

General Construction Notes

A. ALL WORK SHALL MEET THE REQUIREMENTS OF THE 2025 BUILDING CODE OF NEW YORK STATE, INCLUDING ALL REFERENCE DOCUMENTS, THE 2025 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE, AND ALL APPLICABLE MUNICIPAL REQUIREMENTS. THESE PLANS HAVE TO THE BEST OF OUR KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT BEEN DESIGNED IN COMPLIANCE WITH THE 2020 NEW YORK STATE ENERGY CODE AND VERIFIED WITH THE LATEST VERSION OF RESCHECK COMPLIANCE PROGRAM.

B. SCOPE OF WORK IS THE CONSTRUCTION OF A NEW COMMERCIAL TWO-STORY STRUCTURE TOTALING 3,188GSF . THE OCCUPIABLE SQUARE FOOT AREA OF EACH HABITABLE FLOOR LEVEL IS:
FIRST FLOOR: 2,153GSF
SECOND FLOOR: 1,033GSF

Site Location



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Development

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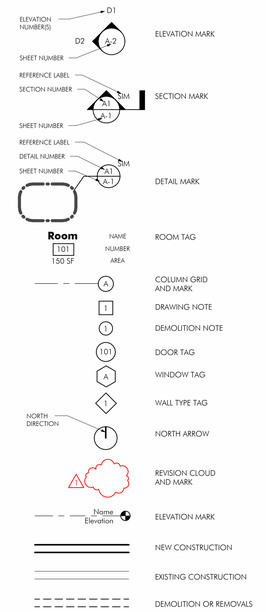
DP110 LVL 1 Plumbing
DX110 Details

Architectural Symbols

COMPACTED FILL
CONCRETE
STONE
GWB
INSULATION (RIGID)
INSULATION (BATT OR SPRAY FOAM)
STEEL
ALUMINUM
MASONRY - CMU
MASONRY - BRICK
PLYWOOD
TILE (SECTION)
WOOD TRIM
WOOD (CONTINUOUS)
WOOD (DISCONTINUOUS)

Drawings Legend



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2081 Kensington Avenue - Commerical Development

Permit / Construction Documents

P- 26022

11.16.2026

Project N

Nickel City Dentistry

1603 Hertel Avenue
Buffalo, NY 14216

Project Information

A-001

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Revit Version: 2026 **Model Author:** Kevin Quinlet **Last Saved By:** Kevin Quinlet
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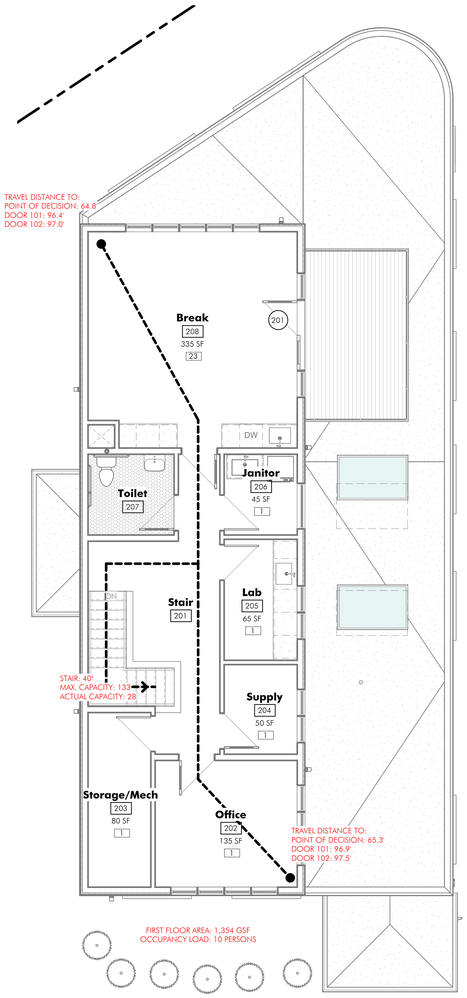
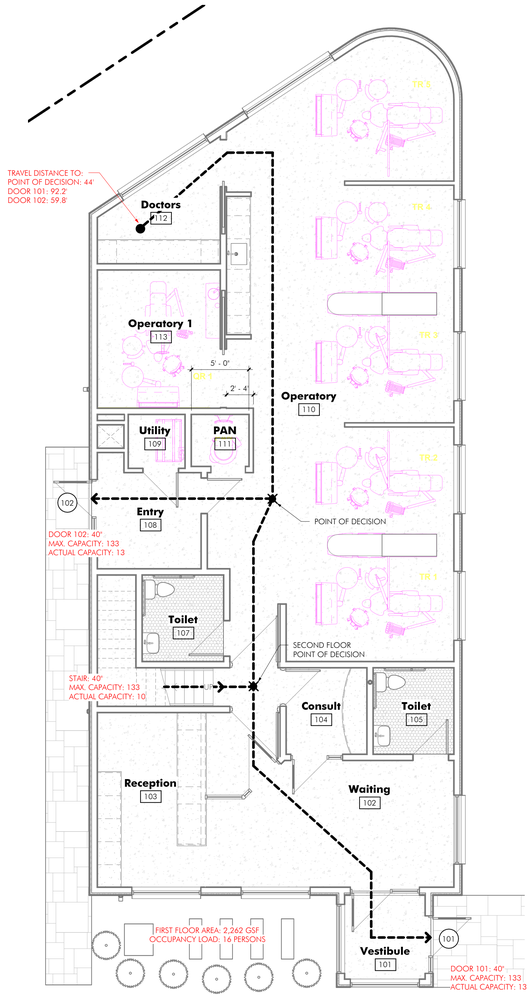


D2 Second Floor Life Safety Plan

3/16" = 1'-0"



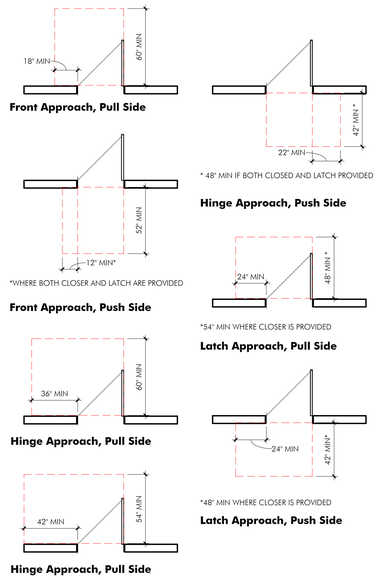
D3 First Floor Life Safety Plan

3/16" = 1'-0"

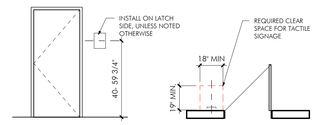
Life Safety Plan

- 1 HOUR FIRE RATING
- POINT OF DECISION
- STARTING POINT OF TRAVEL DISTANCE
- A/V ALARM
- FIRE ALARM PULL
- EXIT SIGN - ONLY PRIMARY EXIT ROUTE SIGNS SHOWN - REFER TO ELECTRICAL DRAWINGS FOR ALL EXIT SIGNS
- XXXft — MAXIMUM TRAVEL DISTANCE & DIRECTION DESIGNATION MEASURED TO THE CENTER OF THE CORRIDOR
- FE — WALL BRACKET MOUNTED FIRE EXTINGUISHER
- Room — ROOM TAG
  - 101 — ROOM NUMBER
  - 150SF — ROOM AREA
  - 2 — OCCUPANCY LOAD

Accessibility Requirements



Signage Requirements



A. SIGN SHALL BE INSTALLED ON WALL ADJACENT TO THE LATCH SIDE OF THE DOOR OR TO THE RIGHT OF THE RIGHT HAND DOOR AT DOUBLE DOORS. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE OF A SINGLE DOOR OR TO THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHOULD BE ON THE NEAREST ADJACENT WALL. CHARACTER MOUNTING HEIGHT SHALL BE 48" AFF (MIN.) TO 60" AFF (MAX.). SIGNS CONTAINING TACTILE CHARACTERS SHALL HAVE AN 18"x18" MIN. SPACE ON THE GROUND, CENTERED ON THE SIGN, BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED AND 45 DEGREE OPEN POSITION.

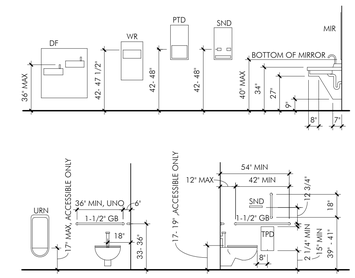
B. TACTILE CHARACTERS SHALL BE SANS SERIF AND SHALL BE ACCOMPANIED BY GRADE II BRAILLE. TACTILE CHARACTERS SHALL BE RAISED 1/32" MIN. ABOVE THEIR BACKGROUND. CHARACTERS SHALL BE 5/8" MIN. AND 2" MAX.

C. PICTOGRAMS SHALL HAVE A HEIGHT OF 6". CHARACTERS OR BRAILLE SHALL NOT BE IN THE PICTOGRAM FIELD. WHERE TEXT DESCRIPTORS FOR PICTOGRAMS ARE REQUIRED, THEY SHALL BE DIRECTLY BELOW OR ADJACENT TO THE PICTOGRAM.

D. CHARACTERS AND THEIR BACKGROUNDS SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND, WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

E. LOCATIONS REQUIRING SIGNAGE:
-ACCESSIBLE WOMENS AND MENS TOILET ROOMS
-PARKING WHEN >5 SPACES ARE PROVIDED
-SIGNAGE AS NOTED IN THE CONTRACT DOCUMENTS

Fixture Mounting Heights



Life Safety Summary

APPLICABLE CODES:
- 2025 BUILDING CODE OF NYS [BCNYS]
- 2025 ENERGY CONSERVATION CODE OF NYS [ECCNYS]
- 2025 FIRE CODE OF NYS [FCNYS]
- 2025 FUEL GAS CODE OF NYS [FGNYS]
- 2025 MECHANICAL CODE OF NYS [MCNYS]
- 2025 PLUMBING CODE OF NYS [PCNYS]

SCOPE OF WORK:
- NEW BUILDING

BUILDING DESIGN DATA:

OCCUPANCY CLASSIFICATION AND USE:
- NEW - BUSINESS (B) [BCNYS 304.1]

CONSTRUCTION CLASSIFICATION:
- TYPE IIB [BCNYS TABLE 601]

FIRE RESISTANCE REQUIREMENTS: [BCNYS TABLE 601]

- PRIMARY STRUCTURAL FRAME:	0 HOURS	(0 HOURS PROVIDED)
- BEARING WALLS, EXTERIOR:	0 HOURS	(0 HOURS PROVIDED)
- BEARING WALLS, INTERIOR:	0 HOURS	(0 HOURS PROVIDED)
- NON-BEARING WALLS, EXTERIOR:	0 HOURS	(0 HOURS PROVIDED)
- NON-BEARING WALLS, INTERIOR:	0 HOURS	(0 HOURS PROVIDED)
- FLOOR CONSTRUCTION/SECONDARY:	0 HOURS	(0 HOURS PROVIDED)
- ROOF CONSTRUCTION/SECONDARY:	0 HOURS	(0 HOURS PROVIDED)

BUILDING HEIGHT AND NUMBER OF STORIES: [BCNYS TABLE 504.3/504.4]

- ALLOWABLE HEIGHT:	75'
- STORIES ALLOWED:	4
- PROPOSED/ACTUAL HEIGHT:	22.2'
- PROPOSED/ACTUAL STORIES:	2

ALLOWABLE BUILDING AREA: [BCNYS TABLE 506.2]
- ALLOWABLE AREA: 69,000 SF [BCNYS TABLE 506.2]
- PROPOSED/ACTUAL AREA: 3,188 SF

OCCUPANT LOAD - PER FLOOR LEVEL: [BCNYS TABLE 1004.5]
- 1ST FLOOR- 16 PERSONS
- 2ND FLOOR- 10 PERSONS
- OCCUPANT LOAD TOTAL: 26 PERSONS

FULLY AUTOMATIC SPRINKLER SYSTEM: [BCNYS 903.1]
PROVIDED

STRUCTURAL DESIGN CRITERIA:

- RISK CATEGORY-	II
- FLOOR LIVE LOADS *(SHOWN ON PLANS WHERE APPLICABLE)*	
- ROOF SNOW LOAD-	50PSF
- WIND SPEED-	105-110MPH
- EXPOSURE CATEGORY-	B
- ROOF RAIN LOAD-	XXPSF
- FLOOD HAZARD AREA	NA
- SEISMIC DESIGN CATEGORY	NA

MEANS OF EGRESS:

MEANS OF EGRESS SIZING: [BCNYS 1005.2]
STAIRWAYS - 0.3" PER OCCUPANT *(SHOWN ON PLANS)*
OTHER EGRESS COMPONENTS - 0.2" PER OCCUPANT *(SHOWN ON PLANS)*

- MINIMUM NUMBER OF EXITS FROM STORIES:	2	(X PROVIDED)
- MINIMUM EXIT DOORWAY CONFIG - 1/2 DIAGONAL DISTANCE (COMPLIES)		
- ACCESSIBLE MEANS OF EGRESS COMPONENT:	(STAIRWAY)	
- MAXIMUM COMMON PATH OF EGRESS DISTANCE:	125'-0"	(50'-0" ACTUAL)
- MAXIMUM EXIT ACCESS TRAVEL DISTANCE:	200'-0"	(100'-0" ACTUAL)

CORRIDORS: NA

EXIT COMPONENTS:
- DOORS *(SHOWN ON PLANS)*
- STAIRWAYS *(SHOWN ON PLANS)*
- PASSAGEWAY *(SHOWN ON PLANS)*
- HORIZONTAL EXITS *(SHOWN ON PLANS)*
- EXIT DISCHARGE *(SHOWN ON PLANS)*

MINIMUM ROOF COVERING FIRE CLASSIFICATION: C (PROVIDED)

REFER TOP MEP+FP DRAWINGS AS PROVIDED: FOR REFERENCE ONLY AS NOTED:

FIRE PROTECTION AND LIFE SAFETY SYSTEMS:

- SUPERVISORY SERVICE:	REQUIRED	(PROVIDED)
- FULLY AUTOMATIC SPRINKLER SYSTEM:		(PROVIDED)
- STANDPIPE SYSTEM *(SHOWN ON PLANS)*		
- PORTABLE FIRE EXTINGUISHERS *(SHOWN ON PLANS)*		
- FIRE ALARM AND DETECTION SYSTEM:	REQUIRED	(PROVIDED)
- FIRE DEPARTMENT CONNECTION *(SHOWN ON PLANS)*		
- FIRE PUMP *(SHOWN ON PLANS)*		

ENERGY EFFICIENCY – 2025 ECCCNYS
TO THE BEST OF OUR KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS & SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2025 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.

NOTE: REFER TO SEPARATE PROJECT COMMERICAL CODE REVIEW DOCUMENT FOR FULL CODE REVIEW COMPLIANCE

Occupancy Loads

Number	Name	Area	Occupants per SF	Occupant Load
101	Vestibule	50 SF		
102	Waiting	220 SF	15	15
103	Reception	140 SF	100	2
104	Consult	55 SF	100	1
105	Toilet	55 SF		
106	Stair	80 SF		
107	Toilet	55 SF		
108	Entry	80 SF	50	2
109	Utility	25 SF	300	1
110	Operatory	1000 SF	100	10
111	PAN	25 SF	100	1
112	Doctors	80 SF	100	1
113	Operatory 1	130 SF	100	2
201	Stair	205 SF		
202	Office	135 SF	150	1
203	Storage/Mech	80 SF	300	1
204	Supply	50 SF	300	1
205	Lab	65 SF	100	1
206	Janitor	45 SF	300	1
207	Toilet	50 SF		
208	Break	335 SF	15	23
TOTAL				63

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Life Safety Plan & Code Summary Information

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Specifications

SELECTIVE DEMOLITION
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including any General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section Includes:
1. Demolition and removal of selected portions of building or structure.

1.3 DEFINITIONS
A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP
A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.5 FIELD CONDITIONS
A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.
D. Storage or sale of removed items or materials on-site is not permitted.
E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS
2.1 PERFORMANCE REQUIREMENTS
A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION
3.1 EXAMINATION
A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS
A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
1. Arrange to shut off indicated utilities with building management and utility companies.
2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed or necessary to complete final design.
a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.

3.3 PREPARATION
A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with corridors, exits, stairways, elevators, and toilet rooms.
B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
1. Provide temporary exits to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.

3.4 SELECTIVE DEMOLITION, GENERAL
A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches.
5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
6. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
8. Dispose of demolished items and materials promptly.
B. Removed and Salvaged Items:
1. Clean salvaged items.
2. Transport items to Owner's storage area designated by Owner.
3. Protect items from damage during transport and storage.
C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original or new locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS
A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent. Use only enclosed containers for transporting demolition materials through the building.
B. Burning: Do not burn demolished materials.

ROUGH CARPENTRY
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including any General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section Includes:
1. Wood furring.
2. Sheathing.
3. Subflooring.
4. In-wall blocking.

1.3 DEFINITIONS
A. Rough carpentry includes carpentry work not specified as part of other Sections and Generally not exposed, unless otherwise specified.

1.4 QUALITY ASSURANCE
A. Single-Source Responsibility for Fire Retardant Treated Wood: Obtain each type of fire-retardant treated wood products from one source for both treatment and fire-retardant formulation.

1.5 DELIVERY, STORAGE AND HANDLING
A. Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as sheathing and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials. For materials pressure treated with waterborne chemicals, place spacers between each bundle to provide air circulation.

PART 2 - PRODUCTS
2.1 LUMBER, GENERAL
A. Furnish lumber manufactured to comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standard Committee's (ALSC) Board of Review.

B. Grade Stamps: Provide lumber with each piece factory-marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.

ROUGH CARPENTRY - CONT.
2.2 MISCELLANEOUS LUMBER
A. Provide lumber for support or attachment of other construction including bucks, nailers, blocking, furring and similar members. Fabricate miscellaneous lumber from dimension lumber of sizes adequate for intended use.

2.3 CONCEALED PERFORMANCE-RATED CONSTRUCTION PANELS
A. Where called for in drawings or required per normal standards of construction, provide APA performance-rated panels complying with the requirements designated under each application.

B. Subfloor, Wall Sheathing, Roof Sheathing: APA RATED SHEATHING.
1. Exposure Durability Classification: Exposure 1.
2. Span Rating: As required to suit joist spacing indicated.
3. Edge Detail: Tongue and groove.

2.4 CONSTRUCTION PANELS FOR BACKING
A. Plywood Backing Panels: For mounting electrical or telephone equipment, provide fire-retardant-treated plywood panels with grade designation, APA C_D PLUGGED EXPOSURE 1, in thickness not less than 15/32 inch.

2.5 FASTENERS
A. Provide fasteners of size and type either indicated that comply with requirements specified for material, specified by manufacture or that meet recognized standards. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating.
1. Nails, wire and brads: ASTM F1667
2. Power driven fasteners: National Evaluation Report NER-272
3. Wood Screws: ANSI B18.6.1
4. Lag bolts: ANSI B18.2.1
5. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and where required, flat washers.

B. Provide metal framing anchors of type, size, metal and finish that comply with requirements specified including the following: Current Evaluation/Research Reports, Allowable Design Loads. Use galvanized steel framing anchors for carpentry exposed to the weather, in ground contact, or in area of high relative humidity, and where indicated.

2.6 PRESERVATIVE WOOD TREATMENT BY PRESSURE PROCESS
A. Where lumber or plywood is indicated as preservative wood or is specified to be treated, comply with applicable requirements of AWPA Standards C2 (Lumber) and C((plywood). Mark each treated item with the AWPB or SPIB Quality Mark Requirements.
B. Pressure-treat with waterborne preservative to a minimum retention of 0.2 pcf. For interior uses, after treatment, kiln-dry lumber and plywood to a maximum moisture content, respectively of 19% and 15%. Treat indicated items and the following:
1. Wood cants, nailers, equipment, support bases, blocking, stripping, and similar member in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping and similar concealed members in contact with masonry or concrete.
3. Wood framing members less than 18" above grade.
4. Wood floor plates installed over concrete slabs directly in contact with earth.
C. Pressure-treat wood members in contact with ground or fresh water with water-borne preservative to a minimum retention of 0.40 pcf.
D. Complete fabrication of treated items prior to treatment, where possible. If cut after treatment coat cut surface to comply with AWPA M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

2.7 MISCELLANEOUS MATERIALS
A. Adhesives for Field Gluing Panels to Furring: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels. Use adhesives that have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart 5 (EPA Method 24).

PART 3 - EXECUTION
3.1 INSTALLATION, GENERAL
A. Discard units of material with defects that impair quality of rough carpentry construction and that are too small to use in fabricating rough carpentry with minimum joints or optimum joint arrangement.
B. Set rough carpentry to required levels and lines, with members plumb and true to line and cut and fitted. Fit rough carpentry to other construction: scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated. Countersink nail heads on exposed carpentry work and fill holes. Use common wire nails unless otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials.

3.2 WOOD GROUNDS, NAILERS, BLOCKING AND SLEEPERS.
A. Install wood grounds, nailers, blocking and sleepers where shown and where required for screeding or attachment of other work. Form to shapes as shown or required and cut as required for true line and level of work to be attached.
B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry during installation of masonry work. Where possible, anchor to formwork before concrete placement.
C. Install permanent grounds of dressed, preservative treated, key-beveled lumber not less than 1-1/2" wide and of thickness required to bring face of ground to exact thickness of finished materials involved. Remove temporary grounds when no longer required.

3.3 INSTALLATION OF CONSTRUCTION PANELS
A. General: Comply with applicable recommendations contained in Form No. E30, "APA Design/Construction Guide - Residential & Commercial" for types of construction panels and application indicated.
B. Fastening Methods: Fasten panels as indicated below:
1. Subflooring: Glue and nail to framing throughout.
2. Sheathing: Nail to framing.
3. Plywood Backing Panels: Nail to supports.

NON-STRUCTURAL METAL FRAMING
PART 1 - GENERAL
1.1 ACTION SUBMITTALS
A. Product Data: For each type of product.

PART 2 - PRODUCTS
2.1 FRAMING SYSTEMS
A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
B. Studs and Runners: ASTM C 645.
1. Steel Studs and Runners:
a. Minimum Base-Metal Thickness: 0.0296 inch (20 ga drywall).
b. Depth: As indicated on Drawings.

2.2 AUXILIARY MATERIALS
A. General: Provide auxiliary materials that comply with referenced installation standards.
1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

PART 3 - EXECUTION
3.1 EXAMINATION
A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL
A. Installation Standard: ASTM C 754.
1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
C. Install bracing at terminations in assemblies.
D. Do not bridge building expansion and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.3 INSTALLING FRAMED ASSEMBLIES
A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
1. Single-Layer Application: 16 inches (406 mm) OC unless otherwise indicated.
B. Install studs so flanges within framing system point in same direction.
C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
a. Install two studs at each jamb unless otherwise indicated.
b. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
3. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
D. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

3.4 GENERAL
A. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.
B. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.
C. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
D. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
E. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced installation standards.
F. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
G. Do not connect or suspend steel framing from ducts, pipes, or conduit.
H. Seismic Bracing: Sway-brace framing systems to building structure.
I. Installation Tolerances: Install suspension systems that are level to within 1/8 inch in 12 feet (3 mm in 3.6 m) measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

GYPSUM BOARD
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including any General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 ACTION SUBMITTALS
A. Product Data: For each type of product.

1.3 DELIVERY, STORAGE AND HANDLING
A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.4 FIELD CONDITIONS
A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
B. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS
2.1 GYPSUM BOARD, GENERAL
A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.2 INTERIOR GYPSUM BOARD
A. Manufacturers: American Gypsum.
B. Gypsum Board, Type X: ASTM C 1396/C 1396M.
1. Thickness: 5/8 inch (15.9 mm).
2. Long Edges: Tapered.
C. Gypsum Ceiling Board: ASTM C 1396/C 1396M.
1. Thickness: 1/2 inch (12.7 mm).
2. Long Edges: Tapered.

2.3 SPECIALTY BOARD
A. Tile backer board.
1. Product: Denshield by Georgia Pacific Gypsum, LLC.
2. Thickness: 1/2 inch except 5/8" at fire rated assemblies.

2.4 TRIM ACCESSORIES
A. Interior Trim: ASTM C 1047.
1. Material: Paper faced with corrosion resistant steel sheet.

2.5 JOINT TREATMENT MATERIALS
A. General: Comply with ASTM C 475/C 475M.
B. Joint Tape:
1. Interior Gypsum Board: Paper.
C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
a. Use setting-type compound for installing paper-faced metal trim accessories.
3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.

2.6 AUXILIARY MATERIALS
A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
C. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
D. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834.

PART 3 - EXECUTION
3.1 EXAMINATION
A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL
A. Comply with ASTM C 840.
B. Install ceiling/soffit panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
E. Form control and expansion joints with space between edges of adjoining gypsum panels.
F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch wide joints to install sealants.
G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
I. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

3.3 APPLYING INTERIOR GYPSUM BOARD
A. Install interior gypsum board in the following locations:
1. Type X: Where required for fire-resistance-rated assembly.
2. Ceiling Type: Ceiling surfaces.
3. Tile backer board: As a base for ceramic or porcelain tile and as indicated on Drawings.
B. Single-Layer Application:
1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 INSTALLING TRIM ACCESSORIES
A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
B. Interior Trim: Install in the following locations unless otherwise indicated:
1. Outside corners: Sheetrock 90 Outside Corner Bead B1W.

3.5 FINISHING GYPSUM BOARD
A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

3.6 PROTECTION
A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

FIRESTOPPING
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including any General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Firestopping systems.

1.3 ACTION SUBMITTALS
A. Product Data: Provide data on product characteristics, performance ratings, and limitations. Submit VOC content documentation for all non-preformed materials.

1.4 FIELD CONDITIONS
A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation. Maintain minimum temperature before, during and for 3 days after installation of materials. Provide ventilation in areas where solvent-cured materials are being installed.

PART 2 - PRODUCTS
2.1 FIRE STOPPING - GENERAL REQUIREMENTS
A. Manufacturers: 3M Fire Protection Products or Hilti Inc.
B. Firestopping: Any material meeting requirements.
C. Firestopping Materials with Volatile Content: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No. 1168.
D. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.

FIRESTOPPING - CONT.
2.2 FIRESTOPPING FOR FLOOR-TO-FLOOR, WALL-TO-FLOOR, AND WALL-TO-WALL JOINTS
A. Concrete and Concrete Masonry Walls and Floors:
1. Floor to Floor Joints: 1 & 2 Hour Construction: UL System FF-D01013; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
2. Top of Wall Joints at Concrete/Concrete Masonry Walls to Concrete over Metal Deck Floor: 2 Hour Construction: UL System HW-D-0181; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
3. Concrete/Concrete Masonry Wall to Wall Joints: 2 Hour Construction: UL System WW-D-0017; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
B. Gypsum Board Walls:
1. Wall to Wall Joints: 1 & 2 Hour Construction: UL System WW-D-0067; Hilti CP 606 Flexible Firestop Sealant.
2. Top of Wall Joints to Underside of Steel Beam and Concrete Over Metal Deck Floor with Spray on Fireproofing: 1 & 2 Hour Construction: UL System HW-D-0259; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
3. Top of Wall Joints at Concrete Over Metal Deck Floor Parallel to Ribs: 1 & 2 Hour Construction: UL System HW-D-0049; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
4. Top of Wall Joints at Concrete Over Metal Deck Floor Perpendicular to Ribs, Cut to Ribs: 1 & 2 Hour Construction: UL System HW-D-0045; Hilti SP 606 Flexible Firestop Sealant.
5. Top of Wall Joints at Concrete Over Metal Deck Floor Perpendicular to Ribs, Not Cut to Ribs: 1 & 2 Hour Construction: UL System HW-D-0042; Hilti CFS-SP WB Firestop Joint Spray and CP 672.

2.3 FIRESTOPPING PENETRATIONS THROUGH CONCRETE AND CONCRETE MASONRY CONSTRUCTION
A. Blank Openings: In Floors or Walls: 1 & 2 hour Construction: UL System C-AJ-0090; Hilti FS-ONE MAX Intumescent Firestop Sealant.
B. Penetrations Through Floors or Walls By:
1. Multiple Penetrations in Large Openings: 1 & 2 Hour Construction: UL System C-AJ-8143; Hilti FS-ONE MAX Intumescent Firestop Sealant.
2. Bathtub Drains: Up to 3 Pipes Construction: UL System F-A-1037, F-A-1038, F-A-2094, or F-A-2095; Hilti CP 681 Tub Box Kit.
3. Uninsulated Metallic Pipe, Conduit, and Tubing: 1 & 2 Hour Construction: UL System C-AJ-1226; Hilti FS-ONE MAX Intumescent Firestop Sealant.
4. Electrical Cables Not in Conduit: 1 & 2 Hour Construction: UL System W-J-3198; Hilti CFS-SL RK Retrofit Sleeve Kit.
5. Insulated Pipe: 1 & 2 Hour Construction: UL System C-AJ-5091; Hilti FS-ONE MAX Intumescent Firestop Sealant.
6. HVAC Ducts, Uninsulated: 1 & 2 Hour Construction: UL System C-AJ-7111; Hilti FS-ONE MAX Intumescent Firestop Sealant.

2.5 FIRESTOPPING PENETRATIONS THROUGH GYPSUM BOARD WALLS
A. Blank Openings: In Floors or Walls: 1 & 2 hour Construction: UL System W-L-03334; Hilti CP 653 Speed Sleeve.
B. Penetrations By:
1. Multiple Penetrations in Large Openings: 1 & 2 Hour Construction: UL System W-L-1408, or W-L-8013, or W-L-8079; Hilti FS-ONE MAX Intumescent Firestop Sealant.
2. Uninsulated Metallic Pipe, Conduit, and Tubing: 1 & 2 Hour Construction: UL System W-L-1054 or W-L-1164; Hilti FS-ONE MAX Intumescent Firestop Sealant.
3. Electrical Cables Not in Conduit: 1 & 2 Hour Construction: UL System W-L-3065; Hilti CFS-SL RK Retrofit Sleeve Kit.
4. Insulated Pipe: 1 & 2 Hour Construction: UL System W-L-5028, or W-L-5029; Hilti FS-ONE MAX Intumescent Firestop Sealant.
5. HVAC Ducts, Uninsulated: 1 & 2 Hour Construction: UL System W-L-7156; Hilti FS-ONE MAX Intumescent Firestop Sealant.

2.6 FIRESTOPPING SYSTEMS
A. Firestopping: Any material meeting requirements.

PART 3 EXECUTION
3.1 EXAMINATION
A. Verify openings are ready to receive the work for this section.

3.2 PREPARATION
A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that could adversely affect bond of firestopping material. Remove incompatible materials that could adversely affect bond. Install backing materials to arrest liquid material leakage.

3.3 INSTALLATION
A. Install materials in manner described in fire test report and in accordance with manufacturer's written instructions, completely closing openings. Do not cover installed firestopping until inspection by authority having jurisdiction.

3.4 CLEANING
A. Clean adjacent surfaces of firestopping materials.

3.5 PROTECTION
A. Protect adjacent surfaces from damage by material installation.

JOINT SEALANTS
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including any General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section Includes:
1. Nonsag gunnable joint sealants.
2. Self-leveling pourable joint sealants.
3. Joint backings and accessories.

1.3 ACTION SUBMITTALS
A. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following:
1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
2. List of backing materials approved for use with specific product.
3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
4. Substrates the product should not be used on.
B. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

1.4 WARRANTY
A. Correct defective work within a five year period of Date of Substantial Completion.
B. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS
2.1 MANUFACTURERS
A. Nonsag sealant: Permits application in joints on vertical surfaces without sagging or slumping.
1. BASF Construction Chemicals
2. Hilti, Inc.
3. Tremco Global Sealants
B. Selfleveling Sealants: Pourable or self-leveling sealant that has sufficient flow to form a smooth, level surface when applied in a horizontal joint.
1. BASF Construction Chemicals
2. Pecora Corporation.
3. Tremco Global Sealants

2.2 JOINT SEALANT APPLICATIONS
A. Scope:
1. Exterior Joints: Seal open joints, whether or not the joint is indicated on the drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to the following: Wall expansion and control joints; Joints between door, window, and other frames and adjacent construction; Joints between different exposed materials; Other joints not indicated below.
2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed included, but are not limited to the following: Joints between door, window, and other frames and adjacent construction; In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings, between wall/ceiling and other construction and other flanking sound paths; Other joints not indicated below.
3. Do not seal the following types of joints: Joint indicated to be treated with manufactured expansion joint cover or some other type of sealing device; Joints where sealant is specified to be provided by manufacturer of product to be sealed; Joints where installation of sealant is specified in another section; Joints between suspended panel ceilings/grid and walls.
B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing.
2. Lap Joints in Manufactured Metal Panels: Butyl rubber, non-curing.
C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
2. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
3. Narrow Control Joints: Self-leveling polyurethane "traffic-grade" sealant.
4. Other Floor Joints: Self-leveling polyurethane "traffic-grade" sealant.
D. Sound-Rated Assemblies: Walls and ceilings identified as "STC-Rated", "Sound-rated", or "Acoustical"

2.3 JOINT SEALANTS - GENERAL
A. Sealants and Primers: Provide products having a lower volatile organic compound (VOC) content than indicated in South Coast Air Quality Management District [SCAQMD]; Rule 1168.

2.4 NON-SAG JOINT SEALANTS
A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: Plus and minus 50%, minimum.
2. Non-Staining to Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
3. Dirt Pick-up: Reduced dirt pick-up compared to other silicone sealants.
4. Color: To be selected by Architect from manufacturer's standard range.
B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: Plus and minus 25%, minimum.
2. Color: To be selected by Architect from manufacturer's standard range.
C. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, nonsag, non-bleeding, not intended for exterior use.
D. Non-Curing Butyl Sealant: Non-bleeding, vapor-impermeable; intended for fully concealed applications.

JOINT SEALANTS - CONT.
2.5 SELF-LEVELING SEALANTS
A. Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion and traffic.
1. Movement Capability: Plus and minus 25%, minimum.
B. Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement: rigid enough to support concrete edges under traffic.
1. Composition: Multicomponent, 100% solids by weight.
2. Hardness: Minimum of 85 (Shore A) or 35 (Shore D), when tested in accordance with ASTM D2240 after 7 days.
3. Joint Width, Minimum: 1/8" (3mm).

2.6 ACCESSORIES
A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
1. Types for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O - Open Cell Polyurethane.
2. Open Cell: 40 to 50 percent larger in diameter than joint width.
B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturer for specific application.
C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

PART 3 EXECUTION
3.1 EXAMINATION
A. Verify that joints are ready to receive work. Verify that backing materials are compatible with sealants. Verify that backer rods are of the correct size.

3.2 PREPARATION
A. Remove loose

Specifications

DOOR HARDWARE - CONT.

C. Informational Submittals:
1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
2. Product Certificates for electrified door hardware, signed by manufacturer:
a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
3. Certificates of Compliance:
a. Certificate of compliance for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in "QUALITY ASSURANCE" article, herein.
c. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in "QUALITY ASSURANCE" article, herein.
4. Product Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by qualified testing agency, for door hardware on doors located in accessible routes.
5. Warranty: Special warranty specified in this Section.
D. Closeout Submittals:
1. Operations and Maintenance Data : Provide in accordance with Division 01 and include:
a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
b. Catalog pages for each product.
c. Name, address, and phone number of local representative for each manufacturer.
d. Parts list for each product.
e. Final approved hardware schedule, edited to reflect conditions as-installed.
f. Final keying schedule
g. Copies of floor plans with keying nomenclature
h. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
i. Copy of warranty.

1.5 QUALITY ASSURANCE
A. Product Substitutions: Comply with product requirements stated in Division 01 and as specified herein.
1. Where products indicate "acceptable substitute" or "acceptable manufacturer", provide product from specified manufacturers, subject to compliance with specified requirements and "Single Source Responsibility" requirements stated herein.
B. Supplier Qualifications and Responsibilities: Recognized architectural hardware supplier with record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides certified Architectural Hardware Consultant (AHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
1. Warehousing Facilities: In Project's vicinity.
2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
4. Coordination Responsibility: Coordinate installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related subcontractors.
a. Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.
C. Installer Qualifications: Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.
D. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.
1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated.
2. Manufacturers that perform electrical modifications and that are listed by testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
E. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
F. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.
G. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.
H. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release latch. Locks do not require use of key, tool, or special knowledge for operation.
I. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in "REFERENCES" article, herein.
1. Provide operating devices that do not require tight grasping, pinching, or twisting of wrist and that operate with force of not more than 5 lbf (22.2 N).
2. Maximum opening-force requirements:
a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
3. Bevel raised thresholds with slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
4. Adjust door closer sweep periods so that, from open position of 70 degrees, door will take at least 3 seconds to move to 5 inches (75 mm) from latch, measured to leading edge of door.
J. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01.
1. Attendees: Owner, Contractor, Architect, Installer, and Supplier's Architectural Hardware Consultant.
2. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
b. Preliminary key system schematic diagram.
c. Requirements for key control system.
d. Requirements for access control.
e. Address for delivery of keys.
K. Pre-installation Conference: Conduct conference at Project site
1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Inspect and discuss preparatory work performed by other trades.
3. Inspect and discuss electrical roughing-in for electrified door hardware.
4. Review sequence of operation for each type of electrified door hardware.
5. Review required testing, inspecting, and certifying procedures.
L. Coordination Conferences:
1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.6 DELIVERY, STORAGE, AND HANDLING
A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.
B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.
1. Deliver each article of hardware in manufacturer's original packaging.
C. Project Conditions:
1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
2. Provide secure lock-up for door hardware delivered to Project, but not yet installed. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
D. Protection and Damage:
1. Promptly replace products damaged during shipping.
2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
E. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.
F. Deliver keys to Owner by registered mail or overnight package service.

1.7 COORDINATION
A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Specifications.
B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building security systems.
E. Direct shipments not permitted, unless approved by Contractor.

PART 2 - PRODUCTS
2.1 MANUFACTURERS
A. Approval of manufacturers other than those listed shall be in accordance with QUALITY ASSURANCE article, herein.
B. Approval of products from manufacturers indicated as "Acceptable Manufacturer" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
C. Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.2 MATERIALS
A. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.
1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.3 HINGES
A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity:
a. Two Hinges: For doors with heights up to 60 inches.
b. Three Hinges: For doors with heights 61 to 90 inches.
c. Four Hinges: For doors with heights 91 to 120 inches.
d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
3. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
a. Exterior Doors: Heavy-weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

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2.3 HINGES
4. Hinge Options: Comply with the following:
a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for all out-swinging lockable doors.
5. Manufacturers:
a. McKinney (MK) - TA/T4A Series, 5-knuckle.

2.4 CONTINUOUS HINGES
A. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge. with minimum 0.120-inch thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
1. Where specified, provide modular continuous geared hinges that ship in two or three pieces and form a single continuous hinge upon installation.
2. Manufacturers:
a. Pemko (PE).

2.5 SLIDING AND FOLDING HARDWARE
A. Sliding and Folding Door Hardware: Hardware is to be of type and design as specified and should conform with ANSI/BHMA A156.14.
1. Provide sliding door hardware as follows:
a. Sliding Bi-Passing Pocket Door Hardware: Provide complete sets consisting of track, hangers, stops, bumpers, floor channel, guides, and accessories indicated.
b. Pocket Sliding Door Hardware: Rated for doors weighing up to 200 lb.
2. Manufacturers:
a. Pemko (PE).

2.6 POWER TRANSFER DEVICES
A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and surface wiring up to 5' for single motion egress.
B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
1. Manufacturers:
a. Pemko (PE) - EL-CEPT Series.
b. Securitron (SU) - EL-CEPT Series.
B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the leaf requirements for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
1. Provide one each of the following tools as part of the base bid contract:
a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
b. McKinney (MK) - Connector Hand Tool: QC-R003.
2. Manufacturers:
McKinney (MK) - QC-C Series.

2.7 DOOR OPERATING TRIM
A. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws, unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Pulls shall be provided with a 10" clearance from the finished floor on the push side to accommodate wheelchair accessibility.
5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets. When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.
6. Manufacturers:
a. Rockwood (RO).

2.8 CYLINDERS AND KEYING
A. A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master keyed systems and have on record a published security keying system.
1. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA).
B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
1. Threaded mortise cylinders with rings and cams to suit hardware application.
2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored or cylindrical locks with tailpieces as required to suit locks.
4. Tubular deadlocks and other auxiliary locks.
5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
6. Keyway: Manufacturer's Standard.
C. Keying System: Each type of lock and cylinders to be factory keyed.
1. Supplier shall conduct a 'Keying Conference' to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.
D. Key Quantity: Provide the following number of keys:
1. Change Keys per Cylinder: Two (2).
2. Master Keys (per Master Key Level/Group): Five (5).
E. Key Registration List (Bitting List):
1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.9 KEY CONTROL
A. A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks keyed in the project.
1. Manufacturers:
a. Lund Equipment (LU).
b. MMF Industries (MM).
c. Telkee (TK).

2.10 CYLINDRICAL LOCKS AND LATCHING DEVICES
A. Cylindrical Locksets, Grade 2 (Standard Duty): ANSI/BHMA A156.2, Series 4000, Grade 2 Certified Products Directory (CPD) listed. Locks are to be non-handed and fully field reversible.
1. Provide locksets with functions and features as follows:
a. Meets ANSI/BHMA A156.41 for single motion egress.
b. Where required by code, provide knurling or abrasive coating on all levers leading to hazardous areas.
c. Meets UL and CUL Standard 10C Positive Pressure, Fire Test of Door Assemblies with levers that meet A117.1 Accessibility Code.
d. Meets Florida Building Code FL2998 and UL Certification Directory ZHEM.R21744 for latching hardware for hurricane impact.
e. Five-year limited warranty for mechanical functions.
2. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA) - 4600LN Series.
b. No Substitution.

2.11 RESIDENTIAL LOCKING DEVICES
A. A. Residential Locking Devices: Provide ANSI A156.2, Series 4000, Grade 2 products (knobs, levers, deadbolts, interconnected, handlesets) as specified.
1. Provide residential locking devices with functions and features as follows:
a. Locksets, deadbolts, and handle sets designed to fit ANSI standard door preps.
b. Meets UL and ULC Standard 10C Positive Pressure, Fire Test of Door Assemblies.
c. Non-handed levers.
d. Provide levers of like design and style as specified.
2. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA) - Heritage Series.
B. No Substitution.

2.12 DEADLOCKS AND LATCHES
A. Cylindrical Deadlocks: ANSI/BHMA A156.36 Grade 2 Certified Products Directory (CPD) deadbolts to fit standard ANSI 161 preparation in functions and with visual status indicators as specified in the hardware sets.
1. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA) - D200 Series.

2.13 LOCK AND LATCH STRIKES
A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
B. Standards: Comply with the following:
1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.14 ELECTRIC STRIKES
A. Standard Electric Strikes: Electric strikes conforming to ANSI/BHMA A156.31, Grade 1, for use on non-rated or fire rated openings. Strikes shall be of stainless steel construction tested to a minimum of 1500 pounds of static strength and 70 foot pounds of dynamic strength with a minimum endurance of 1 million operating cycles. Provide strikes with 12 or 24 VDC capability, fail-secure unless otherwise specified. Where specified provide latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike.
1. Manufacturers:
a. HES (HS) - 1500/1600 Series.
B. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes conforming to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Constructions includes internally mounted solenoid with two heavy-duty, stainless steel locking mechanisms operating independently to provide tamper resistance. Strikes tested for a minimum of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike. Strike requires no cutting to the jamb prior to installation.
1. Manufacturers:
a. HES (HS) - 9400/9500/9600/9700/9800 Series.

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C. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with the combined products having a five year warranty.

2.15 CONVENTIONAL EXIT DEVICES
A. A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
1. Exit devices shall have a five-year warranty.
2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
4. Except on fire-rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified lockset.
b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide split proof strikes where metal parts are exposed when open into the floor.
8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
B. Conventional Push Rail Exit Devices (Surface Mounting): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed exit devices. Listed manufacturers shall meet all functions and features as specified herein. Listed manufacturers shall meet all functions and features as specified herein.
1. Provide locksets with functions and features as follows:
a. Where required by code, provide knurling or abrasive coating on all levers leading to hazardous areas.
b. Meets UL and CUL Standard 10C Positive Pressure, Fire Test of Door Assemblies with levers that meet A117.1 Accessibility Code.
c. Five-year limited warranty for mechanical features.
2. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA) - 6000 Series.
b. No Substitution.
C. Conventional Push Rail Exit Devices, Aluminum Entrances: ANSI/BHMA A156.3, Grade 1 panic devices functions specified in the Hardware Sets. Push bar to be made of extruded aluminum, maximum projection of 3", available in clad or anodized architectural finishes. Exit device design to fit narrow (minimum 2"), medium, or wide stile aluminum door applications.
1. Manufacturers:
a. Adams Rite Manufacturing (AD) - 8000 Series.

2.16 SURFACE DOOR CLOSERS
A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
5. Covers: Shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Heavy duty surface mounted door closers shall have a 30-year warranty.
2. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA) - 4400 Series.
b. No Substitution.
C. Door Closers, Surface Mounted (Unitrol): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted closers with door stop mechanism to absorb dead stop shock on arm and top hinge. Hold-open arms to have a spring loaded mechanism in addition to shock absorber assembly. Arms to be provided with rigid steel main arm and secondary arm lengths proportional to the door width.
1. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA) - Unitrol Series.
D. Door Closers, Surface Mounted (Multi-Point): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, multi-point adjustable door closers with complete spring power adjustment, sizes 1 thru 6. Closers to be rack and pinion type, cast aluminum case construction, with adjustable backcheck, closing sweep, and latch speed control valves. Provide closer standard packed for regular, top-jamb, and parallel arm type mounting applications.
1. Manufacturers:
a. ASSA ABLOY ACCENTRA (YA) - 51BC Series.
b. Norton Rixson (NO) - 1601 Series.

2.17 ARCHITECTURAL TRIM AND ACCESSORIES
A. Door, Frame and Wall Protective Trim: ANSI/BHMA A156.6, protective products as specified in the hardware sets. Push plate protection plates shall be not more than 2" less than door width on stop side and 1" less door width on the pull side or on stop side of pairs of doors. Listed manufacturers shall meet all functions and features as specified herein.
1. Provide protective trim with functions and features as follows:
a. Meets ADA requirements for smooth bottom door surfaces.
b. UL Classified options for use on fire-rated doors up to 3 hours.
c. Fabricated from stainless steel, brass, bronze, aluminum, or high-impact plastic.
d. Available in a variety of sizes, finishes, and profiles to suit aesthetic and functional requirements.
e. Designed to protect doors, frames, and adjacent walls from damage due to impact, abrasion, or traffic.
f. Fasteners included: adhesive-backed options available for select models.
g. Ten-year limited warranty.
2. Manufacturers:
a. Rockwood (RO).

2.18 DOOR STOPS AND HOLDERS
A. Door Stops and Bumpers ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
1. Manufacturers:
a. Rockwood (RO).

2.19 ARCHITECTURAL SEALS
A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light and sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

A. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.
B. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
C. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
D. Manufacturers:
1. Pemko (PE).

2.20 ELECTRONIC ACCESSORIES
A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
1. Manufacturers:
a. Alarm Controls (AK) - CP1-1026 Series.
b. Securitron (SU) - DPS Series.
B. Linear Power Supplies: Filtered and regulated power for electrified hardware. Listed manufacturers shall meet all functions and features as specified herein.
1. Provide power supplies with functions and features as follows:
a. 120VAC input with selectable output at 12VDC (6 amp) or 24VDC (3 amp).
b. Internal back-up battery (batteries not included) charging circuit.
c. Regulated and filtered, fuse protected outputs.
d. Each output can be individually turned on and off via a jumper.
e. Power status of each output is shown by an LED.
f. Fire alarm interface; dry contacts NO/NC, 9-33VDC, 3-15mA.
2. Manufacturers:
a. Sargent (SA) - LSP Series.

2.21 FABRICATION
A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

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2.22 FINISHES
A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION
3.1 EXAMINATION
A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION
A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION
A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; power supply devices; and seals.
B. Paint prime coated mullions to match frames.
C. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
E. Push Plates and Door Pulls: When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.
F. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
G. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL
A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
1. Organization of List: Include openings Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING
A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION
A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
B. Clean adjacent surfaces soiled by door hardware installation.
C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION
A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SCHEDULE
A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.
B. Hardware Sets: See attached

HOLLOW METAL DOORS & FRAMES

PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including any General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
B. Refer to Door Schedule for Hardware Set Headings and separate Hardware Schedule if provided.

1.2 SUMMARY
A. A. Section Includes:
1. Standard and custom hollow metal doors and frames.
2. Steel sidelight, borrowed lite and transom frames.
3. Louvers installed in hollow metal doors.
4. Light frames and glazing installed in hollow metal doors.
B. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
9. SDI-113 Standard Practice for Determining the Steady-State Thermal Transmittance of Steel Door & Frame Assemblies.
10. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
11. ASTM C1199 - Standard Test Method for Measuring the Steady-State Thermal Transmittance of Fenestration Systems Using Hot Box Methods
12. ASTM E1423 - Practice for Determining Steady State Thermal Transmittance of Fenestration Systems.
13. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
14. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
15. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
16. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
17. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.
18. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
19. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.3 SUBMITTALS
A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, hardware reinforcements, profiles, anchors, fire-resistance rating, and finishes.
B. Door hardware supplier is to furnish templates, template reference number and/or physical hardware to the steel door and frame supplier in order to prepare the doors and frames to receive the finish hardware items.
C. Shop Drawings: Include the following:

Specifications

DOOR HARDWARE SCHEDULE - CONT.

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
   1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
   2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
   3. Content: Include the following information:
      a. Type, style, function, size, label, hand, and finish of each door hardware item.
      b. Manufacturer of each item.
      c. Fastenings and other pertinent information.
      d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
      e. Explanation of abbreviations, symbols, and codes contained in schedule.
      f. Mounting locations for door hardware.
      g. Door and frame sizes and materials.
   4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: Prepared under the supervision of the Owner, separate schedule detailing final keying instructions for locksets and cylinders in writing. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner to approve submitted keying schedule prior to the ordering of permanent cylinders.

D. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and contact information of the manufacturers providing the hardware and their nearest service representatives. The final copies delivered after completion of the installation test to include "as built" modifications made during installation, checkout, and acceptance.

F. Warranties and Maintenance: Special warranties and maintenance agreements specified in the Related Sections.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.5 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

1.6 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. Refer to SEPARATE DOCUMENT.

PART 3 - EXECUTION

3.1 DOOR HARDWARE SETS

The door hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

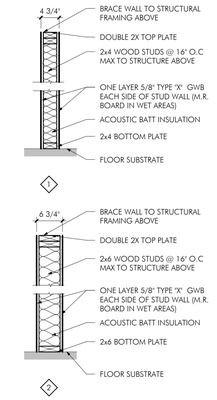
3.1 DOOR HARDWARE SETS - CONT.

   1. Quantities listed are for each pair of doors, or for each single door.
   2. The supplier is responsible for handing and sizing all products.
   3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
   4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

A. Products listed in the hardware sets shall be supplied by and in accordance with the requirements described in the specification section as noted for each item.
   1. Section 08 71 00 – Door Hardware.

B. Manufacturer's Abbreviations:
C. MK - McKinney
D. PE - Pemko
E. SU - Securitron
F. YA - ASSA ABLOY ACCENTRA
G. YR - ASSA ABLOY ACCENTRA Residential Mechanical
H. RO - Rockwood
I. AD - Adams Rite
J. HS - HES
K. NO - Norton Rixson
L. OT - Other

Wall Types



General Wall Type Notes

A. ALL WALL TYPES - ALL GYPSUM WALL BOARD SHALL BE "TYPE X" EXCEPT FOR ON WET WALLS WHERE GREEN BOARD SHALL BE USED OR WHERE SPECIFIC GYPSUM WALL BOARD TYPE IS CALLED FOR.

B. ALL RATED WALL CONSTRUCTION IS TO MEET ALL REQUIRED UL DESIGN GUIDELINES WITHOUT EXCEPTION IN ORDER TO MEET DESIGNATED RATING DURATION.

C. REFER TO FINISH NOTES FOR FINISH OF NEW MATERIALS.

D. BASIS OF DESIGN FOR SOUND ATTENUATION BATT IN WALLS ROCKWELL COMFORTBATT 3-1/2" THICK FOR STEEL STUD CONSTRUCTION.

General Finish Notes

A. ALL FINAL FINISH SELECTIONS SHALL BE COORDINATED WITH THE WISHES OF THE OWNER. PAINTED WOOD TRIM TO BE POPLAR - EITHER PURCHASED PRE-PRIMED OR PRIMED BEFORE INSTALLATION - FINISH COLOR TO BE APPLIED IN FIELD. STAINED WOOD TRIM IS TO BE A SPECIES TO MATCH EXISTING. ALL MANUFACTURER'S INSTALLATION GUIDELINES WILL BE FOLLOWED FOR ALL FINISH MATERIALS.

Finish Materials

FLOORING

CPT-1 - CARPET TILE
MFR: ALADDIN COMMERCIAL
STYLE: BRILLIANTLY AMAZED TILE 2B60
COLOR: SO INTRIGUED 521
SIZE: 24x24

BASE

VB-1 - VINYL BASE
MFR: ROPPE
STYLE: STANDARD TOE TYPE TV
COLOR: CHARCOAL 123
SIZE: 6"

PAINT

PT-1 - WALL PAINT
MFR: SHERWIN WILLIAMS
COLOR: OLYMPUS WHITE SW6253
FINISH: SATIN

DEVICES & ACCESSORIES
COLOR: WHITE

Abstract Architecture PC
313 Broadway
Buffalo, NY 14204
mail@abstractarch.com
(716) 812-2596

2081 Kensington Avenue - Commerical Development

Permit / Construction Documents

P- 26022

11.16.2026

Nickel City Dentistry

1603 Hertel Avenue
Buffalo, NY 14216

Project N

Specifications & Wall Schedule

A-005

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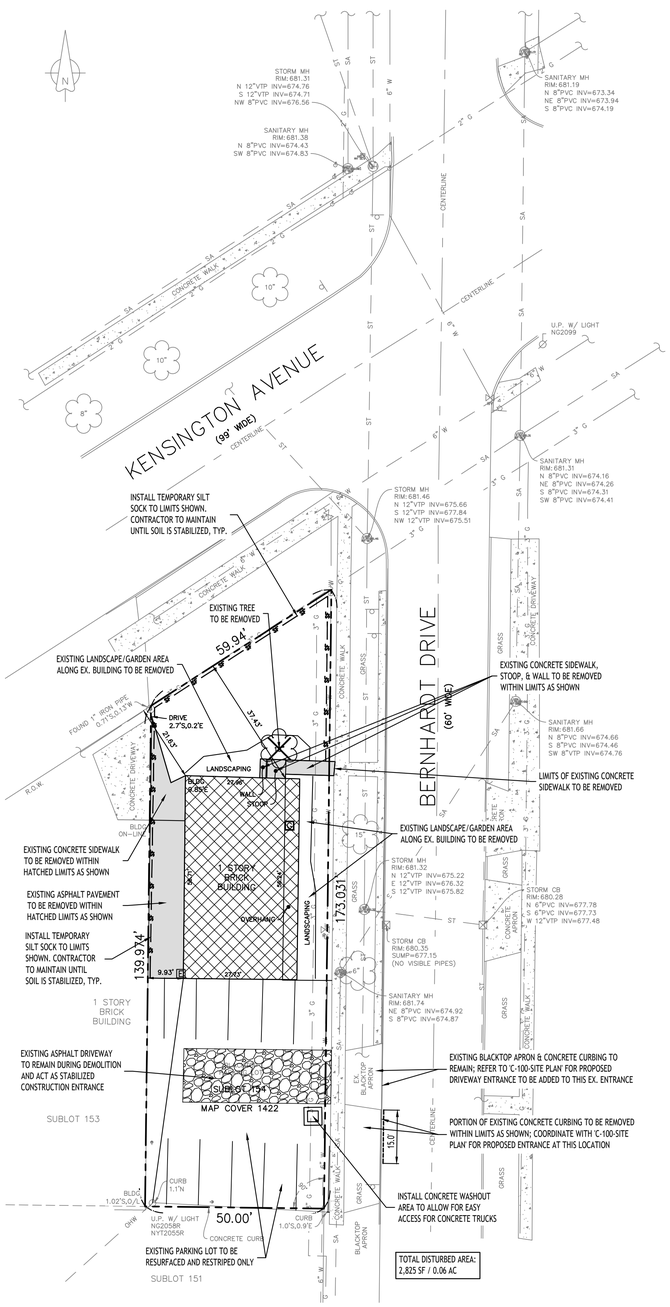
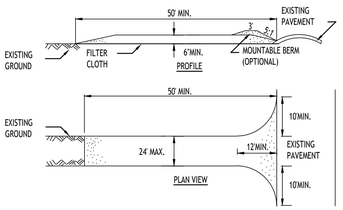


Demo & Erosion Control Plan

SCALE: 1"=20'

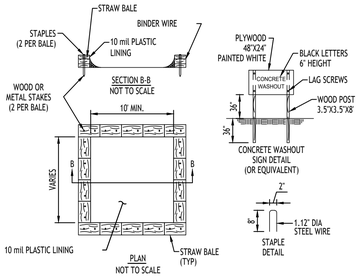


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
10. WITHIN THE NYSDOT RIGHT-OF-WAY, THE TEMPORARY CONSTRUCTION ENTRANCE SHALL CONSIST OF TEMPORARY ASPHALT.

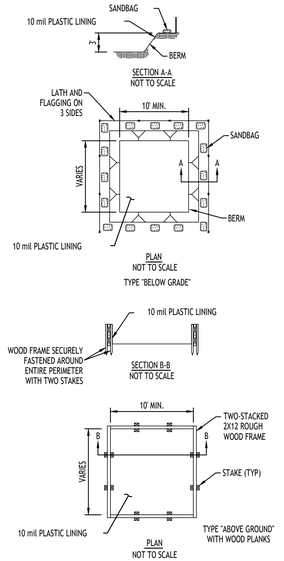
STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



NOTES

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.



CONCRETE WASHOUT DETAIL

NOT TO SCALE

NOTES:

CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED ½ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

SILT SOCK DETAIL

NOT TO SCALE

GENERAL NOTES

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF AMHERST SPECIFICATIONS WHERE APPLICABLE AND/OR SUBJECT TO THE LATEST REVISIONS BY THE TOWN ENGINEER.
2. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL LOCATIONS BEFORE BEGINNING WORK AS REQUIRED BY APPLICABLE LAWS & REGULATIONS.
3. ALL FILL WITHIN THE RIGHT-OF-WAY & UTILITY AREAS IS TO BE COMPACTED TO 95% MOD-PROCTOR, BENCHED IN 6" LIFTS, & TO BE COMPLETED PRIOR TO UTILITY & ROADWAY CONSTRUCTION.
4. STUMPS & BRUSH SHALL NOT BE BURIED IN THE TOWN.
5. ANY AREAS NOT REQUIRING FILL OR RE-GRADING SHALL NOT BE STRIPPED OF TOPSOIL.
6. ALL AREAS THAT HAVE BEEN STRIPPED ARE TO RECEIVE A MINIMUM OF 4-INCHES OF TOPSOIL, GRADED & SEEDED.
7. NO TOPSOIL IS TO LEAVE THE SITE AFTER THE TOWN RECEIVES DEDICATION.

RESTORATION NOTES

1. THE ADJACENT AREAS DISTURBED OR DAMAGED DURING CONSTRUCTION MUST BE RESTORED IN KIND TO THE SATISFACTION OF THE OWNER.
2. WHEN RESTORING LAWN AREAS ADJACENT TO NEW CONSTRUCTION, ON-SITE MATERIAL MAY BE USED TO BACKFILL THE AREA WITHIN SIX INCHES OF THE FINISHED SURFACE. ON-SITE MATERIAL SHALL BE THOROUGHLY COMPACTED & FREE OF GRASS CLUMPS, TREE ROOTS PIECES OF ASPHALT & OTHER EXTRANEOUS MATERIALS, & STONES LARGER THAN 1 INCH IN SIZE.
3. ALL DISTURBED UN-SURFACED AREAS SHALL RECEIVE FOUR INCHES OF TOPSOIL, SEED & MULCH & SHALL BE WATERED UNTIL A HEALTHY STRAND OF GRASS IS OBTAINED.
4. WHEN ADJACENT ASPHALT, CONCRETE OR PAVING STONE AREAS ARE DISTURBED AS PART OF THE CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO REPLACE THE DAMAGED OR EXCAVATED AREA. THE PERIMETER OF THE DISTURBED AREA SHALL BE SAW CUT FULL DEPTH, SO THAT ALL LINES ARE STRAIGHT & TRUE. PAVING STONES SHALL BE REPLACED IN WHOLE UNITS ONLY, & ALL REPLACEMENT PAVING STONES ARE TO MATCH THE EXISTING ONES IN SIZE, SHAPE & COLOR. ASPHALT SHALL BE COMPACTED TO A SMOOTH FINISH & SHALL BE FLUSH WITH THE EXISTING ADJACENT AREA THAT IS TO REMAIN.

DEMOLITION NOTES:

1. ALL PERIMETER SILT SOCK TO BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY BEGINNING.
2. CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
3. TEMPORARY SILT SOCK TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
4. AS NECESSARY, COVERED DUMPSTERS SHALL BE PROVIDED ONSITE AS REQUIRED FOR CONSTRUCTION WASTE.
5. REMOVE ALL TREES AND STUMPS AS SHOWN AND DISPOSE OF OFF SITE. CONTRACTOR TO PROTECT ALL TREES/BRUSH NOT DISTURBED BY CONSTRUCTION ACTIVITY. LOCATIONS OF TREES SHOWN ON PLAN ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE WITH TOWN LANDSCAPE ARCHITECT WHICH TREES SHALL BE REMOVED AND WHICH SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.

DEMOLITION & EROSION CONTROL LEGEND

- INSTALL SILT FENCE — SF
- INSTALL STORM DRAINAGE INLET PROTECTION
- EXISTING LANDSCAPING TO BE REMOVED
- APPROXIMATE LIMITS OF EXISTING BUILDING FOUNDATION, WALL, SLAB, SUPERSTRUCTURE, ETC. TO BE REMOVED
- APPROXIMATE LIMITS OF IMPERVIOUS & PERVIOUS SURFACES TO BE CLEARED/ REMOVED. ABOVE & BELOW GROUND AMENITIES WITHIN LIMITS TO BE REMOVED UNLESS NOTED OTHERWISE

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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TOWN OF AMHERST APPROVAL BOX:

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Amherst, New York

REVISIONS:

No.	Description	Date
1	Rev. per Town Review Comments	11/10/26

STATE OF NEW YORK CHRISTOPHER WOOD 076304 LICENSED PROFESSIONAL ENGINEER

DRAWING NAME:
Demo & Erosion Control plan

Date: 09.09.26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-001

Project No: 26-4103

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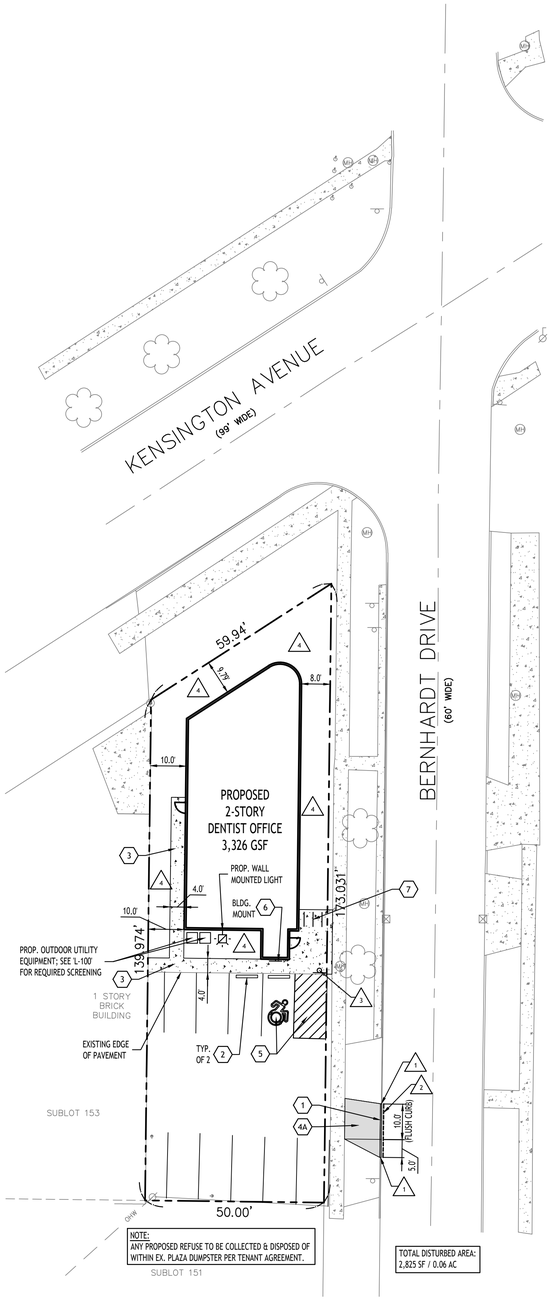
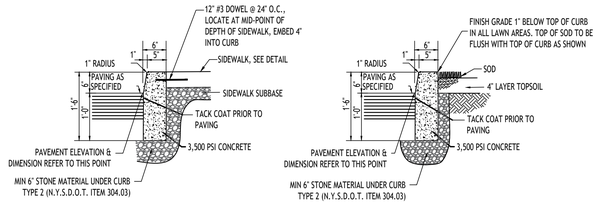


Site Plan

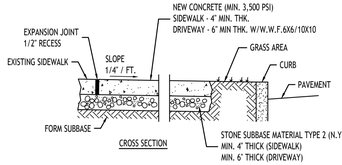
SCALE: 1"=20'



ABUTTING SIDEWALK | **ABUTTING LANDSCAPE/GRASS**

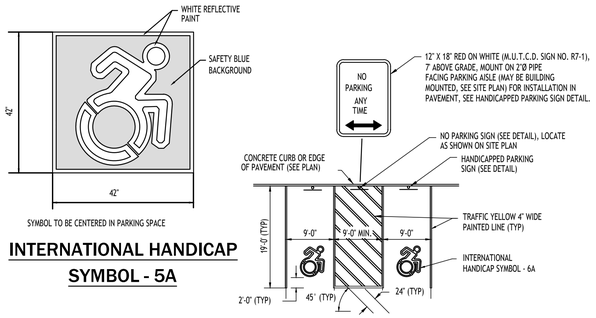
NOTES:
1. CONTROL JOINTS TO BE 2' DEEP AT 15'-0" O.C. - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. WHERE THE CURB DROPS (IS FLUSH WITH ASPHALT) THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY.

TYPE "A" CONCRETE CURB - 1



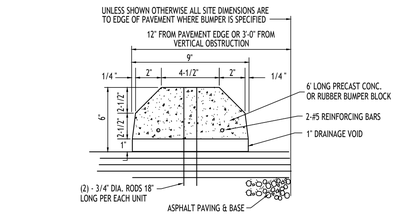
NOTES:
1. CONTROL JOINTS TO BE AT 5'-0" O.C., BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
2. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 608-3.
3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE, PROVIDE CONTINUOUS STONE PATH TO CURB UNDERDRAIN WHERE PROVIDED.
4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20' O.C., BOTHWAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.
5. SEE CURB DETAIL FOR DOWLING REQUIREMENTS WHERE ABUTTING CURB.
6. INSTALL 6" LONG #3 DOWELS @ 12" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE, THICKEN SIDEWALK TO 6" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6' DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE.
7. INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE.

CONCRETE SIDEWALK - 3

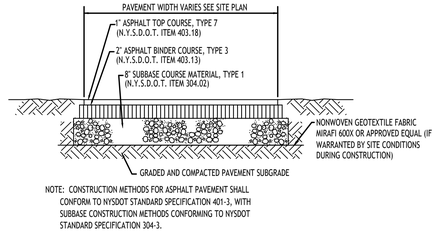


INTERNATIONAL HANDICAP SYMBOL - 5A

HANDICAPPED PAVEMENT MARKINGS & SIGNAGE - 5

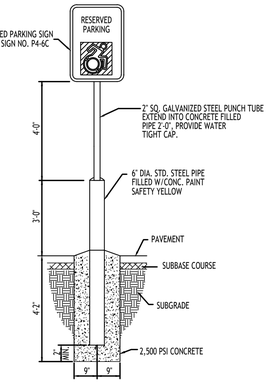


PRECAST PARKING BUMPER - 2



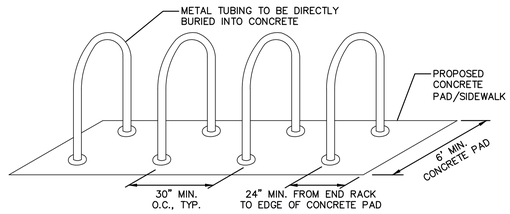
NOTE: CONSTRUCTION METHODS FOR ASPHALT PAVEMENT SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 401-3, WITH SUBBASE CONSTRUCTION METHODS CONFORMING TO NYSDOT STANDARD SPECIFICATION 304-3.

STANDARD DUTY ASPHALT SECTION - 4A



HANDICAPPED PARKING SIGN - 6

INSTALLED IN PAVEMENT



INVERTED "U" BICYCLE RACK - 7

SITE DATA		
SITE AREA = 0.18 AC OVERALL (2,825 SF / 0.06 AC TO BE DISTURBED)		
ZONED: GENERAL BUSINESS DISTRICT, TRADITIONAL NEIGHBORHOOD BUSINESS OVERLAY DISTRICT 2		
USE: PROPOSED 3,326 GSF 2-STORY DENTIST OFFICE WITH SITE IMPROVEMENTS		
SETBACKS - BUILDING	REQUIRED	PROVIDED
FRONT	NONE / 15 FT (MAX.)	9.79 FT
SIDE (ABUTTING COMM.)	NONE, OR 10' MIN.	10.0 FT
REAR (ABUTTING COMM.)	NONE	N/A
SETBACKS - PARKING		
FRONT	5 FT	76.2 FT (EX.)
SIDE	5 FT	4.7 FT (EX.)
REAR	5 FT	0.0 FT (EX.)
PARKING		
# OF SPACES - SEE CALCULATION BELOW	18	9 **
PARKING SPACE SIZE	9' x 19'	9' x 19'
BUILDING HEIGHT	26 FT (MIN.)/35 FT (MAX.)	< 35 FT
LANDSCAPING		
INTERIOR PARKING AREA (> 2,999 sf, 0%)	N/A	N/A
90% MAX. IMPERVIOUS AREA	0.16 AC	0.11 AC

** SEE ALTERNATIVE PARKING ANALYSIS

PARKING CALCULATION:

MEDICAL OFFICE:
NET SF = 80% OF G.S.F. = 0.8 x 3,326 = 2,661 N.S.F.
REQD = 1 SPACE PER 150 N.S.F
REQD = 2,661 / 150 = 17.74 = 18 SPACES REQD

DETAIL LEGEND

SEE SITE DETAIL SHEET

1. TYPE "A" CONCRETE CURB
2. PRECAST PARKING BUMPER
3. CONCRETE SIDEWALK
4A. STANDARD DUTY ASPHALT
5. HANDICAPPED PAVEMENT MARKINGS
6. HANDICAPPED PARKING SIGN
7. BIKE RACK

NOTE LEGEND

1. RUNOUT CURB IN 2' OR MATCH EXISTING CURB
2. SAWCUT LINE, MATCH EXISTING EDGE OF PAVEMENT
3. INSTALL "NO PARKING" SIGN, M.U.T.C.D. SIGN NO. P1-1C
4. LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED

GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
9. ALL REASONABLE MEASURES SHALL BE TAKEN TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

NOTES:

1. ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS: SHALL HAVE 4" MIN. OF TOPSOIL & SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
5. BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED WALL MOUNTED LIGHT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

20' 20 0 20 40Ft.

TOWN OF AMHERST APPROVAL BOX:

CARMINAWOOD DESIGN
Buffalo | Utica | Greensboro

Dentist Office

2081 Kensington Ave
Amherst, New York

REVISIONS:

No.	Description	Date
1	Rev. per Town Review Comments	11/10/26

STATE OF NEW YORK · CHRISTOPHER WOOD · 076304 · LICENSED PROFESSIONAL ENGINEER

DRAWING NAME:
Site Plan
& Details

Date: 09.09.26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.
C-100

Project No: 26-4103

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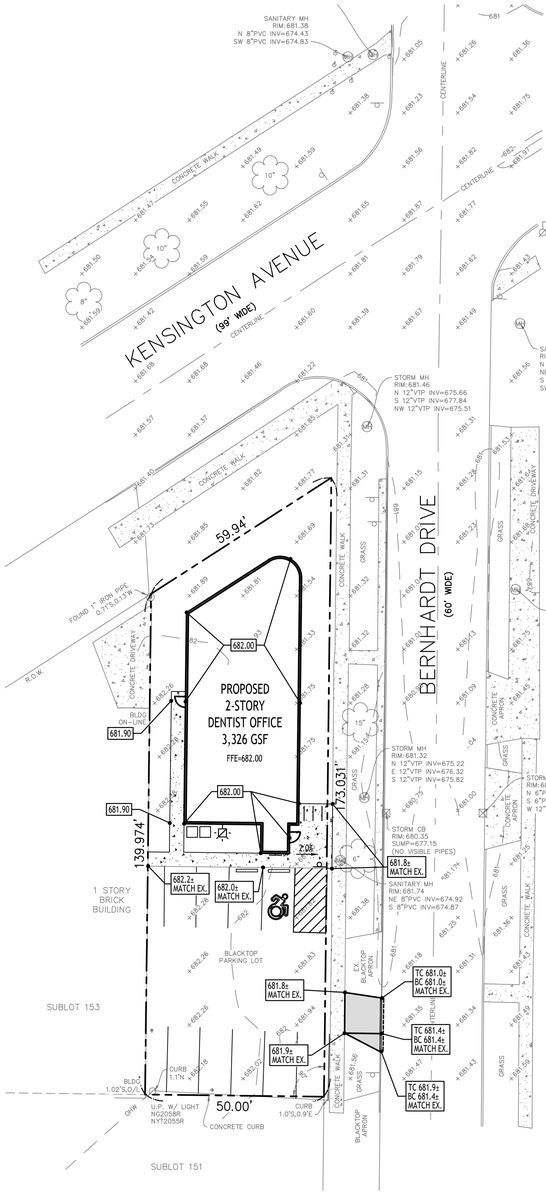
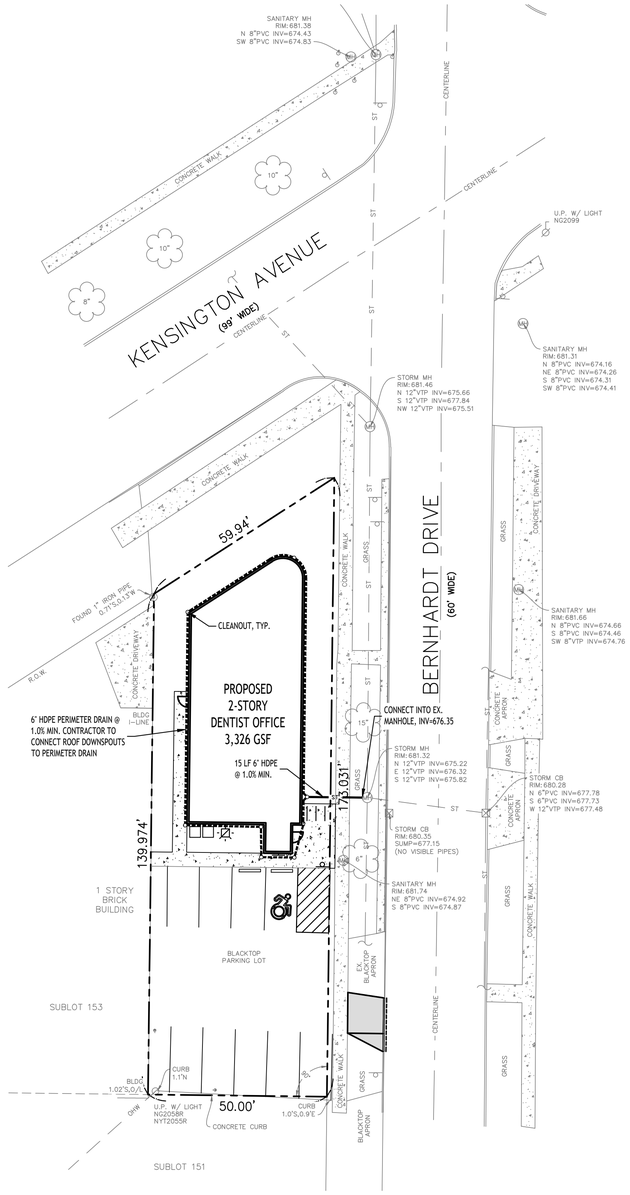


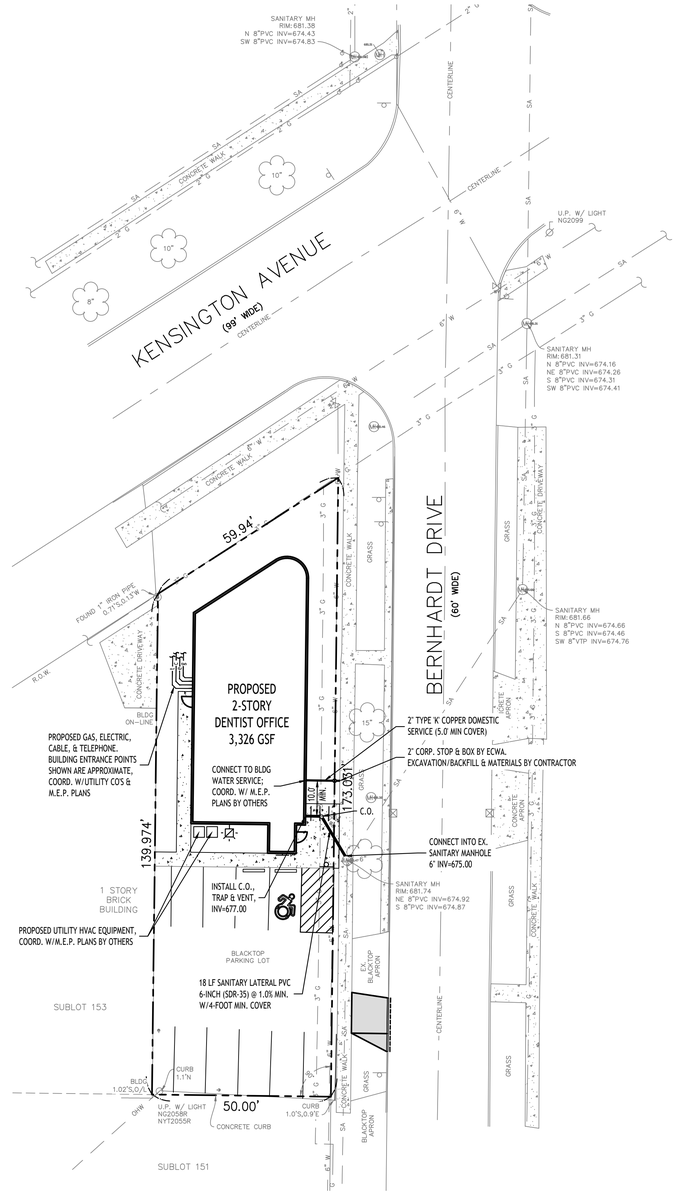
Grading Plan

SCALE: 1"=20'



Storm Drainage Plan

SCALE: 1"=20'



Utility Plan

SCALE: 1"=20'

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	ST
PROPOSED SANITARY SEWER	6" SA
PROPOSED WATERLINE	1" W
PROPOSED CATCH BASIN	CB
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH
PROPOSED HYDRANT ASSEMBLY	
PROPOSED GATE VALVE	GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

PROPOSED GRADING LEGEND

PROPOSED CONTOUR	101
PROPOSED SPOT ELEVATION	100.80
PROPOSED TOP/BOTTOM OF CURB ELEV.	TC 100.50 BC 100.00
PROPOSED CATCH BASIN	CB
PAVEMENT/GROUND SLOPE	
PROPOSED YARD DRAIN	YD
PROPOSED MANHOLE	MH

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

20' 20 0 20 40Ft.

TOWN OF AMHERST APPROVAL BOX:

CARMINAWOOD
DESIGN
Buffalo | Utica | Greensboro

Dentist Office

2081 Kensington Ave
Amherst, New York

REVISIONS:

No.	Description	Date
1	Rev. per Town Review Comments	11/10/26

STATE OF NEW YORK
CHRISTOPHER WOOD
LICENSED PROFESSIONAL ENGINEER
076394

DRAWING NAME:

Grading, Utility, & Storm Drainage Plan

Date: 09.09.26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.

C-200

Project No: 26-4103

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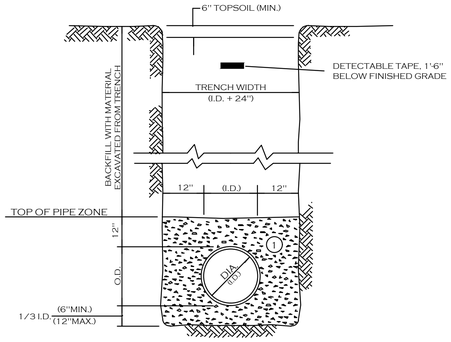


NOTES:

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.

C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

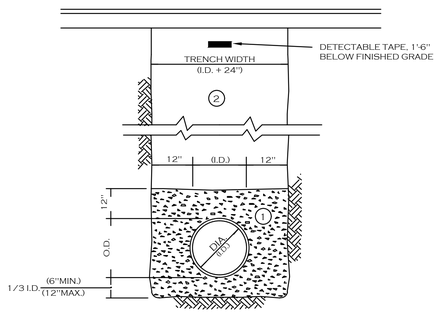
(1) NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)

(2) NO.2 RUN OF CRUSHER STONE OR NO.2 RUN OF CRUSHER GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6"LIFTS TO 90% DENSITY)

NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS 1 AND (2)

UTILITY TRENCH SECTION IN UNPAVED AREAS



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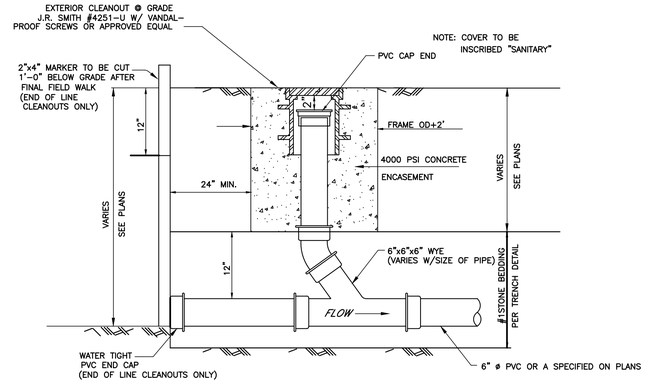
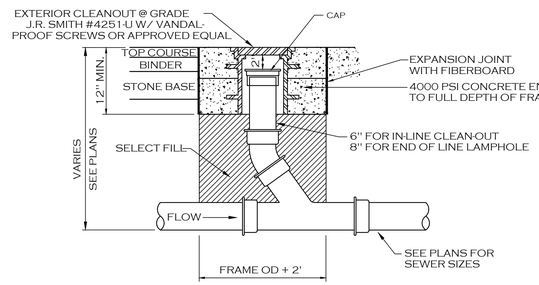
NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS 1 AND (2)

UTILITY TRENCH SECTION IN PAVED AREAS



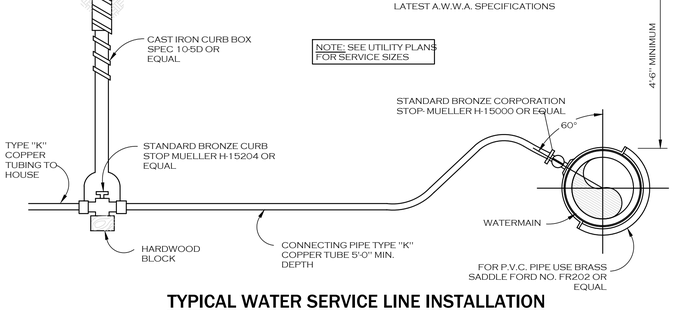
LAMPHOLE/CLEANOUT IN LAWN/FIELD AREAS

NOT TO SCALE

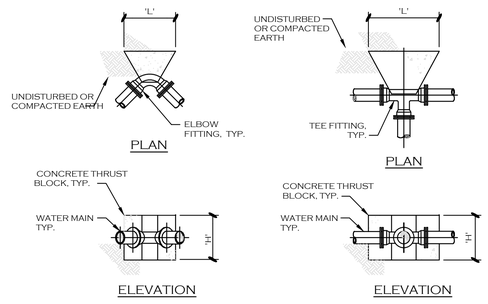


Lamphole/Cleanout in Pavement/Sidewalk

NOT TO SCALE



TYPICAL WATER SERVICE LINE INSTALLATION



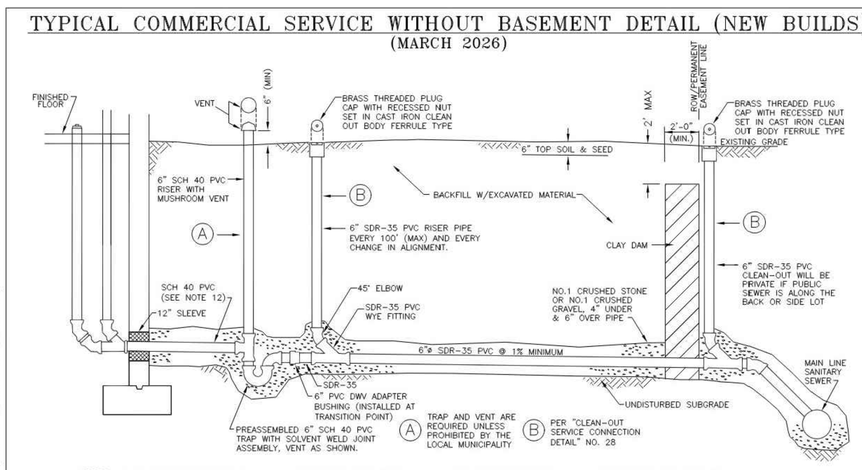
DIMENSION SCHEDULE		
PIPE SIZE	TEE OR TAP SLEEVE	
—	'H'	'L'
4"	1.5'	1.0'
6"	1.5'	2.5'
8"	1.5'	3.5'
10"	2.5'	3.5'
12"	3.5'	3.5'

DIMENSION SCHEDULE								
PIPE SIZE	90° ELBOW		45° ELBOW		22.5° ELBOW		11.25° ELBOW	
	'H'	'L'	'H'	'L'	'H'	'L'	'H'	'L'
4"	1.5'	2.0'	1.0'	2.0'	1.0'	1.0'	1.0'	1.0'
6"	2.0'	2.5'	1.5'	2.0'	1.0'	1.5'	1.0'	1.5'
8"	2.5'	3.5'	2.0'	2.5'	1.5'	1.5'	1.0'	2.0'
10"	3.0'	4.5'	2.5'	3.0'	1.5'	3.0'	1.0'	2.5'
12"	3.5'	5.0'	3.0'	3.5'	2.5'	2.5'	1.5'	2.5'

THRUST BLOCK SCHEDULE

TYPICAL COMMERCIAL SERVICE WITHOUT BASEMENT DETAIL (NEW BUILDS)

(MARCH 2026)



NOTES:

1. NO INSPECTION WILL BE PROVIDED WITHOUT A PERMIT. INSPECTIONS REQUIRE 48 HR. ADVANCE NOTICE FOR SCHEDULING.
2. ALL WORK MUST BE INSPECTED BY A COUNTY INSPECTOR.
3. PVC PIPE MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST ASTM SPECIFICATION D-3033/D-3034.
4. CLEANOUTS MUST BE INSTALLED IN LAWN AREAS. IF NOT FEASIBLE FOLLOW "CLEAN-OUT IN PAVEMENT/SIDEWALKS DETAIL" NO. 53
5. SELECT BACKFILL REQUIRED UNDER PAVED AREAS.
6. CONCRETE ENCASEMENT IF COVER DEPTH IS LESS THAN 4'-0" UNDER PAVED AREAS.
7. MIN. DEPTH OF COVER 3'-0".
8. CLEANOUT MEASUREMENTS SHALL START FROM CENTERLINE OF MAIN SEWER FOR NEARSIDE LATERALS AND FROM THE 6" CLEANOUT FOR FAR SIDE CONNECTIONS. A CLEANOUT MAY BE REQUIRED FOR ANY ABRUPT CHANGES IN LATERAL DIRECTION FLOW.
9. ANY EXCAVATION TO BE LEFT OPEN OVERNIGHT SHALL BE COMPLETELY ENCLOSED IN FENCING, OR WHERE NECESSARY, COVERED WITH STEEL PLATES.
10. DOWN SPOUTS, SUMP PUMPS, AND FOOTING DRAINS ARE NOT PERMITTED TO BE CONNECTED TO THE LATERAL.
11. NO CONNECTION SHALL BE MADE UNTIL BUILDING ROOF IS ERECTED.
12. IF CAST IRON IS USED EXITING THE BUILDING, A MISSION COUPLING IS REQUIRED BEFORE THE TRAP.
13. 6" CLEAN OUT IS REQUIRED NEAR THE RIGHT OF WAY OR PERMANENT EASEMENT LINE FOR BOTH NEAR SIDE AND FAR SIDE LATERALS.

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

Rev. 11/08	ADDED SLEEVE AND PVC-SDR 35	
Rev. 1/12	REVISED 6" CAST IRON TRAP NOTE	
Rev. 10/21	REMOVED VENT, RISER, AND TRAP ASSEMBLY	
Rev. 11/23	ADDED VENT, RISER, TRAP ASSEMBLY & (A)	
Rev. 3/24	CHANGED VENT, RISER, TRAP ASSEMBLY SCH 40	
Rev. 11/25	ADDED NEAR SIDE C.O.(B) ADD NOTE 14 DELETE 9	
Rev. 3/26	ADDED NOTE 14 CHANGED NOTE 4	
File:	D-22	Date: 3/1/91

STD. DETAIL 22

File: V:\DSM\Engineering\CAD\Details\Details March 2026\D-22.dwg, Last saved: 5/5/2026, Plot Date: 5/5/2026, Plot Style: DETAILS.CTB

TOWN OF AMHERST APPROVAL BOX:

CARMINAWOOD DESIGN
Buffalo | Utica | Greensboro

Dentist Office

2081 Kensington Ave
Amherst, New York

REVISIONS:

No.	Description	Date
1	Rev. per Town Review Comments	11/10/26



DRAWING NAME:

Storm & Utility Details

Date: 09.09.26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.

C-201

Project No: 26-4103

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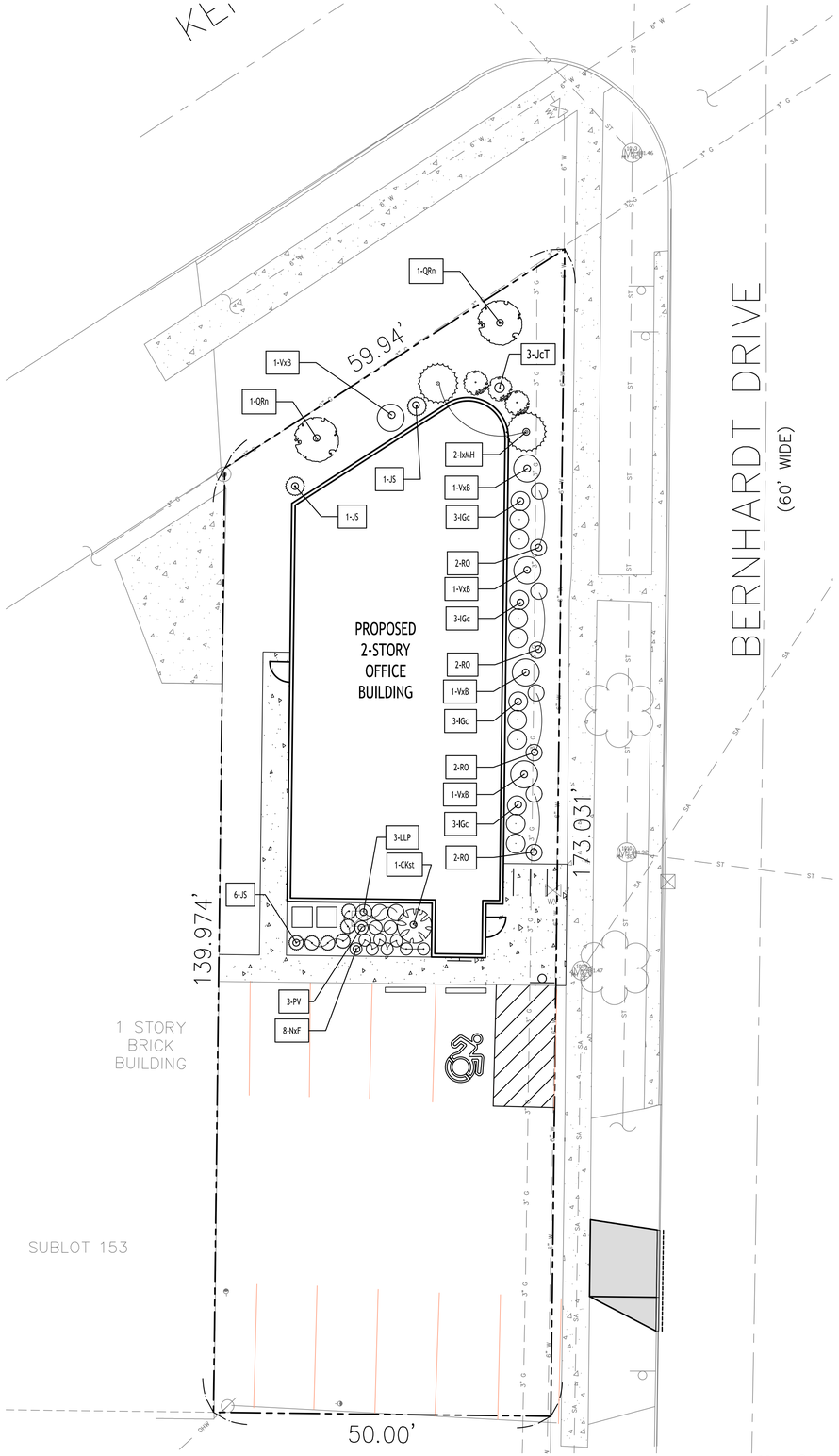


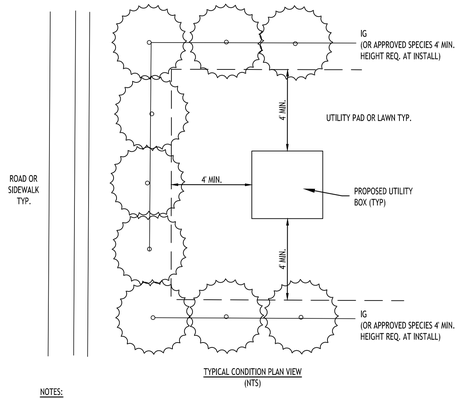
Plant Finish Schedule - 2081 Kensington Ave. - Amherst, New York

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
		DECIDUOUS TREES			
QRn	2	Quercus robur x bicolor Nadler PP17604'	Kindred Spirit Oak	2 1/2" - 3" CAL.	B&B, HT. 30', W 6'
		SMALL / ORNAMENTAL TREES			
CKst	1	Cornus kousa 'Snow Tower' PPAF	Snow Tower Kousa Dogwood	Multi-stem 12' Tall Min.	B&B, HT. 15', W 6'
		EVERGREEN TREES			
JS	8	Juniperus scopolarum 'Skyrocket'	Skyrocket Juniper	6-8' Tall	B&B, HT. 16', W 4'
		SHRUBS			
VxB	5	Viburnum x burkwoodii	Burkwood Viburnum	36-48" Tall	B&B, HT. 5-7', W 6'
IGc	12	Ilex glabra compacta	Inkberry Holly - Compact	24-36" Tall	B&B, HT. 4', W 4'
LLP	3	Hydrangea paniculata 'Little Lime Punch'	Little Lime Punch Panicle Hydrangea	24-36" Tall	B&B, HT. 5', W 5'
IxMH	2	Ilex x meserveae 'Hachfee'	Castle Spire Blue Holly	24-36" Tall	B&B, HT. 12', W 4'
		GRASSES / PERENNIALS / GROUNDCOVERS			
RO	8	Andropogon Gerardii 'Red October'	Red October Big Blue Stem	18-24" Tall	Cont. #3, HT. 4', W 6'
PV	3	Panicum virgatum 'Shenandoah'	Switch Grass	18-24" Tall	Cont. no.3 - 3'Tall, 3'Wide
JcT	3	Juniperus communis 'Tortuga'	Tortuga Juniper	6-12" Tall	B&B, HT. 2', W 6'
NxF	8	Nepeta x faassenii 'Walker's Low'	Walkers Low Catmint	6-12" Tall	Cont. no.3 - 18" Tall, 1-4'Wide

N

Site Plan

SCALE: 1"=10'



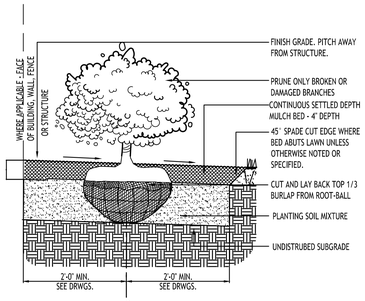
TYPICAL CONDITION PLAN VIEW
(NTS)

NOTES:

1. USE EVERGREEN SHRUBS TO SCREEN ALL ABOVEGROUND UTILITY BOXES AND INFRASTRUCTURE FROM ADJACENT ROAD OR SIDEWALK PER TOWN OF AMHERST CODE.
2. PROVIDE A MINIMUM 4' OFFSET FROM THE SHRUBS PLANTED EDGE TO THE EDGE OF THE UTILITY BOX TO ALLOW ENOUGH CLEARANCE FOR UTILITY MAINTENANCE TO BE PERFORMED.

TYPICAL SHRUB PLANTING TO SCREEN UTILITY INFASTRUCTURE

NOT TO SCALE



STD. SHRUB PLANTING

NOT TO SCALE

LEGEND

DECIDUOUS TREE

SMALL TREE

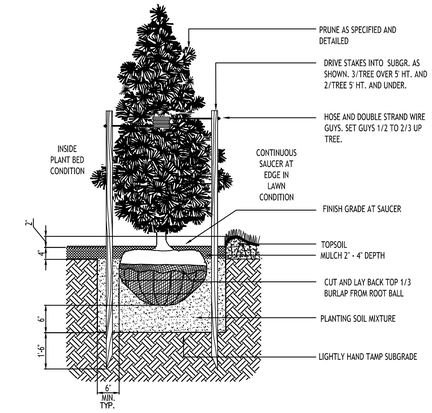
EVERGREEN TREE/SHRUB

BUSH/ORNAMENTAL GRASS PERENNIAL

GROUND COVER

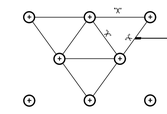
PLANTING NOTES:

1. ALL INTERIOR LANDSCAPED AREAS SHALL HAVE A MINIMUM PLANTING SOIL DEPTH OF THREE (3) FEET AND BE FREE FROM ALL FORMS OF CONSTRUCTION DEBRIS AND FOREIGN MATERIAL.
2. ALL TREE PIT SAUCERS, SHRUB BEDS, ORNAMENTAL GRASS BEDS, AND PERENNIAL FLOWER BEDS SHALL RECEIVE 'PREEN' HERBICIDE AND THREE (3) INCHES DEPTH OF DARK SHREDDED HARDWOOD BARK MULCH.
3. ALL SEASONAL FLOWER BEDS SHALL BE A MINIMUM OF TWELVE (12) INCHES DEEP WITH A WELL-BLENDED MIXTURE OF 50% PEAT MOSS & 50% SCREENED TOPSOIL. SEASONAL FLOWER BEDS SHALL RECEIVE 'PREEN' HERBICIDE. NO MULCH SHALL BE INSTALLED IN THE SEASONAL FLOWER BEDS.
4. ALL DECIDUOUS AND EVERGREEN TREES SHALL BE STAKED WITH THREE (3) TREE STAKES AS PER TREE PLANTING DETAIL.



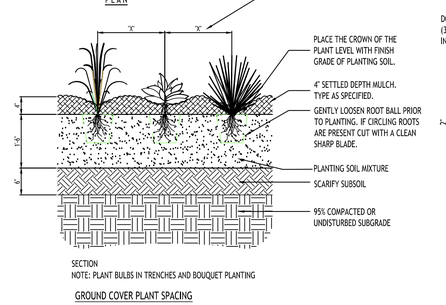
STD. EVERGREEN PLANTING

NOT TO SCALE



TYPICAL SPACING "X" NOTED ON DRAWINGS AS ON-CENTER DIMENSION.

PLAN



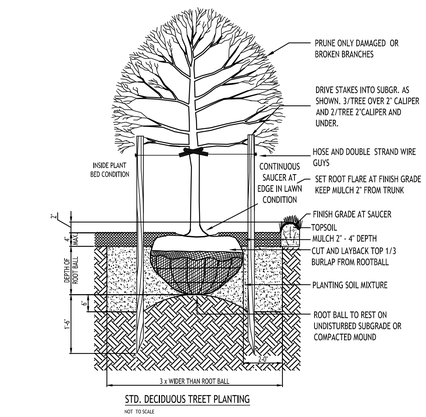
SECTION
NOTE: PLANT BULBS IN TRENCHES AND BOUQUET PLANTING

GROUND COVER PLANT SPACING

NO TO SCALE

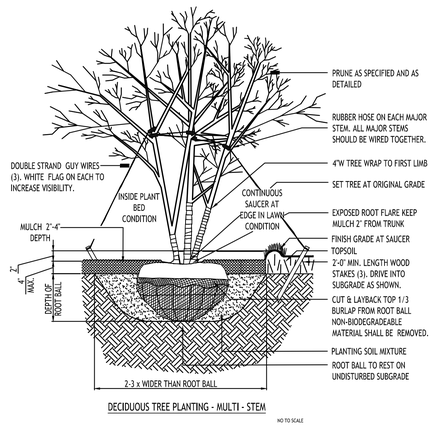
LANDSCAPE NOTES:

1. ALL PLANTS INSTALLED SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED ON THE PLANS AND IN THE LATEST EDITION ON THE AMERICAN STANDARD FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, ANSI 260.1
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFF, THE QUANTITIES SHOWN ARE A MINIMUM AND ARE FOR REFERENCE ONLY.
3. THE CONTRACTOR SHALL PERFORM A ROUGH FIELD STAKEOUT OF ALL PLANTING MATERIAL LOCATIONS AND CONTACT THE OWNERS FIELD REPRESENTATIVE PRIOR TO ACTUALL INSTALLING. THE PLANTING MATERIAL LOCATIONS SHOWN ON THE PLANS ARE TO CONVEY THE DESIGN INTENT ONLY, ACTUAL LOCATIONS WILL BE FINALIZED BY THE OWNERS FIELD REPRESENTATIVE AT THE TIME OF INSTALLATION.
4. THE CONTRACTOR IS HEREBY NOTIFIED THAT IF UNDERGROUND UTILITIES EXIST IN THE VICINITY OF THE PLANTINGS, ALL PROPOSED PLANTINGS SHALL BE INSTALLED A MINIMUM OF 5' FROM ANY UNDERGROUND UTILITY, CONTACT THE OWNERS FIELD REPRESENTATIVE IF PLANTINGS SHOWN ON THE PLANS VIOLATE THIS SITUATION.
5. ALL TREES SHALL BE INSTALLED A MINIMUM OF 20' FROM ANY OVERHEAD ELECTRIC LINES.
6. PLANTING BACKFILL MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, ½ PART WELL ROTTED MANURE, 10 LBS 5-10-5 PLANTING FERTILIZER THOROUGHLY MIXED PER CUBIC YARD.
7. STAKE AND WRAP TREES IMMEDIATELY FOLLOWING INSTALLATION.
8. ALL PLANTED AREAS SHALL RECEIVE A 3" LAYER OF SHREDDED PINE BARK MULCH OVER 10 MIL. WEED MAT EQUAL TO "WEEDBLOCK" BY EASY GARDENER OR DEWITT WEED BARRIER.
9. THE AREAS ON THE PLAN TO BE SEEDED SHALL HAVE 4" MINIMUM OF TOPSOIL, DISK PLOWED, LEVELED AND HAND RAKED SMOOTH. SURFACE SHALL BE ROLLED TO REMOVE LUMPS.
10. ALL SEEDED AREAS SHALL BE HYDROSEEDED IN ACCORDANCE WITH THE SPECIFICATION INDICATED. WHERE REQUIRED BY CLIMATIC CONDITIONS, SLOPE OR SEASON OF PLANTING, SOD MAY BE SUBSTITUTED FOR SEEDING IN ORDER TO ACHIEVE THE REQUIRED COVERAGE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MOWING AND OTHER MAINTENANCE TO SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER, THIS SHALL INCLUDE WATERING DAILY FOR 15 DAYS OR AS REQUIRED BY WEATHER CONDITIONS AND RE-SEEDING OF THIN SPOTS FOLLOWING THE GERMINATION OF THE SEEDS.



STD. DECIDUOUS TREET PLANTING

NOT TO SCALE



DECIDUOUS TREE PLANTING - MULTI - STEM

NO TO SCALE

PER TOWN OF AMHERST CODE:
ALL DEAD OR MISSING EXISTING PLANTS FROM THE PREVIOUSLY APPROVED SITE PLANS SHALL BE REPLACED/INSTALLED AS PER ZONING ORDINANCE 7-2-3(A)(1). CONTRACTOR SHALL REFER TO PREVIOUSLY APPROVED SITE AND LANDSCAPE PLANS BY OTHERS FOR ALL LANDSCAPE REFERENCES.

PER TOWN OF AMHERST CODE:
CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS AS PER ZONING ORDINANCE 7-2-3(B)(3).

PER TOWN OF AMHERST CODE:
ALL REFUSE CONTAINERS & ALL MECHANICAL EQUIPMENT, UTILITY STRUCTURES, MULTIPLE METER BOARDS, GENERATORS, RPZ'S, & SIMILAR APPURTENANCES, INCLUDING THOSE WHICH ARE MOUNTED ON ANY PART OF A PRIMARY STRUCTURE SHALL BE SHOWN ON THE SITE PLAN & APPROPRIATELY SCREENED W/ A FENCE, WALL, &/OR LANDSCAPING AS REQUIRED BY 203-7-2-4(C) & 203-7-2-4(D) OF TOWN CODE. SUCH SCREENING SHALL BE SHOWN ON THE PLANS SUBMITTED FOR REVIEW. PROVIDE GATE ON REFUSE ENCLOSURE THAT SHALL BE CLOSED WHENEVER REFUSE CONTAINER(S) ARE NOT BEING SERVICED & ENCLOSURE SHALL BE HIGH ENOUGH TO SCREEN THE REFUSE CONTAINERS WITHIN.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

10' 10 0 10 20Ft.

TOWN OF AMHERST APPROVAL BOX:

CARMINAWOOD
DESIGN
Buffalo | Utica | Greensboro

Dentist Office

2081 Kensington Ave
Amherst, New York

REVISIONS:

No.	Description	Date
1	Rev. per Town Review Comments	11/10/26



DRAWING NAME:
Site Landscape Plan

Date: 09.09.26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.

L-100

Project No: 26-4103

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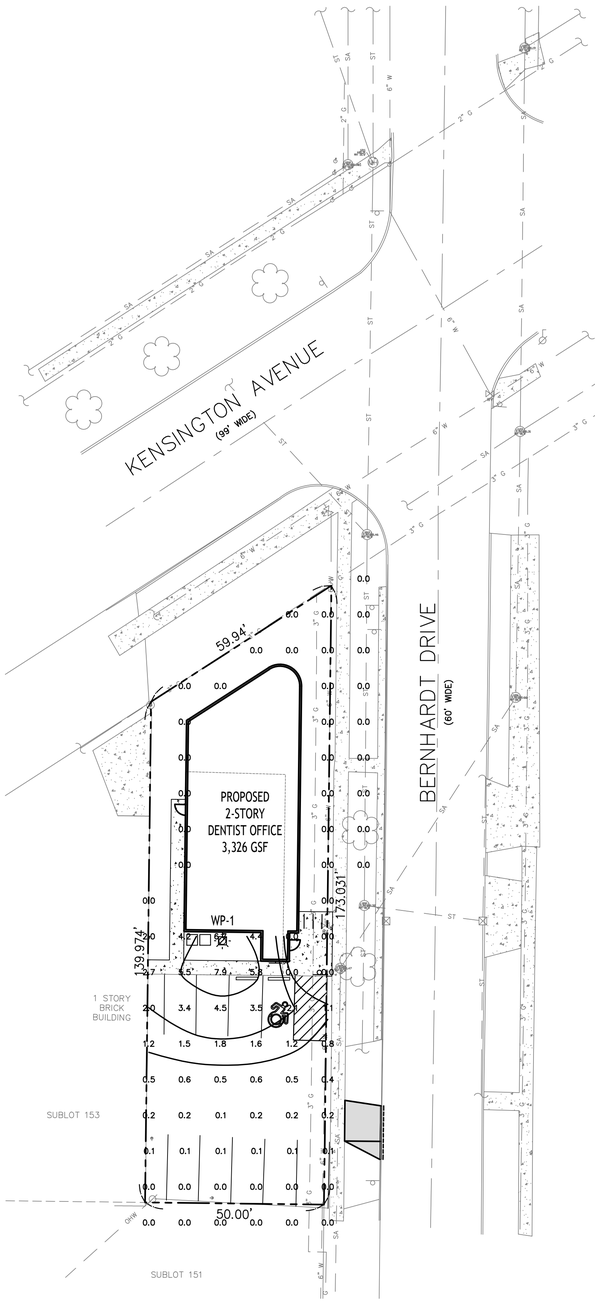


N

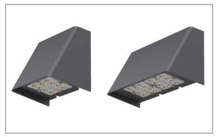
Lighting Plan

SCALE: 1"=20'

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	VOLTS	NOTE 1	NOTE 2	QUANTITY	LUMENS / LAMP
WP-1	⊢○	(20) (20) 2200K CCT, 70 CRI LEDS	GEKKO WALL PACK 12000LM PACKAGE 70CRI 2200K FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC	ELECTRONIC	WALL	COOPER LIGHTING SOLUTIONS – McGraw-Edison, GKO-PB2E-722-U-T4W	120V 1P 2W	BUG Rating: B2-U0-G2	Mounting Height: 15.0'	1	10292

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GKO Gekko

Wall Mount Luminaire

Product Features

Light Attributes®

Product Certifications

DLC LISTED, DLC PREMIUM, ENERGY STAR, cULus DAMP LOCATION, FC COMPLIANT, IP66, BAA, TAA, BASA, DLC, 5 YEAR, RoHS

Interactive Menu

- Ordering Information page 2
- Product Specifications page 2
- Optical Configurations page 3
- Energy and Performance Data page 4
- Control Options page 10

Quick Facts

- Available in small and medium housing sizes
- Choice of 5 optical distributions
- 11 lumen packages from 750 up to 13,500
- Efficacies up to 169 lumens per watt

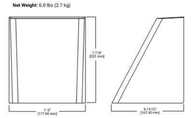
Connected Systems

- WaveLinx PRO Wireless
- WaveLinx LITE Wireless

Dimensional Details

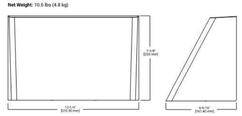
PB1

Net Weight: 6.0 lbs (2.7 kg)



PB2

Net Weight: 10.5 lbs (4.8 kg)



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

McGraw-Edison

GKO Gekko

Ordering Information

SAMPLE NUMBER: **GKO-PB2A-740-U-T3-BK**

Product Family	Light Engine Configuration: Light Engine	Light Engine Configuration: Size	Lumen Output	Color Temperature	Voltage	Distribution	Finish
GKO=Gekko Wall Mount **BAA-GKO**=Gekko Buy American Act Compliant **TAA-GKO**=Gekko Trade Agreements Act Compliant **BAAH'-GKO**=Gekko Build America Buy American Act Compliant for FHWA funded projects [1]	**PB**=Mini 10-LED Light Square	1=Small, 1 Square 2=Medium, 2 Square	**A**=Output Level 1 **B**=Output Level 2 **C**=Output Level 3 **D**=Output Level 4 **E**=Output Level 5 **F**=Output Level 6 [2]	722=70 CRI, 2200K CCT 727=70 CRI, 2700K CCT 730=70 CRI, 3000K CCT 735=70 CRI, 3500K CCT 740=70 CRI, 4000K CCT 750=70 CRI, 5000K CCT 827=80 CRI, 2700K CCT 830=80 CRI, 3000K CCT 835=80 CRI, 3500K CCT 840=80 CRI, 4000K CCT 850=80 CRI, 5000K CCT **AWC**=Amber 3000K [3]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **H**=347-480V [4] **9**=347V [4]	**T1**=Type I **T2R**=Type II Round **T2S**=Type II Offset **T3**=Type III **T4W**=Type IV Wide	**AP**=Grey **DB**=Bronze **BK**=Black **DP**=Dark Platinum **SP**=Super Platinum **WH**=Raw White

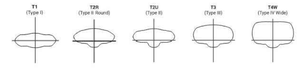
Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately)
P=Single Fused (120, 277 or 347, Specify Voltage) FF=Double Fused (208, 240 or 480, Specify Voltage) **DMG**=0-10V Dimming Driver (Standard) **ZDM**=Zero (0)% DALI/ADV Fazed Surge Protective Device **2L**=Two Circuits [5] **EM**=Emergency Pack **CBP**=5W Battery Pack, Cold Weather Rated [6,9] **CBP-CEC**=9W Battery Pack, Cold Weather Rated, CEC Compliant [6,9] **HSS**=Factory Installed House Side Shield **HA**=50°C High Ambient [9] **CC**=Coastal Construction [9]	**BPC**=Button Type Photocontrol (120, 208, 240 or 277V, Must Specify Voltage) **FADC**=Field Adjustable Dimming Controller [9] **SPR**=Dimming Occupancy Sensor with Bluetooth Interface, <8' Mounting [9,10] **SPO**=Dimming Occupancy Sensor with Bluetooth Interface, 8'-20' Mounting [9,10] **MS/SM-LOR**=Motion Sensor for Dimming Operation, <8' Mounting [9,10,11] **MS/DIM-L25**=Motion Sensor for Dimming Operation, 8'-20' Mounting [9,10,11] **WPX2MW**=WaveLinx Pro, 2ft Driver, Dimming Motion and Daylight, WAC Programmable, 8'-16' Mounting [9,10] **WPX4MW**=WaveLinx Pro, 2ft Driver, Dimming Motion and Daylight, WAC Programmable, 17'-40' Mounting [9,10] **WLS2MW**=WaveLinx Lite, 2ft Driver, Dimming Motion and Daylight, Bluetooth Programmable, 8'-16' Mounting [9,10] **WLS4MW**=WaveLinx Lite, 2ft Driver, Dimming Motion and Daylight, Bluetooth Programmable, 17'-40' Mounting [9,10]	**PBHSS**=House Side Shield (Single) [7] **PBPTS**=Perimeter Fence Shield Kit (4 Pieces) **PBSRA**=Square Pole Arm Adapter, Max 165 EPA [8] **MA1322**=10kV Surge Module Replacement **BS/GKO-XX**=Surface mount backbox [9]

NOTES:
1. Buy America Level II not available with PB2.
2. Narrow band 350mA (+/- 5mA for wildlife and observatory use. Choose Output Level 1) supplied at 350mA for PB1, 600mA for PB2. Not available with HA option. Exact luminaire wattage available in IES files.
3. Not available with PB1. Not available with CP option, or controls options of 347V or 480V.
4. Not available with PB1. Not available with CP option.
5. Coastal construction finish salt spray tested to over 6,000 hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
6. Smart device with wireless application required to change system defaults. See controls section for details.
7. Not available with PB1.
8. Not available with PB1 or Output Level 1 or 2. Not available with other exterior activated control options.
9. Only required on PB light square.
10. Bluetooth Programmable not available with PB2 at output level 5 or 7.
11. When motion controls are selected, PB1 uses surface mount sensor in PB2 housing. PB2 uses side-mount motion sensor in PB2 housing.
12. The FADC-100 configuration tool is required to adjust parameters including high and low levels, sensitivity, time delay, ramp rates and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
13. Components, shipped separately may be separately analyzed under domestic preference requirements. See DOMESTIC PREFERENCES website for more information. Components, shipped separately may be separately analyzed under domestic preference requirements.
14. Buy America Compliant: Meets the requirements of the Build America Buy America Act (BABA) of 2021, Division A, Section 70914 of the Infrastructure Investment and Jobs Act (IIJA). Individual Government Agencies may have more stringent compliance standards. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components, shipped separately may be separately analyzed under domestic preference requirements.
15. 4000 mA/W is not available with PB2.
16. 4000 mA/W is not available with PB2.
17. 4000 mA/W is not available with PB2.
18. Operates at 0°C to +55°C.
19. Replace XX with color designation. Includes 5 gasketed 3/4" conduit entry points.

McGraw-Edison

GKO Gekko

Optical Distributions



Energy and Performance Data

Lumen Maintenance

Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours*	L70*
25°C	98.1%	96.3%	95.6%	92.8%	>102,000
40°C	98.0%	96.1%	95.3%	92.3%	>102,000
50°C	97.8%	95.6%	94.8%	91.4%	>102,000

Note: * Calculations provided in accordance with IES TM-21-11 using the configuration results in highest LED temperature.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

FADC Settings

FADC Position	Percent of Typical Lumen Output
1	25%
2	48%
3	56%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

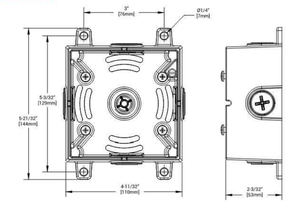
Note: +/-5% typical value

LED Color Multipliers

	CCT				
	2200	2700	3000	4000	5000
CRI	Lumen Multiplier*				
70	0.83	0.92	0.95	1.00	1.00

Note: * Estimates, refer to IES file for accuracy.

Accessories



SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES (27)
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED WALL MOUNTED LIGHT

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

20' 20 0 20 40Ft.

TOWN OF AMHERST APPROVAL BOX:

CARMINAWOOD DESIGN

Buffalo | Utica | Greensboro

Dentist Office

2081 Kensington Ave
Amherst, New York

REVISIONS:

No.	Description	Date
1	Rev. per Town Review Comments	11/10/26

STATE OF NEW YORK
CHRISTOPHER WOOD
027394
LICENSED PROFESSIONAL ENGINEER

DRAWING NAME:

Lighting Plan

Date: 09.09.26
Drawn By: C. Wood
Scale: As Noted

DRAWING NO.

LP-100

Project No: 26-4103

GENERAL STRUCTURAL NOTES:

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2025 NEW YORK STATE BUILDING CODE

2. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AS A COMPLETE UNIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, AND SEQUENCES OF ALL PHASES OF CONSTRUCTION AND DEMOLITION INCLUDING TEMPORARY SHORING, BRACING, COLD AND HOT-WEATHER PROTECTION. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND STANDARDS THAT PERTAIN TO MEANS, METHODS. AND SEQUENCES OF CONSTRUCTION.

3. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION AND COORDINATED WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE SUCH REQUIREMENTS INTO THEIR WORK.

4. DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR THE MOST NEARLY SIMILAR CONDITION AS DETERMINED BY THE ARCHITECT OR ENGINEER.

5. CONTRACTOR TO COORDINATE ALL OPENINGS, EQUIPMENT LOCATIONS, AND INSERTS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE TRADES THAT REQUIRE THEM. PENETRATIONS THROUGH STRUCTURAL MEMBERS ARE NOT PERMITTED EXCEPT AS DETAILED..

6. SHOP DRAWINGS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED AND SIGNED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE ARCHITECT AND ENGINEER. REPRODUCTIONS OF THE STRUCTURAL DRAWINGS SHALL NOT BE USED FOR THE PREPARATION OF SHOP DRAWINGS. MANUFACTURED COMPONENTS SHALL BE SIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER PRIOR TO SUBMISSION.

DESIGN LOADS:

1. LIVE LOAD:
   - PUBLIC SPACES, LOBBIES AND EXITS = 100 PSF
   - OFFICES = 50 PSF

2. SNOW LOADS:
   - Pg = 59psf ULT
   - Pf = 34.7psf (ASD)
   - I = 1.0
   - Ct = 1.20

3. WIND LOADS:
   - Vult = 109mph
   - EXPOSURE = B

SEISMIC

SEISMIC USE GROUP "II" – SEISMIC DESIGN CATEGORY "A"
SDS = 0.140g
SD1 = 0.057g
SITE CLASS "D"

BASIC SEISMIC FORCE RESISTING SYSTEM = WOOD PANEL SHEAR WALLS
DESIGN BASE SHEAR = 5k
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE
Ie = 1.00

FOUNDATIONS:

1. SOIL BEARING SURFACES SHALL BE DRY AND FREE FROM FROST OR LOOSE MATERIAL. EXISTING SOIL TO BE REMOVED AND REPLACED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL SOIL BEARING SURFACES AND BACKFILL SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR OTHER APPROVED TESTING AGENT.

2. CONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING BELOW GRADE UTILITIES PRIOR TO CONSTRUCTION.

3. CONTRACTOR TO PROVIDE TEMPORARY PROTECTION AS REQUIRED FOR FOUNDATIONS EXPOSED TO WATER OR FREEZING.

4. ALL FILL PLACED UNDER AND AROUND FOOTINGS, SLABS, AND FOUNDATION WALLS SHALL BE GRANULAR MATERIAL SIMILAR TO TYPE 2 SUBBASE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. EACH LIFT SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHOD. THE DEPTH AND EXTENT OF FILL PLACEMENT SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

5. ALL PIPING SLEEVES THROUGH FOUNDATION WALLS AND FOOTING STEPS TO ACCOMMODATE PIPING SHALL BE COORDINATED WITH THE PLUMBING CONTRACTOR/DRAWINGS.

6. BOTTOM OF ALL FOOTINGS SHALL BE A MINIMUM OF 3'-0" BELOW GRADE EXCEPT WHERE FIELD CONDITIONS REQUIRE AN ADJUSTMENT.

7. BACKFILLING OF FOUNDATION WALLS IS NOT BEGIN UNLESS WALLS ARE ADEQUATELY BRACED OR FILLING IS BALANCED.

8. PROVIDE CONTROL JOINT FOR ALL SLABS-ON-GRADE AT COLUMN CENTERLINES AND AT A MAXIMUM OF 12'0" O.C., UNLESS SHOWN OTHERWISE ON PLANS.

CONCRETE:

1. CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO ACI 318 AND ACI 301.

2. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE:
   - 2.1. PILE CAPS/FOOTINGS 3,000psi, MAX. W/C RATIO = 0.49
   - 2.2. PIERS, GRADE BEAMS 3,500psi, MAX. W/C RATIO = 049
   - 2.3. SLAB ON GRADE 3,500psi, MAX. W/C RATIO = 0.50

3. LEVELING GROUT SHALL BE NON-SHRINK CONFORMING TO ASTM C1107 WITH A MINIMUM 2-DAY STRENGTH OF 5,000psi.

4. ALL CONCRETE EXPOSED TO EARTH OR WEATHER SHALL HAVE ENTRAINED AIR AS FOLLOWS:

MAXIMUM AGGREGATE SIZE	AIR CONTENT
2 in.	4% TO 6.5%
1.5 in.	4% TO 7%
1 in	4.5% TO 7%
0.75 in.	4.5% TO 7%

5. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, AND SHALL BE SUPPLIED IN SHEETS ONLY. THE WELDING Of REINFORCING BARS SHALL CONFORM TO ASTM A706 AND AWS D1.4.

6. THE CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT PRIOR TO POURING CONCRETE.

7. CLEAR COVER TO REINFORCING SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE
   - 7.1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH – 3"
   - 7.2. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
     - #6 AND LARGER – 2"
     - #5 AND SMALLER – 1 1/2"
   - 7.3. CONCRETE NOT EXPOSED TO EARTH OR WEATHER;
     - SLABS, WALLS – 3/4"
     - ALL OTHER 1 – 1/2"

8. LAP SPLICES SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 FOR CLASS "B" TENSION LAP SPLICES, UNLESS NOTED OTHERWISE.

9. HOOKS AND BENDS IN REINFORCING BARS SHALL CONFORM TO ACI 318 UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

10. UNLESS SHOWN OTHERWISE, DOWELS INTO FOUNDATION ELEMENTS SHALL HAVE A STANDARD 90 DEGREE HOOK AND SHALL BE THE SAME SIZE AND QUANTITY PROVIDED IN PIERS AND WALLS ABOVE THE FOUNDATION.

11. PROVIDE A #4x4'-0"Lg. REBAR IN CONCRETE SLABS ACROSS ALL REENTRANT CORNERS OF RECTANGULAR SLAB OPENINGS AND AROUND THE PERIMETER OF ROUND SLAB OPENINGS.

12. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCING IN ALL WALLS AND FOOTINGS.

13. CONCRETE TESTING SHALL BE AS FOLLOWS:
   - 13.1. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD. PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF (ASTM C172).
   - 13.2. OBTAIN: SLUMP (ASTM C143), AIR CONTENT (ASTM C231), TEMPERATURE (ASTM C1064), UNIT WEIGHT; (ASTM C567), COMPRESSION TEST SPECIMENS (ASTM C31) FOR EACH COMPOSITE SAMPLE,
   - 13.3. CAST AND FIELD CURE ONE SET OF FOUR STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE. TEST (1) AT 7 DAYS, (2) AT 28 DAYS AND (1) AT 56 DAYS.

14. SUBMIT SHOP DRAWINGS FOR REINFORCING STEEL AND CONCRETE MIX DESIGNS TO THE ARCHITECT FOR REVIEW BEFORE CONSTRUCTION.

SPECIAL INSPECTIONS:

1. SPECIAL INSPECTIONS SHALL CONFORM TO THE LATEST CODE

2. SPECIAL INSPECTIONS AND TESTING REQUIREMENTS INDICATED IN THIS SECTION ARE THE OWNER'S RESPONSIBILITY, OWNER WILL ENGAGE QUALIFIED SPECIAL INSPECTORS AND TESTING AGENCIES TO PERFORM THESE SERVICES.

SOLID SAWN & LAMINATED LUMBER:

(REFERENCE STANDARD: AF & PA 2018–NATIONAL DESIGN SPECIFICATIONS)

1. ALL LUMBER SHALL BE VISUALLY GRADED, DIMENSION LUMBER, SEASONED AND WITH 19% MAX. MOISTURE CONTENT, U.N.O., AND IN ACCORDANCE WITH THE FOLLOWING MINIMUM GRADE & MATERIAL PROPERTIES REQUIREMENTS:

STUDS	DFL, SPF NO. 2
JOISTS	DO
BEAMS (2"–4" THICK)	DO
POSTS	DO
PLATE STOCK	DO

2. GRADES SHALL BE DETERMINED IN ACCORDANCE WITH SPIB GRADING RULES AGENCY.

3. BRACE STUD WALL UNTIL ALL WOOD DECKING, ROOF TRUSSES, AND SHEAR PANELS ARE IN PLACE.

4. USE WATER-BORNE PRESSURE TREATED WOOD (CBA-A, ACQ-C, ACQ-D, CA-B, SBX-DOT) FOR ALL LUMBER EXPOSED TO WEATHER OR POOL MOISTURE AND SILL PLATES IN CONTACT WITH MASONRY OR CONCRETE. IN ADDITION, FOR LUMBER EXPOSED TO WEATHER, A POLYMER SEALER/BINDER IS ALSO RECOMMENDED.

5. ALL FASTENERS IN CONTACT w/ PRESSURE TREATED LUMBER SHALL BE BATCH/POST HOT-DIP GALVANIZED (PER ASTM A153) OR MECHANICALLY GALVANIZED (PER ASTM B695, CLASS 55 OR GREATER).

   EXCEPTION: BOLTS & LAG SCREWS w/ SHANK DIAMETERS GREATER THAN 1/2" IN DIAMETER AND PROTECTED FROM THE WEATHER ARE NOT REQUIRED TO BE GALVANIZED.

6. AS A MINIMUM, ALL CONNECTORS EXPOSED TO WEATHER SHALL HAVE A G185 (SIMPSON ZMAX) GALVANIZED FINISH.

7. ALL FOUNDATION PLATES OR SILLS SHALL BE ANCHORED TO THE FOUNDATION WITH NOT LESS THAN 1/2" DIA. STEEL BOLTS OR SIMPSON MAS ANCHORS @ 48" O.C. MAX. BOLTS SHALL BE EMBEDDED AT LEAST 7" INTO CONCRETE OR MASONRY. THERE SHALL BE A MIN. OF 2 ANCHORS PER PIECE w/ ONE ANCHOR NOT MORE THAN 12" OR LESS THAN 4" FROM EACH END OF EACH PIECE.

   EXCEPTIONS:

   - 7.1. INTERIOR SILL PLATES MAY BE ANCHORED WITH HILTI X-CP 72 P8 S23 POWDER ACTUATED FASTENERS @ 18" O.C. MAX. PROVIDE PINS @ 6" AND 10" FROM ENDS OF PLATE WITH 2 PINS MIN IN ANY PLATE

ALL OTHER CONNECTIONS SHALL BE DESIGNED TO TRANSFER THE FULL DESIGN STRENGTH Of THE MEMBERS IN QUESTION, UNLESS SPECIFICALLY DETAILED OTHERWISE.

8. ALL HANDRAILS, GUARDRAILS AND STAIR STRINGERS INCLUDING COMPONENTS AND ASSOCIATED CONNECTION SHALL BE DESIGNED BY THE SUPPLIER IN ACCORDANCE WITH THE LOCAL BUILDING CODE.

PRE ENGINEERED WOOD TRUSSES:

A. SUBMIT: PRODUCT DATA FOR LUMBER, METAL CONNECTOR PLATES, HARDWARE, FABRICATION PROCESS, FASTENERS AND METAL FRAMING ANCHORS. SHOP DRAWINGS INDICATING SPECIES, SPECIES GROUP, SIZES AND STRESS GRADES OF LUMBER TO BE USED; PITCH, SPAN, CAMBER, CONFIGURATION AND SPACING FOR EACH TYPE OF TRUSS REQUIRED; TYPE, SIZE, MATERIAL, FINISH, DESIGN VALUES, AND LOCATION OF METAL CONNECTOR PLATES; AND BEARING AND ANCHORAGE DETAILS.

B. THE DESIGN OF THESE PREFABRICATED BUILDING COMPONENTS, FOR THE ROOF LOADS PROVIDED, SHALL BE THE RESPONSIBILITY OF THE FABRICATOR. INCLUDE DESIGN ANALYSIS INDICATING LOADING, ALLOWABLE STRESSES OF MATERIALS USED, STRESS DIAGRAMS AND CALCULATIONS, AND OTHER INFORMATION NEEDED FOR REVIEW THAT HAVE BEEN SIGNED AND SEALED BY A QUALIFIED ENGINEER, LICENSED TO PRACTICE IN THE JURISDICTION WHERE THE PREFABRICATED WOOD UNITS WILL BE INSTALLED. RESPONSIBILITY FOR THEIR PREPARATION SHALL REST WITH THE FABRICATOR'S ENGINEER(S).

D. PREFABRICATED TRUSSES
PREFABRICATED TRUSSES INCLUDE PLANAR STRUCTURAL UNITS CONSISTING OF HIGH QUALITY CHORD AND WEB COMPONENTS METAL PLATE CONNECTED MEMBERS WHICH HAVE BEEN CUT AND ASSEMBLED PRIOR TO DELIVERY TO THE JOB SITE.

E. COMPLY WITH APPLICABLE REQUIREMENTS OF "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", PUBLISHED BY NATIONAL FOREST ASSOCIATION (N.F.P.A.). COMPLY WITH PS 20 AND WITH APPLICABLE RULES OF THE RESPECTIVE GRADING INSPECTION AGENCIES FOR SPECIES GRADE OF LUMBER INDICATED. SUBMIT FABRICATOR'S TECHNICAL DATA COVERING LUMBER, HARDWARE, FABRICATION PROCESS, TREATMENT (IF ANY), HANDLING AND ERECTION. SUBMIT CERTIFICATE, SIGNED BY AN OFFICER OF FABRICATING FIRM, INDICATING THAT UNITS TO BE SUPPLIED FOR PROJECT COMPLY WITH INDICATED REQUIREMENTS.

F. ERECT AND BRACE UNITS TO COMPLY WITH APPLICABLE REQUIREMENTS OF REFERENCED TPI STANDARDS. WHERE UNITS DO NOT FIT, RETURN THEM TO THE FABRICATOR AND REPLACE WITH UNITS OF CORRECT SIZE; DO NOT ALTER UNITS IN FIELD. ERECT UNITS WITH PLANE OF TRUSS WEBS VERTICAL (PLUMB) AND PARALLEL TO EACH OTHER, LOCATED ACCURATELY AT DESIGN SPACINGS INDICATED. HOIST UNITS IN PLACE BY MEANS OF LIFTING EQUIPMENT SUITED TO TYPES OF TRUSSES REQUIRED, EXERCISE CARE NOT TO DAMAGE UNITS OR JOINTS BY OUT-OF-PLANE BENDING OR OTHER CAUSES. ANCHOR UNITS SECURELY AT ALL BEARING POINTS TO COMPLY WITH METHODS AND DETAILS INDICATED. INSTALL PERMANENT BRACING AND RELATED COMPONENTS TO ENABLE UNITS TO MAINTAIN DESIGN SPACING, WITH STAND LIVE AND DEAD LOADS INCLUDING LATERAL LOADS, AND COMPLY WITH OTHER INDICATED REQUIREMENTS. DO NOT CUT OR REMOVE TRUSS OR JOIST MEMBERS.

G. MEMBERS MUST BE HELD STRAIGHT AND PLUMB AT THEIR DESIGN SPACING WHILE ALL BRACING IS APPLIED. LATERAL BRACING SHOULD BE INSTALLED AS SPECIFIED BY MANUFACTURER AT SUPPORT LOCATIONS. ANCHOR TRUSSES SECURELY AT ALL BEARING POINTS TO COMPLY WITH METHODS AND DETAILS INDICATED.

H. DO NOT CUT OR REMOVE ANY PORTION OF MEMBERS CHORDS OR WEBS. NAILING GUIDELINES: FOLLOW APA RECOMMENDATIONS FOR NAILING SHEATHING TO TOP CHORDS OF TRUSSES. 8D BOX, 6D COMMON OR 6D DEFORMED SHANK NAILS MAY BE USED TO NAIL PLYWOOD TO TOP CHORD. STAGGER NAILS TO PREVENT SPLITTING OF THE CHORD. SPACE NAILS 1-1/2" FROM END AND 4" TO 8" APART.

I. NAIL UNITS TO BEARING WITH ONE 8D BOX NAIL THROUGH THE BOTTOM CHORD ON EACH SIDE OF THE WEB, PROVIDE MINIMUM OF 3" BEARING. CONCENTRATED LOADS IN EXCESS OF 30 POUNDS SHOULD NOT BE HUNG FROM BOTTOM CHORDS.

HEADER SCHEDULE

MARK	SIZE	R.O.
H1	(3)–2x10	11'–8"
H2	(3)–2x8	9'–4"
H3	(3)–2x10	7'–0"
H4	(3)–2x6	4'–8"
H5	(3)–2x6	4'–0"
H6	(3)–1 3/4"x 9 1/4" LVL	10'–10"
H7	(3)–2x8	4'–2"
H8	(3)–2x10	5'–2"
H9	(3)–2x8	3'–2"
H10	(3)–2x8	3'–6"
H11	(3)–2x10	6'–0"
H12	(3)–2x10	4'–9"
H13	(3)–2x10	9'–0"
H14	(3)–2x10	5'–0"

1. ALL FIRST STORY HEADERS TO HAVE (2) JACK STUDS UP TO 6FT, > 6FT USE (3) JACK STUDS.

2. KING STUDS USE THE NUMBER OF INTERRUPTED WALL STUDS EQUALLY PLACED EACH SIDE OF THE OPENING.

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245 KINSEY AVE
KENMORE, N.Y. 14217
Tel. 716.854.3508 Fax 716.854.1984

Client Name:

ABSTRACT ARCHITECTURE
BUFFALO, NEW YORK

PSCE Job. No. 14626	GENERAL NOTES	
Drawn By: STAFF	Date 10/23/26	Dwg. No. S-100
Checked By: AP	Scale AS NOTED	

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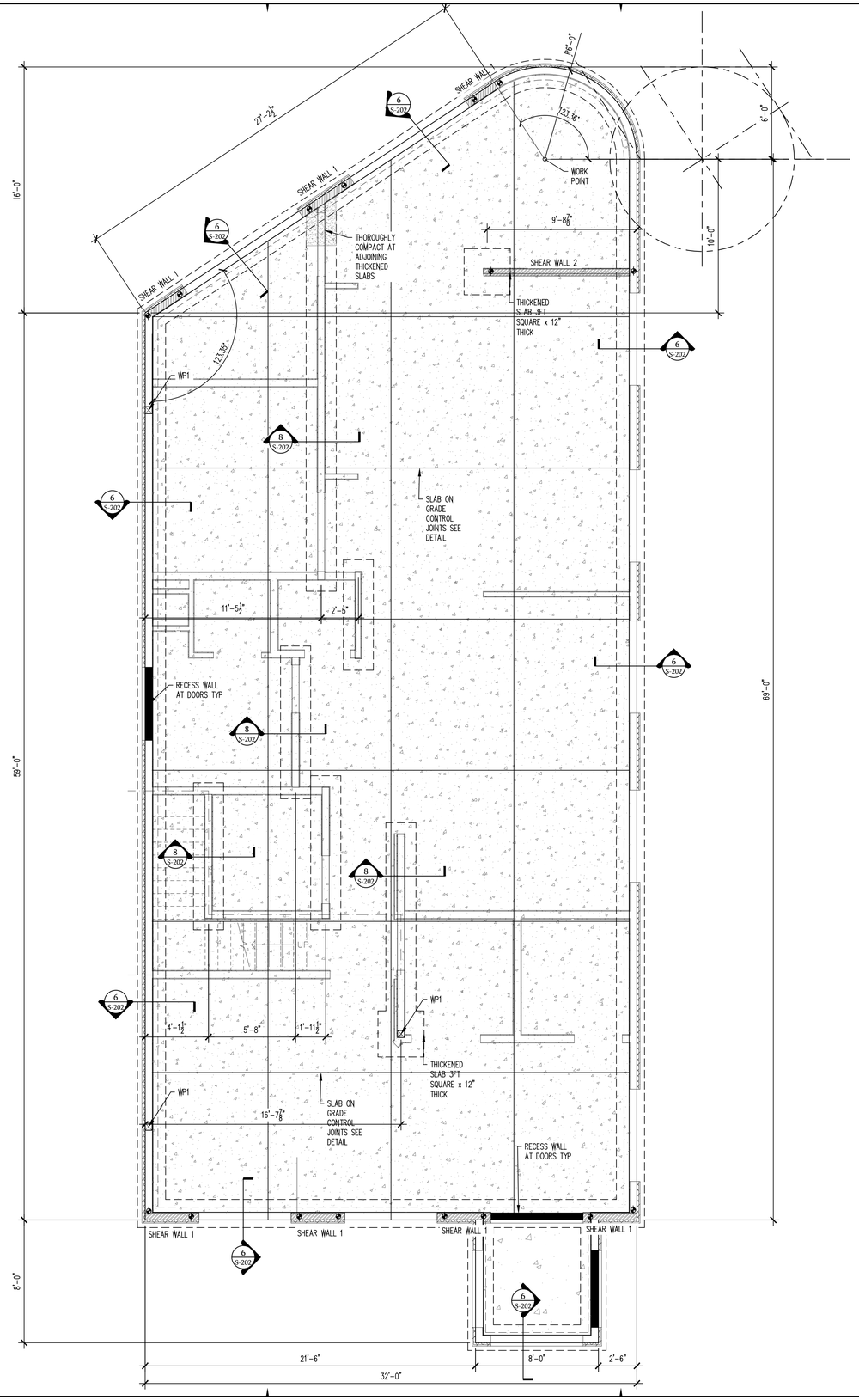
plotted by: Angelina Petrilli
file name: KENSINGTON STRUC.dwg



1 FOUNDATION PLAN

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

PLAN NOTES

FF AS NOTED FROM THE REFERENCE ELEVATION 0.0
SLAB AREAS NOTED AND REINFORCED AS FOLLOWS

4" SLAB ON GRADE WITH 1 LAYER 6x6xW2.1xW2.1 WWF ON 10MIL POLY VAPOR BARRIER ON 8" NO. CRUSHED STONE PER GEO REPORT.

CURING OF SLAB SHALL BEGIN 4 HRS AFTER CONCRETE PLACEMENT.

CONTROL JOINTS, SHALL BE SAWCUT IN, AND SHALL BE CUT THE SAME DAY AS THE CONCRETE PLACEMENT.

SHEAR WALL 1 — INDICATES SHEAR WALL CONSTRUCTION WITH HDUE9-SDS3 TIES DOWNS WITH ⅞" EPOXY ANCHOR x 9" EMBED

plot date: 10/23/2026 8:50 AM
plotted by: Angelino Petrilli
file name: KENSINGTON STRUC.dwg

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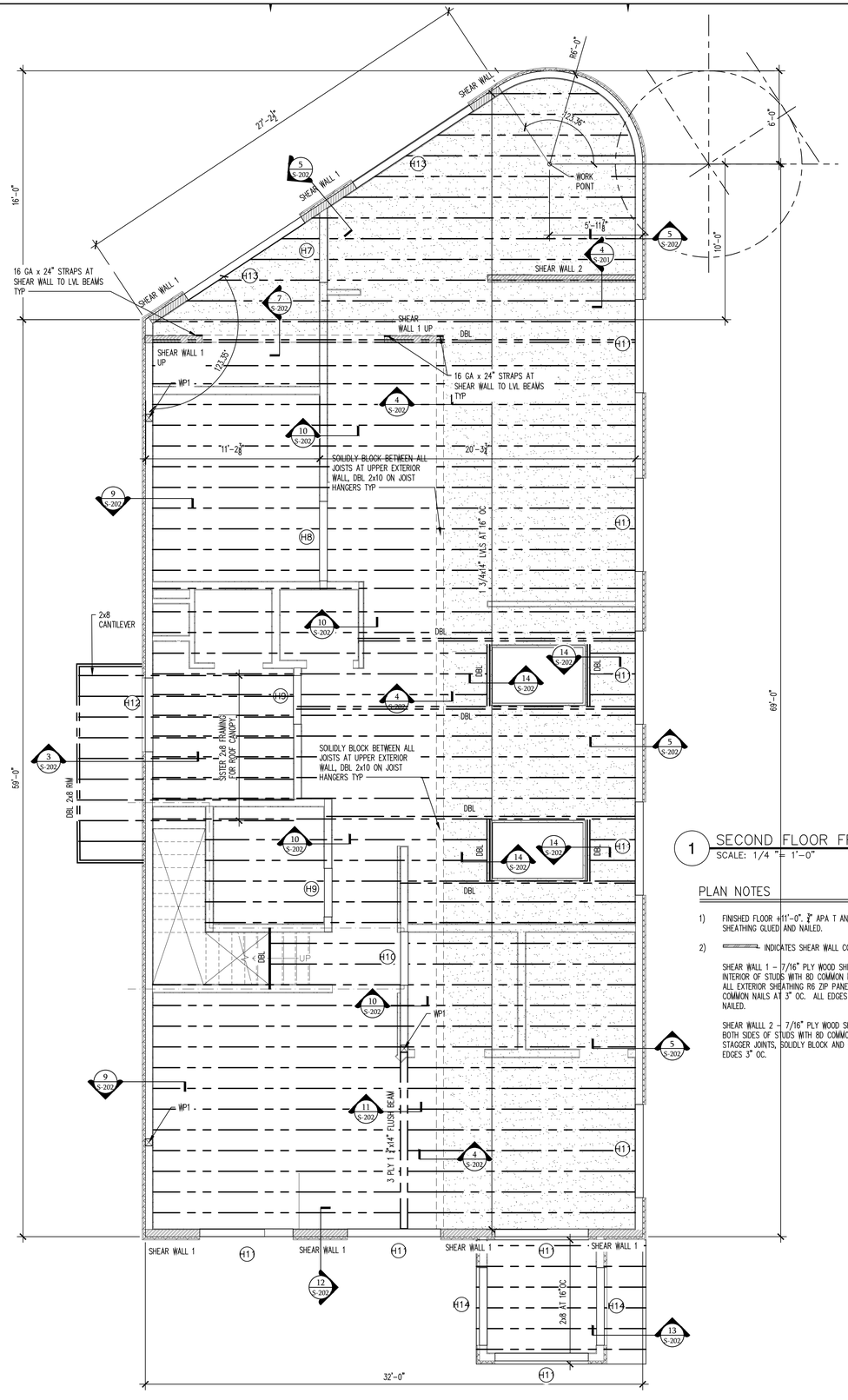
PSCE Job. No. 14626	FOUNDATION PLAN	
Drawn By: STAFF	Date 10/23/26	Dwg. No. S-101
Checked By: AP	Scale AS NOTED	



1 SECOND FLOOR FRAMING PLAN
SCALE: 1/4 "= 1'-0"

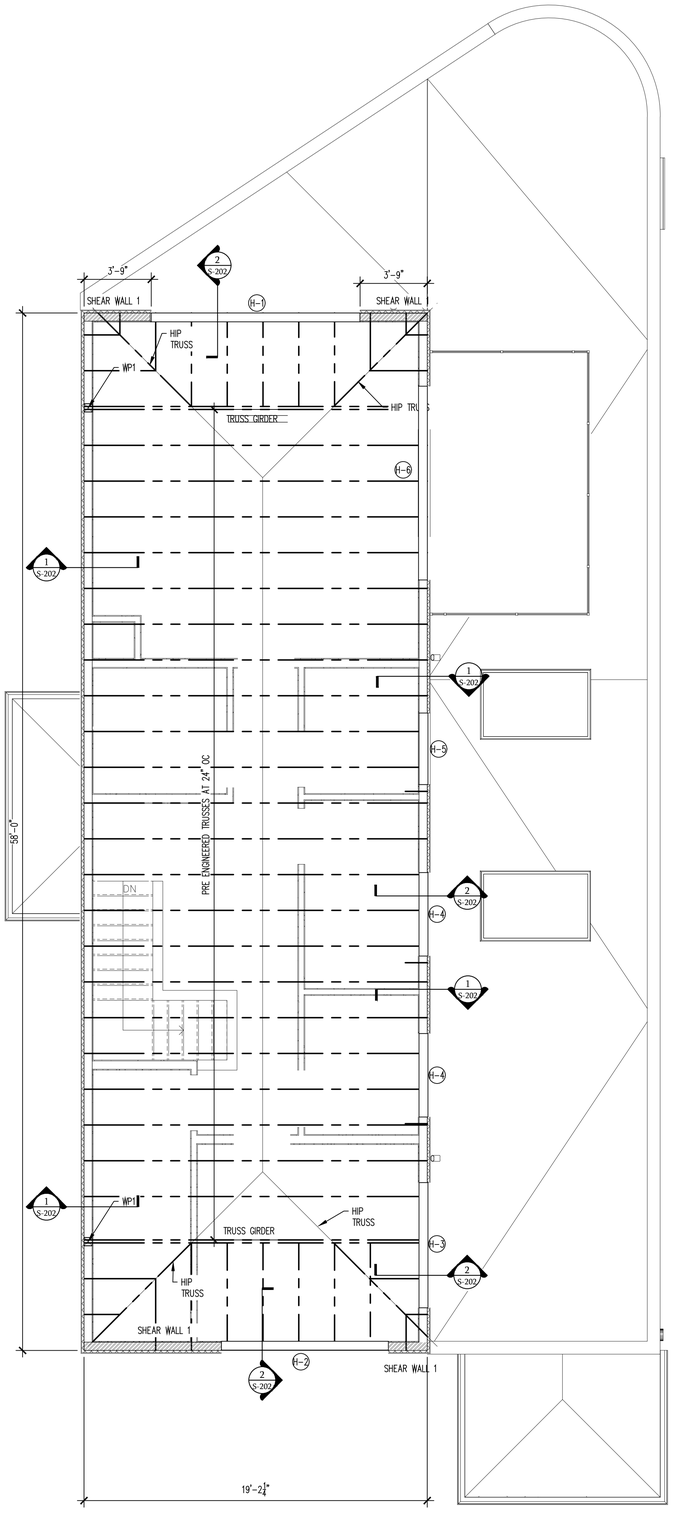
PLAN NOTES

1) FINISHED FLOOR +11'-0". ¾" APA T AND G RATED FLOOR SHEATHING GLUED AND NAILED.

2) ═══ INDICATES SHEAR WALL CONSTRUCTION:

SHEAR WALL 1 – 7/16" PLY WOOD SHEATHING APPLIED TO INTERIOR OF STUDS WITH 8D COMMON NAILS @ 4" O.C. ALL EXTERIOR SHEATHING R6 ZIP PANEL SYSTEM WITH 8D COMMON NAILS AT 3" OC. ALL EDGES BLOCKED AND NAILED.

SHEAR WALLL 2 – 7/16" PLY WOOD SHEATHING APPLIED TO BOTH SIDES OF STUDS WITH 8D COMMON NAILS @ 3" O.C. STAGGER JOINTS, SOLIDLY BLOCK AND NAIL ALL PANEL EDGES 3" OC.



2 UPPER ROOF FRAMING PLAN
SCALE: 1/4 "= 1'-0"

PLAN NOTES

1) TRUSS BEARING AT ELEVATION +20'-0". 2x6 BEARING WALLS ALIGNED WITH TRUSSES

2) TYPICAL ROOF CONSTRUCTION – MANUFACTURED WOOD ROOF TRUSSES AT 24" O.C. SUPPORTING 5/8" APA RATED SHEATHING. NAIL SHEATHING, INSTALL HURRICANE TIE DOWN CLIPS AT EACH END OF TRUSS.

3) ═══ INDICATES SHEAR WALL CONSTRUCTION: 7/16" PLY WOOD SHEATHING APPLIED TO INTERIOR OF STUDS WITH 8D COMMON NAILS @ 4" O.C.
ALL EXTERIOR SHEATHING R6 ZIP PANEL SYSTEM WITH 8D COMMON NAILS AT 4" OC. ALL EDGES BLOCKED AND NAILED.

4) AT WP-1 PROVIDE (3)- 2x6 STUD PACKS AT ALL TRUSSGIRDER LOCATIONS.

5) FULLY SHEATH UNDER ALL OVERBUILDS. COORDINATE DRAFT STOP LOCATIONS WITH THE ARCHITECTURAL PLANS.

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Client Name:

ABSTRACT ARCHITECTURE
BUFFALO, NEW YORK

PSCE Job. No. 14626	SECOND FLOOR / ROOF FRAMING PLAN	
Drawn By: STAFF	Date 10/23/26	Dwg. No. S-102
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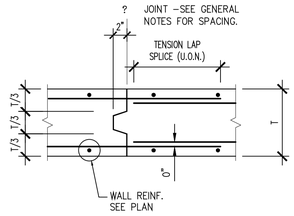

1 TYP. WALL CONSTR. JOINT
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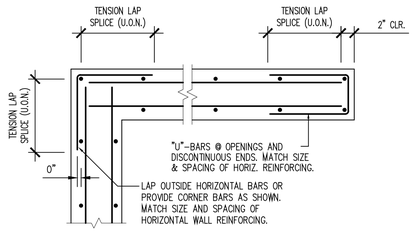

2 TYP. CORNERS AND ENDS OF CONC. WALLS
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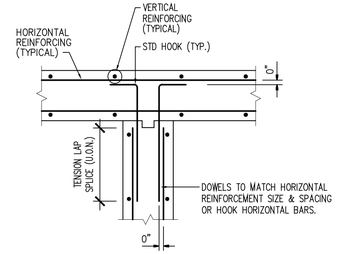

3 TYPICAL CONCRETE WALL INTERSECTION
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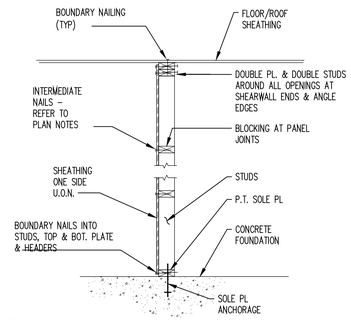

4 SHEAR WALL CONSTRUCTION
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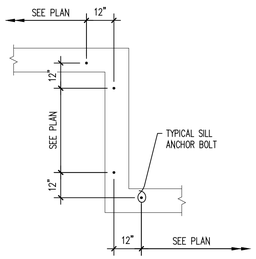

5 SILL ANCHOR BOLT LAYOUT
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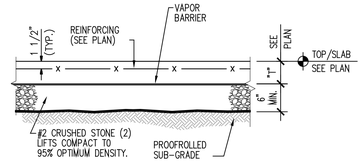
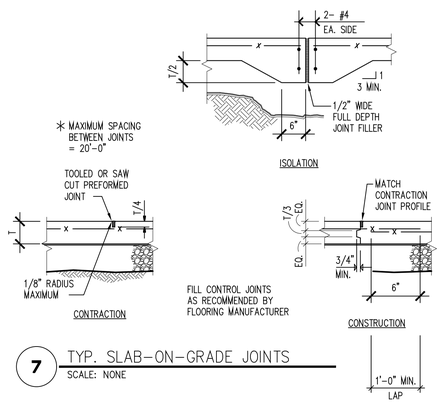


6 TYP. SLAB-ON-GRADE CONSTR.
SCALE: NONE



7 TYP. SLAB-ON-GRADE JOINTS
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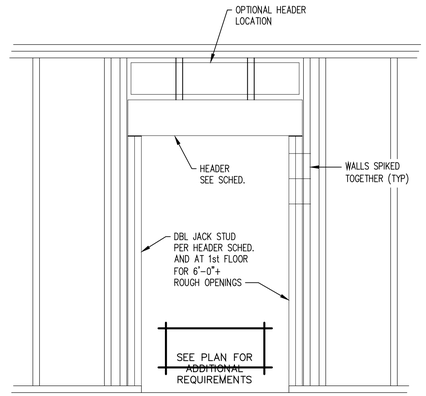

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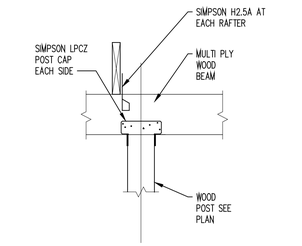

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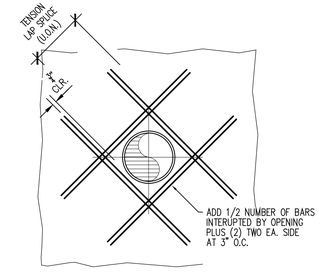

10 TYP. CIRCULAR WALL OPENING
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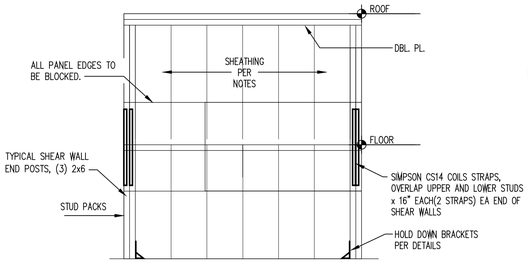
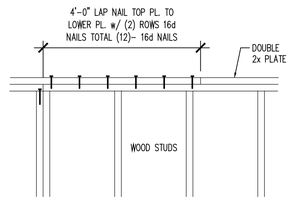


11 TYP. SHEAR WALL ELEVATION
SCALE: NTS



TYP. WOOD LAP SPLICE (12 / S202)
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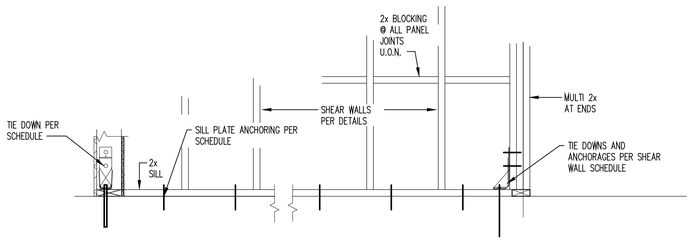

TYP. SHEAR WALL FOUNDATION SECTION (13 / S202)
SCALE: N.T.S.

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PSCE Job. No.	DETAILS	
14626		
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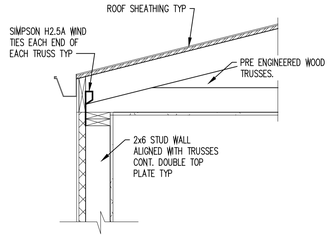
Checked By: AP	Scale AS NOTED	

plot date: 10/23/2026 8:58 AM
plotted by: Angelino Petrilli
current project file name: KENSINGTON STRUC.dwg



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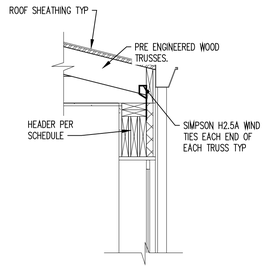

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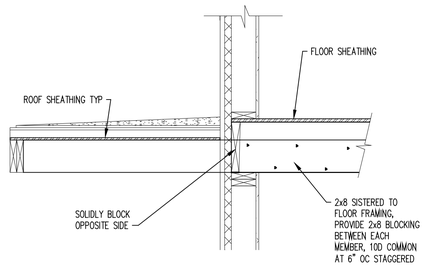

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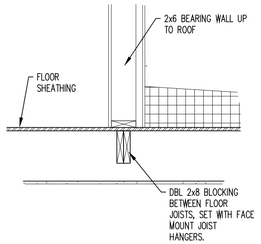

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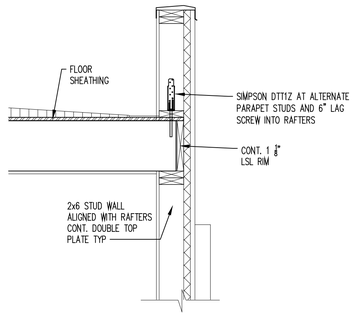

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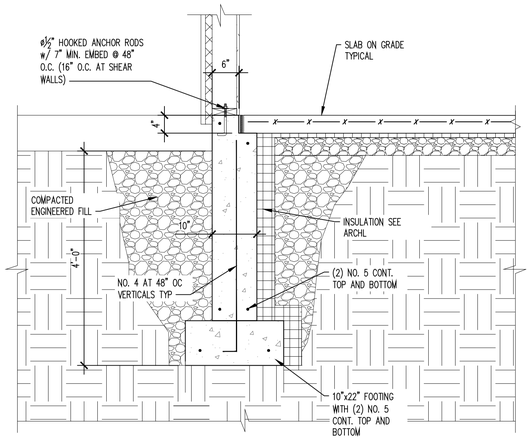

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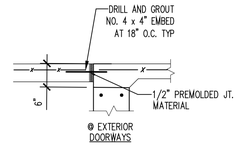

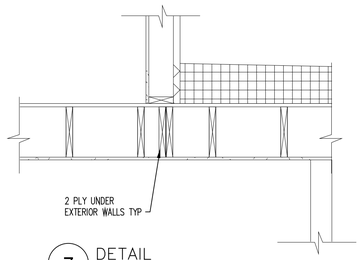

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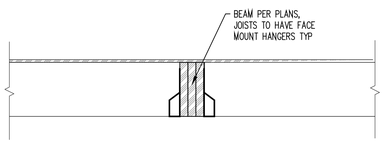

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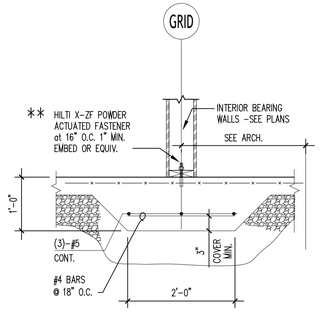

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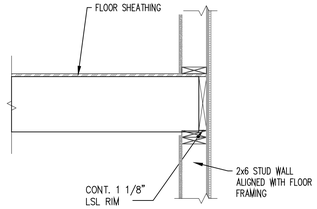

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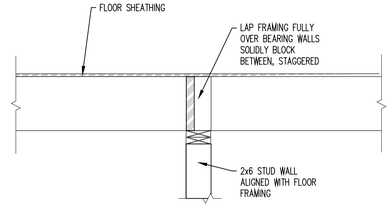
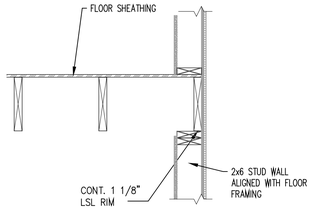


10 DETAIL
SCALE: 3/4 "= 1'-0"



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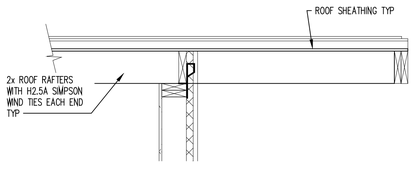

13 DETAIL
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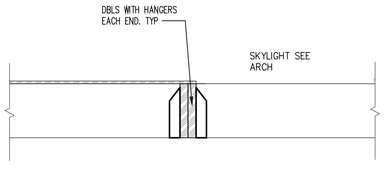

14 DETAIL
SCALE: 3/4 "= 1'-0"

plot date: 10/23/2026 8:58 AM
plotted by: Angelino Petrilli
file name: KENSINGTON STRUC.dwg

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Drawing Title:

2081 KENSINGTON AVE
COMMERCIAL BUFFALO, NEW YORK

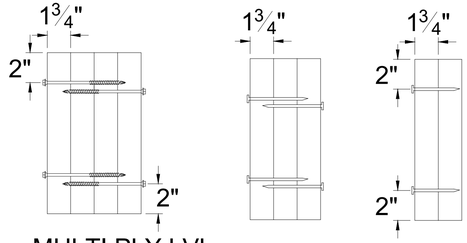
Seal

PETRILLI STRUCTURAL &
CONSULTING ENGINEERING P.C.
149 KINSEY AVE.
KENMORE, N.Y. 14217
Tel. 716.854.3508 Fax 716.854.1984

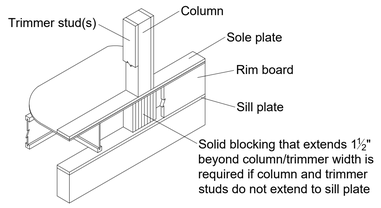
Client Name:

ABSTRACT ARCHITECTURE
BUFFALO, NEW YORK

PSCE Job. No.	DETAILS	
14626		
Drawn By: STAFF	Date 10/23/26	Dwg. No. S-202
Checked By: AP	Scale AS NOTED	



MULTI PLY LVL ASSEMBLY FASTENERS AT 16" O.C.



CRIPPLE STUDS AT POSTS

2-Ply Nailing Recommendations

- **For 2x4, 1¾" x 5½", 2x6, 1¾" x 7¼", and 2x8:** Minimum of **two rows** of 16d (0.131" x 3¼") pneumatic nails at 10" on-center, staggered.
- Nail from one side.

3-Ply Nailing Recommendations

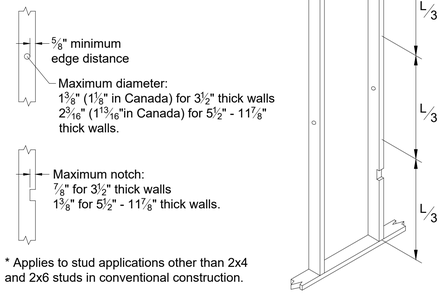
- **For 2x4:** Minimum of **two rows** of 16d (0.131" x 3¼") pneumatic nails at 8" on-center, staggered.
- **For 1¾" x 5½", 2x6, 1¾" x 7¼", and 2x8:** Minimum of **three rows** of 16d (0.131" x 3¼") pneumatic nails at 5" on-center, staggered.
- Nail from both sides.

4-Ply Nailing Recommendations

- **For 2x4:** Nail each ply to the other with a minimum of **two rows** of 16d (0.131" x 3¼") pneumatic nails at 5" on-center. When connecting each ply, offset nail rows by 2" from the ply below.
- **For 1¾" x 5½", 2x6, 1¾" x 7¼", and 2x8:**
  - Nail each ply to the other with a minimum of **three rows** of 16d (0.131" x 3¼") pneumatic nails at 5" on-center. When connecting each ply, offset nail rows by 2" from the ply below.
    or,
    Minimum of **two rows** of ½" diameter bolts spaced at 8" on-center.



Per ICC ES ESR-1387, holes may be drilled anywhere along the length of the stud or column but must be at least ⅝" from the edge.



* Applies to stud applications other than 2x4 and 2x6 studs in conventional construction.

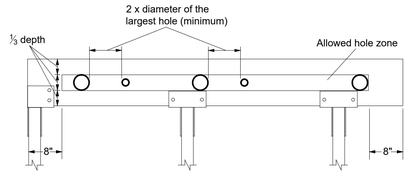
One notch may be cut anywhere except the middle ⅓ of the length of the stud or column



DO NOT cut a notch and a hole in the same cross section

ALLOWABLE HOLES - Headers and Beams

1.55E TimberStrand® LSL Headers and Beams



1.55 E TimberStrand® LSL

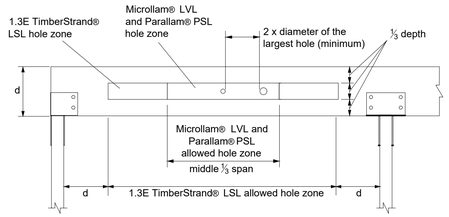
Header or Beam Depth	Maximum Round Hole Size
9½"	3"
11 7/8"	3⅝"
14"-16"	4⅝"

See illustration for allowed hole zone

General Notes

- Allowed hole zone suitable for headers and beams with **uniform and/or concentrated loads anywhere along the member**.
- Round holes only
- No holes in headers or beams in plank orientation.

Other Trus Joist® Headers and Beams





DO NOT cut, notch or drill holes in headers or beams except as indicated in illustrations and tables.

Other Trus Joist® Beams

Header or Beam Depth	Maximum Round Hole Size
4⅛"	1"
5½"	1¾"
7¼" - 20"	2"

See illustration for Allowed Hole Zone

General Notes

- Allowed hole zone suitable for headers and beams with **uniform loads only.**
- Round holes only
- No holes in cantilevers.
- No holes in headers or beams in plank orientation.

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Drawing Title:

2081 KENSINGTON AVE
COMMERCIAL BUFFALO, NEW YORK

Seal

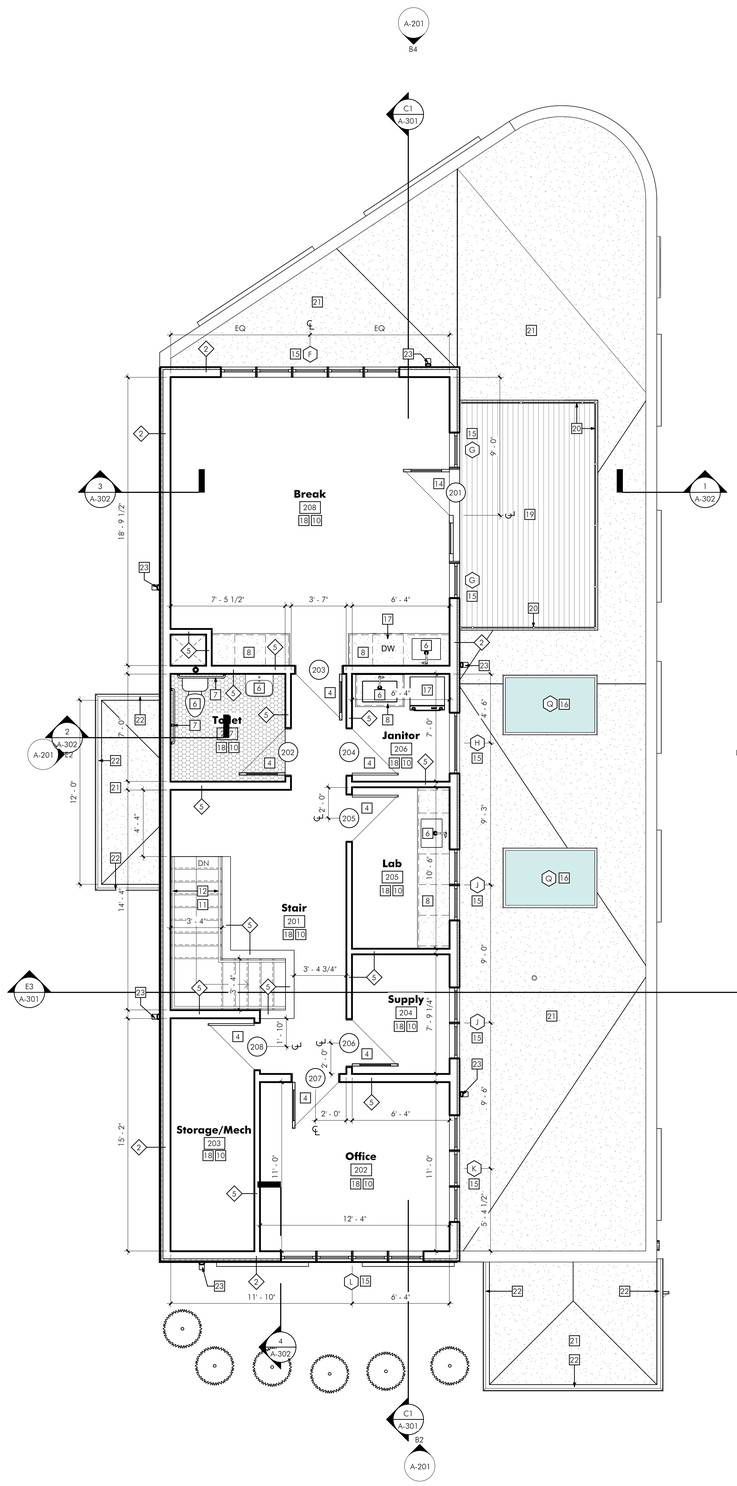
PETRILLI STRUCTURAL &
CONSULTING ENGINEERING P.C.
749 KINSEY AVE.
KENMORE, N.Y. 14217
Tel. 716.854.3508 Fax 716.854.1984

Client Name:

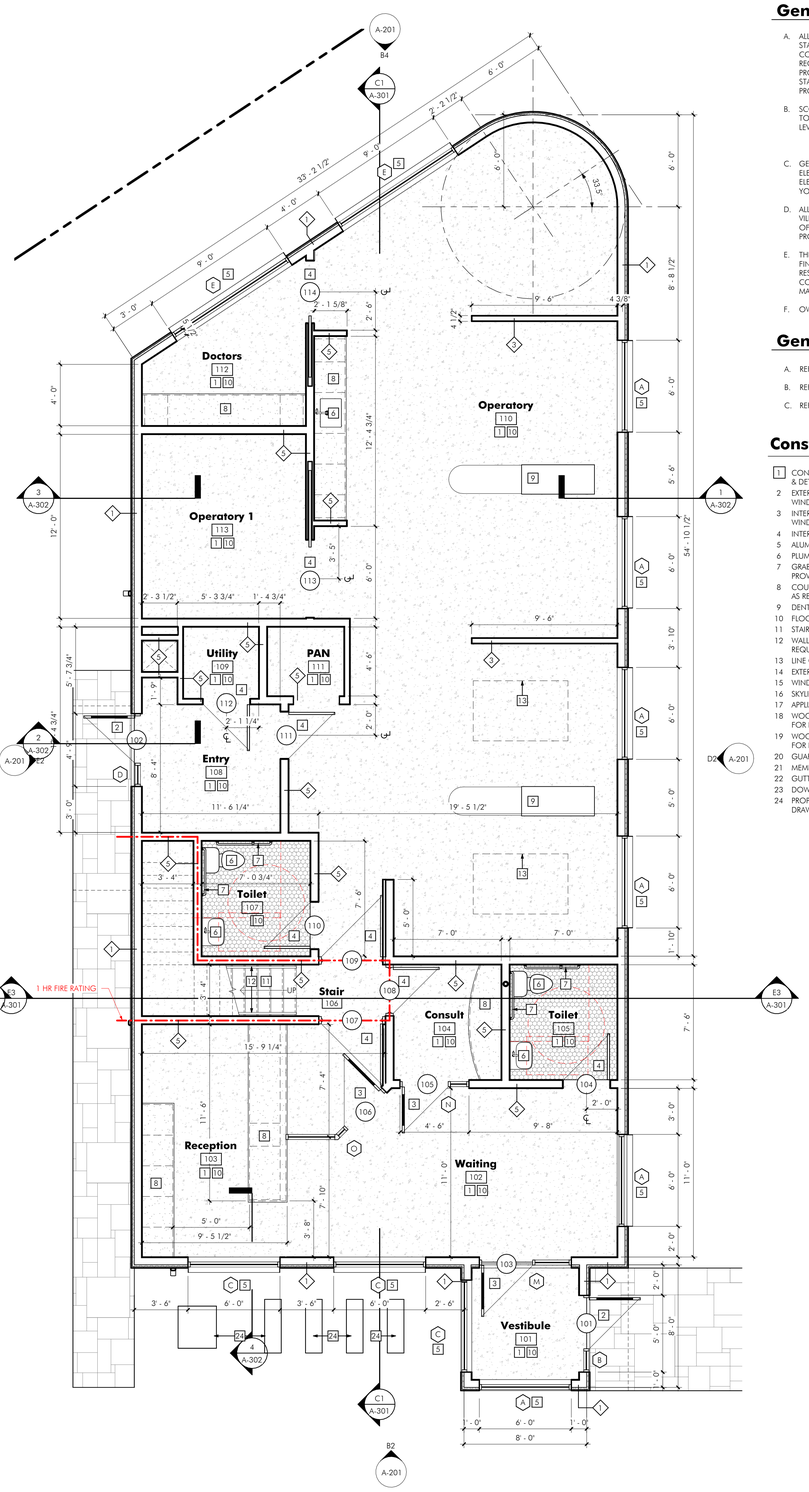
ABSTRACT ARCHITECTURE
BUFFALO, NEW YORK

PSCE Job. No.	DETAILS	
14626		
Drawn By: STAFF	Date 10/23/26	Dwg. No. S-203
Checked By: AP	Scale AS NOTED	

plot date: 10/23/2026 8:58 AM
plotted by: Angelino Petrilli
current project # KENSINGTON STRUC.dwg
file name:



E2 Second Floor Plan
1/4" = 1'-0"



E4 First Floor Plan
1/4" = 1'-0"

General Construction Notes

A. ALL WORK SHALL MEET THE REQUIREMENTS OF THE 2025 BUILDING CODE OF NEW YORK STATE, INCLUDING ALL REFERENCE DOCUMENTS, THE 2025 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE, AND ALL APPLICABLE MUNICIPAL REQUIREMENTS. THESE PLANS HAVE TO THE BEST OF OUR KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT BEEN DESIGNED IN COMPLIANCE WITH THE 2020 NEW YORK STATE ENERGY CODE AND VERIFIED WITH THE LATEST VERSION OF RESCHECK COMPLIANCE PROGRAM.

B. SCOPE OF WORK IS THE CONSTRUCTION OF A NEW COMMERCIAL TWO-STORY STRUCTURE TOTALING 3,188GSF. THE OCCUPIABLE SQUARE FOOT AREA OF EACH HABITABLE FLOOR LEVEL IS
FIRST FLOOR: 2,153GSF
SECOND FLOOR: 1,033GSF

C. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE MECHANICAL, ELECTRICAL AND PLUMBING DESIGNS BY THE INDIVIDUAL TRADES. ALL MECHANICAL, ELECTRICAL AND PLUMBING TRADE WORK SHALL MEET ALL REQUIREMENTS OF THE NEW YORK STATE BUILDING CODES AND ALL APPLICABLE MUNICIPAL REQUIREMENTS.

D. ALL CONTRACTORS WORKING ON THE PROJECT SHALL BE LICENSED IN THE CITY/TOWN/ VILLAGE AND IN GOOD STANDING WITH ALL APPLICABLE PERMITTING DEPARTMENTS, OFFICES, OR GOVERNING BODY. THE CONTRACTOR SHALL COORDINATE ALL WORK PROCEDURES WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.

E. THE CONTRACTOR IS NOT TO SCALE DRAWINGS OR DETAILS. ALL DIMENSIONS ARE TO THE FINISHED FACE OF SURFACES UNLESS OTHERWISE NOTED. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREA.

F. OWNER IS RESPONSIBLE FOR ANY ZONING ISSUES.

General Floor Plan Notes

A. REFER TO SHEET A-001 FOR GENERAL NOTES & LEGENDS.

B. REFER TO SHEET A-004 FOR WALL TYPES & TYPICAL FLOOR CONSTRUCTION.

C. REFER TO DRAWINGS FROM ALL DISCIPLINES FOR ADDITIONAL SCOPE.

Construction Notes

1 CONCRETE SLAB-ON-GRADE FLOOR - REFER TO S DRAWINGS - REFER TO BUILDING SECTIONS & DETAILS FOR FINISHED ELEVATIONS TO BE MET.
2 EXTERIOR DOOR IN ALUMINUM STOREFRONT SYSTEM - REFER TO DOOR SCHEDULE & WINDOW SCHEDULE.
3 INTERIOR DOOR IN ALUMINUM STOREFRONT SYSTEM - REFER TO DOOR SCHEDULE & WINDOW SCHEDULE.
4 INTERIOR DOOR - REFER TO DOOR SCHEDULE.
5 ALUMINUM STOREFRONT WINDOW - REFER TO WINDOW SCHEDULE.
6 PLUMBING FIXTURE - REFER TO PLUMBING DRAWINGS.
7 GRAB BAR TO MEET ADA REQUIREMENTS - REFER TO FIXTURE MOUNTING HEIGHT SCHEDULE - PROVIDE SOLID IN-WALL BLOCKING AS REQUIRED.
8 COUNTERTOP & CASEWORK - REFER TO FINISH NOTES - PROVIDE SOLID IN-WALL BLOCKING AS REQUIRED.
9 DENTAL EQUIPMENT CASEWORK - COORDINATE WITH DA DRAWINGS.
10 FLOOR, WALL & CEILING FINISHES - REFER TO FINISH NOTES.
11 STAIR - REFER TO TYP. DETAIL & BUILDING SECTION FOR FINISHED ELEVATIONS TO BE MET.
12 WALL-MOUNTED HANDRAIL - 36" HIGH A.F.F. - PROVIDE SOLID IN-WALL BLOCKING AS REQUIRED - REFER TO TYP. DETAIL.
13 LINE OF SKYLIGHT ABOVE - REFER TO ROOF PLAN.
14 EXTERIOR DOOR - REFER TO DOOR SCHEDULE.
15 WINDOW - REFER TO WINDOW SCHEDULE.
16 SKYLIGHT - REFER TO ROOF PLAN & TYP. DETAILS.
17 APPLIANCE - REFER TO MEP DRAWINGS & APPLIANCE NOTES.
18 WOOD FRAMED FLOOR - REFER TO S DRAWINGS - REFER TO BUILDING SECTIONS & DETAILS FOR FINISHED ELEVATIONS TO BE MET.
19 WOOD FRAMED DECK - REFER TO S DRAWINGS - REFER TO BUILDING SECTIONS & DETAILS FOR FINISHED ELEVATIONS TO BE MET.
20 GUARDRAIL AT PERIMETER OF DECK - 36" HIGH A.F.F. MIN. - REFER TO EXTERIOR ELEVATIONS.
21 MEMBRANE ROOF - REFER TO ROOF PLAN & DETAILS - REFER TO S DRAWINGS.
22 GUTTER & DOWNSPOUT - REFER TO EXTERIOR ELEVAITONS & MATERIALS SCHEDULE.
23 DOWNSPOUT - REFER TO EXTERIOR ELEVAITONS & MATERIALS SCHEDULE.
24 PROPOSED LOCATION OF MECHANICAL EQUIPMENT - COORDINATE WITH MECHANICAL DRAWINGS.

Abstract Architecture PC
313 Broadway
Buffalo, NY 14204
mail@abstractarch.com
(716) 812-2596

2081 Kensington Avenue - Commerical
Development
Permit / Construction Documents
P- 26022

11.16.2026

Project N

Nickel City Dentistry
1603 Hertel Avenue
Buffalo, NY 14216

Floor Plans & Notes

A-101

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1 **Roof Plan**
1/4" = 1'-0"

General Construction Notes

A. ALL WORK SHALL MEET THE REQUIREMENTS OF THE 2025 BUILDING CODE OF NEW YORK STATE, INCLUDING ALL REFERENCE DOCUMENTS, THE 2025 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE, AND ALL APPLICABLE MUNICIPAL REGULATIONS. THE BUILDING IS CLASSIFIED AS R-2 OCCUPANCY, CONSTRUCTION TYPE IIB, AND PROFESSIONAL JUDGEMENT BEEN DESIGNED IN COMPLIANCE WITH THE 2020 NEW YORK STATE ENERGY CODE AND VERIFIED WITH THE LATEST VERSION OF RESCHECK COMPLIANCE SOFTWARE.

B. SCOPE OF WORK IS THE CONSTRUCTION OF A NEW COMMERCIAL TWO-STORY STRUCTURE TOTALING **3,188SQF**. THE OCCUPIABLE SQUARE FOOT AREA OF EACH HABITABLE FLOOR LEVEL IS:
FIRST FLOOR - **2,153SQF**
SECOND FLOOR **1,033SQF**

C. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE MECHANICAL, ELECTRICAL AND PLUMBING DESIGNS BY THE INDIVIDUAL TRADES. ALL MECHANICAL, ELECTRICAL AND PLUMBING TRADE WORK SHALL MEET ALL REQUIREMENTS OF THE NEW YORK STATE BUILDING CODES AND ALL APPLICABLE MUNICIPAL REQUIREMENTS.

D. ALL CONTRACTORS WORKING ON THE PROJECT SHALL BE LICENSED IN THE CITY/TOWN/VILLAGE, COUNTY OF LOCATION OF THE PROJECT. ALL CONTRACTORS SHALL BE REGISTERED WITH THE OFFICES, OR GOVERNING BODY. THE CONTRACTOR SHALL COORDINATE ALL WORK PROCEDURES WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.

E. THE CONTRACTOR IS NOT TO SCALE DRAWINGS OR DETAILS. ALL DIMENSIONS ARE TO THE FINISHED FACE OF WALL UNLESS OTHERWISE NOTED. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREA.

F. OWNER IS RESPONSIBLE FOR ANY ZONING ISSUES.

Roof Plan & Details

Nickel City Dentistry
1603 Hertel Avenue
Buffalo, NY 14216

11.16.2026

Project N

2081 Kensington Avenue - Commerical Development
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A-102

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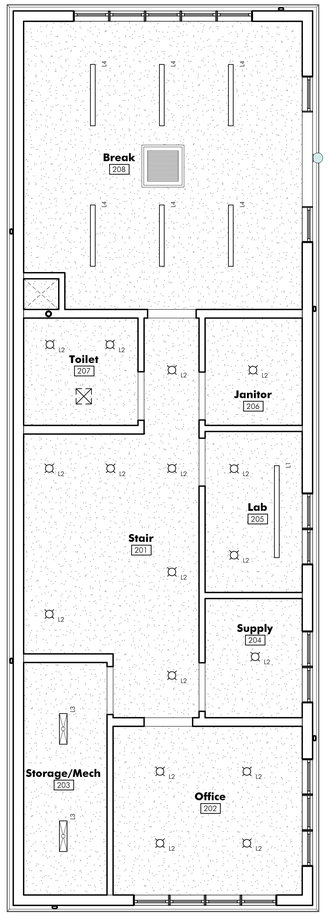
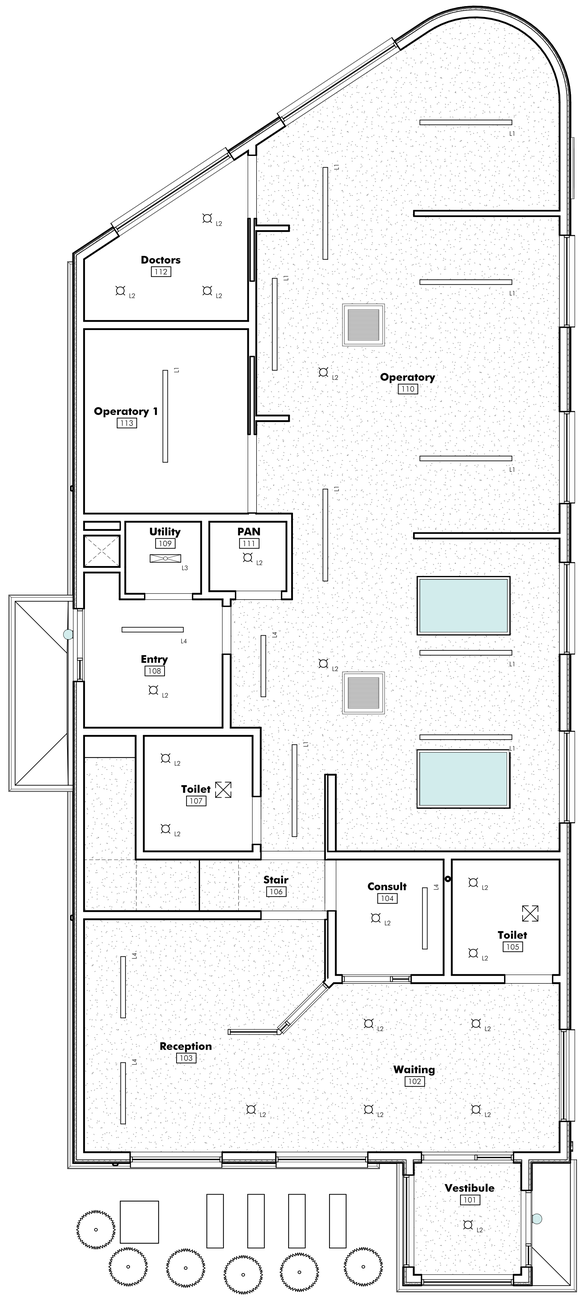


D2 Second Floor RCP

1/4" = 1'-0"



D4 First Floor RCP

1/4" = 1'-0"

RCP Legend

	ACT CEILING
1'-0" A.F.F.	CEILING HEIGHT, ABOVE FINISH FLOOR
Room name 400A	ROOM TAG
L-1	LIGHT FIXTURE
	RETURN DIFFUSER
	SUPPLY DIFFUSER
	EXHAUST DIFFUSER
	EXIT SIGN LOCATION
	SPRINKLER HEAD

Light Schedule

ALL LIGHTING FIXTURES AND ACCESSORIES TO BE APPROVED BY OWNER PRIOR TO ORDERING AND INSTALLATION BY CONTRACTOR.

LED PANEL
LIGHT FIXTURE (L-1):
MANUFACTURER: COOPER LIGHTING
MODEL: METALUX CGT 24x24 LED PANEL
TRIM COLOR: MATTE WHITE
COLOR TEMP: 3500K

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11.16.2026

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Buffalo, NY 14216

Project N

Reflected Ceiling Plan, Details, & Notes.

A-110

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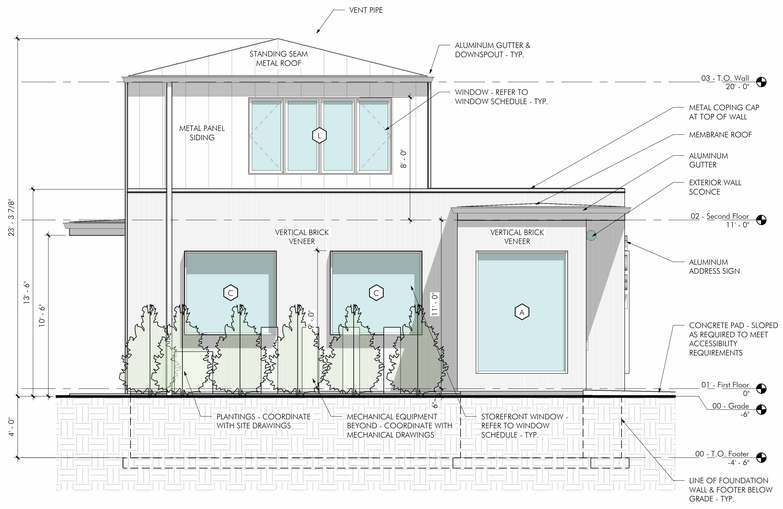
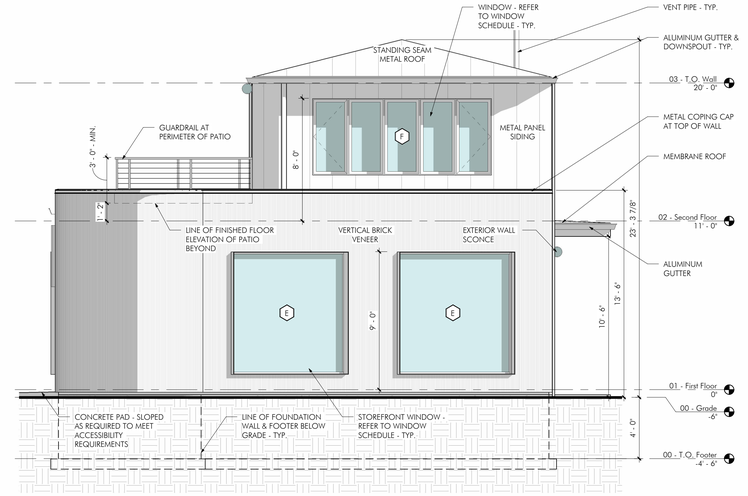


B2 South Elevation

1/4" = 1'-0"



B4 North Elevation

1/4" = 1'-0"

General Finish Notes

A. ALL FINAL FINISH SELECTIONS SHALL BE COORDINATED WITH THE WISHES OF THE OWNER. PAINTED WOOD TRIM TO BE POPLAR - EITHER PURCHASED PRE-PRIMED OR PRIMED BEFORE INSTALLATION - FINISH COLOR TO BE APPLIED IN FIELD. STAINED WOOD TRIM IS TO BE A SPECIES TO MATCH EXISTING. ALL MANUFACTURER'S INSTALLATION GUIDELINES WILL BE FOLLOWED FOR ALL FINISH MATERIALS.

Exterior Materials Schedule

ALL EXTERIOR SIDING MATERIALS TO BE APPROVED BY OWNER PRIOR TO ORDERING.

BASIS OF DESIGNS:

STANDING SEAM METAL ROOF
MANUFACTURER: MCELROY METAL
STYLE: MEDALLION-LOK - FLAT
COLOR: TBD
NOTE: INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARD DETAILS

MEMBRANE ROOF
MANUFACTURER:
COLOR:
NOTE: INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARD DETAILS

METAL PANEL SIDING
MANUFACTURER:
STYLE:
COLOR:
NOTE:

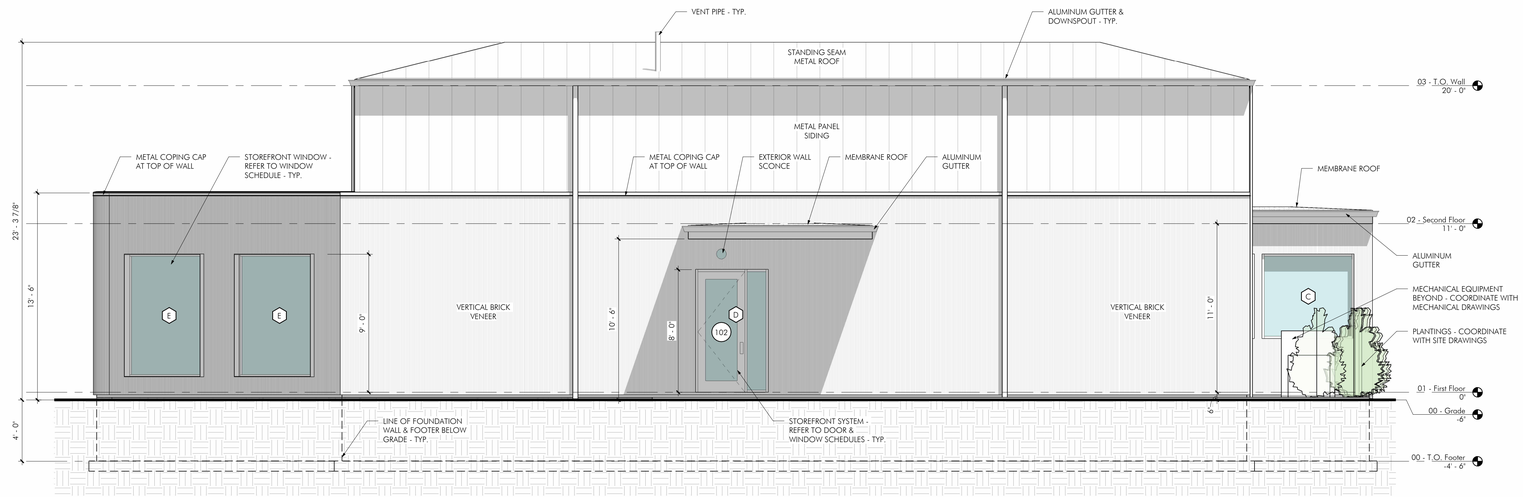
BRICK VENEER
MANUFACTURER:
PROFILE:
FINISH:
THICKNESS:

METAL TRIM
MANUFACTURER:
PROFILE:
FINISH:

GUTTERS & DOWNSPOUTS
MANUFACTURER:
PROFILE:
FINISH:

D2 East Elevation

1/4" = 1'-0"



E2 West Elevation

1/4" = 1'-0"

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2081 Kensington Avenue - Commerical Development

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Project N

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Exterior Elevations, Notes & Details

A-201

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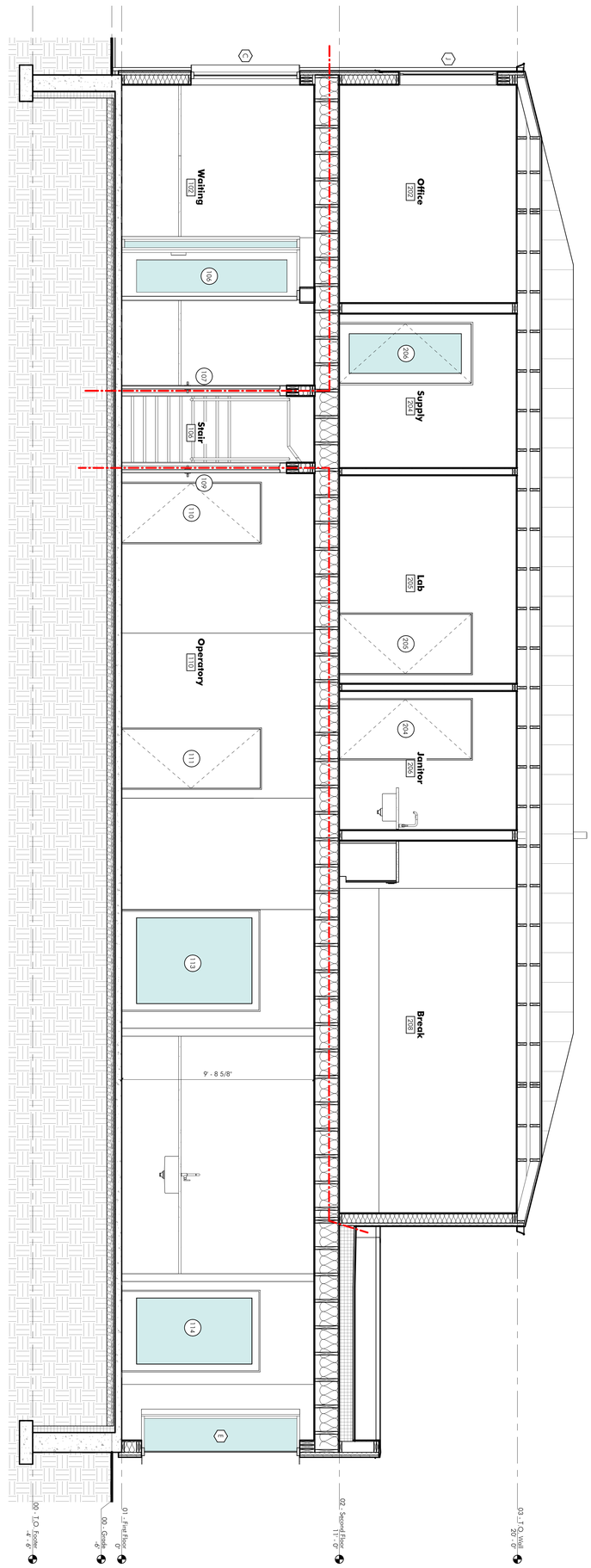
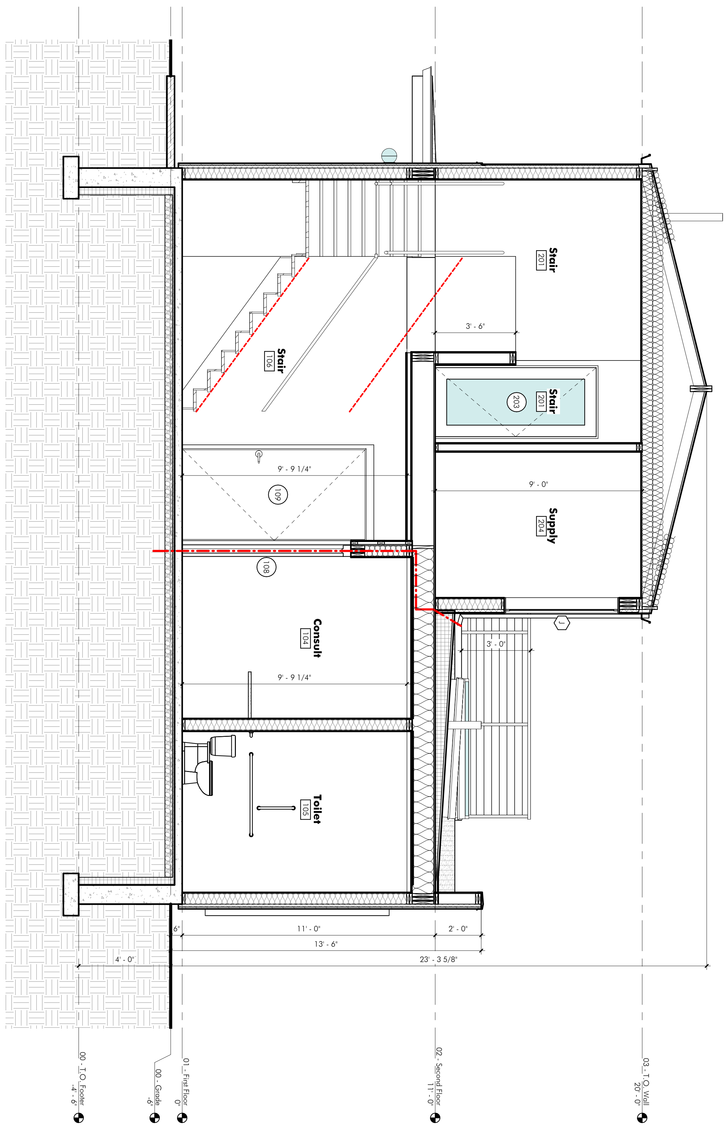
C1 Building Section
3/8" = 1'-0"



E3 Building Section
3/8" = 1'-0"



Building Section & Details

A-301

Nickel City Dentistry

1603 Hertel Avenue
Buffalo, NY 14216

11.16.2026

Project N

2081 Kensington Avenue - Commerical Development

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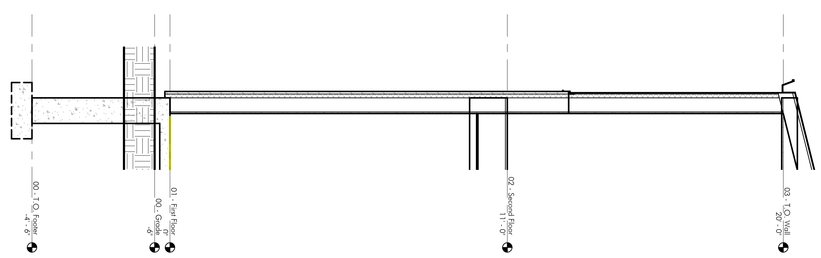
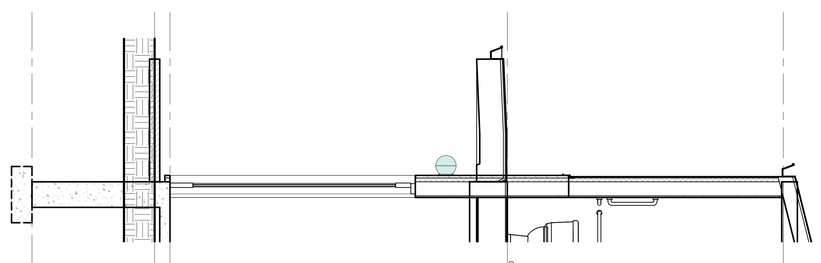
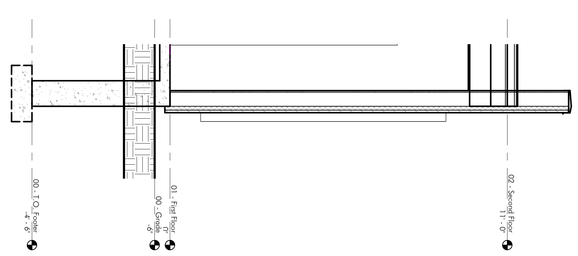


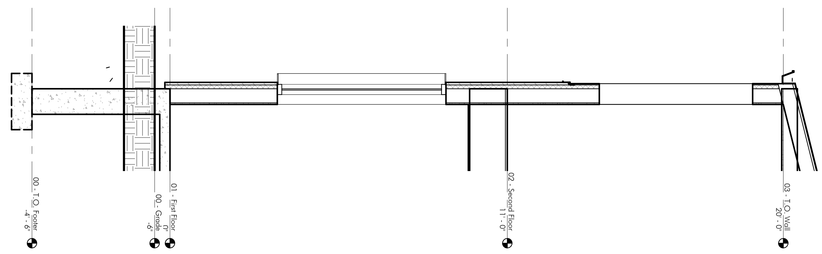
3 Wall Section
1/2" = 1'-0"



2 Wall Section
1/2" = 1'-0"



1 Wall Section
1/2" = 1'-0"



4 Wall Section
1/2" = 1'-0"

Building Section & Wall Sections

A-302

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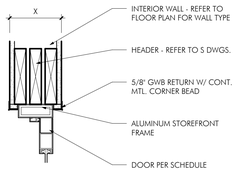
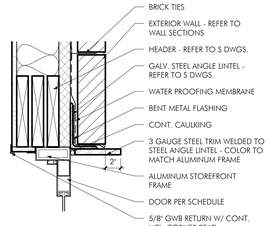


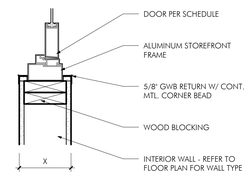
A2 Door Head Detail

1 1/2" = 1'-0"



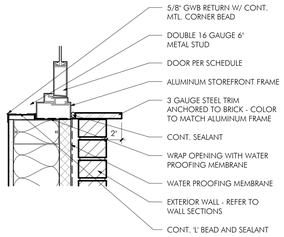
A3 Door Head Detail

1 1/2" = 1'-0"



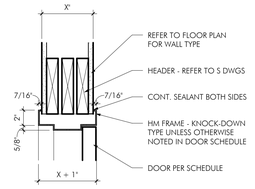
B2 Door Jamb Detail

1 1/2" = 1'-0"



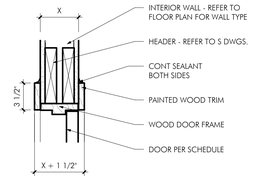
B3 Door Jamb Detail

1 1/2" = 1'-0"



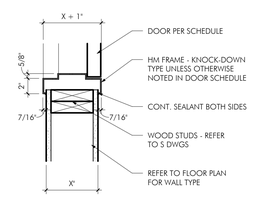
C2 Door Head Detail

1 1/2" = 1'-0"



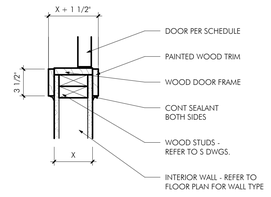
C3 Door Head Detail

1 1/2" = 1'-0"



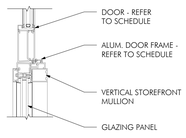
D2 Door Jamb Detail

1 1/2" = 1'-0"



D3 Door Jamb Detail

1 1/2" = 1'-0"



E3 Storefront Door Jamb Detail

1 1/2" = 1'-0"

Door Schedule

Door Number	Door: Width	Height	Thickness	Type	Material	Fire Rating	Glazing	Frame: Type	Material	Head Detail	Jamb Detail	Hardware Set	Notes
101	3' - 4"	8' - 10 1/4"	1 3/4"	FG	ALUM	--	G1		ALUM	1			1
102	3' - 1"	7' - 10 1/4"	1 3/4"	FG	ALUM	--	G1		ALUM	1			1
103	3' - 4"	8' - 9 1/4"	1 3/4"	FG	ALUM	--	G3		ALUM	4			1
104	3' - 0"	7' - 0"	1 3/4"	F	WD	--			WD	3			
105	3' - 0"	7' - 10 1/4"	1 3/4"	FG	ALUM	--	G3		ALUM	4			1
106	3' - 4"	8' - 10 1/4"	1 3/4"	FG	ALUM	--	G3		ALUM	4			1
107	4' - 0"	8' - 0"	1 3/4"	F	HM				HM	5			
108	3' - 0"	7' - 0"	1 3/4"	F	HM	3/4 HR			HM	5			
109	4' - 0"	8' - 0"	1 3/4"	F	HM				HM	5			
110	3' - 0"	7' - 0"	1 3/4"	F	WD	--			WD	3			
111	3' - 0"	7' - 0"	1 3/4"	F	WD	--			WD	3			
112	3' - 0"	7' - 0"	1 3/4"	F	WD	--			WD	3			2
113	5' - 0"	7' - 0"	1 3/4"	FG	WD	--	G3		WD	3			
114	4' - 0"	7' - 0"	1 3/4"	FG	WD	--	G3		WD	3			
201	6' - 0"	6' - 8"	1 3/4"	FG	WD	--	G1		WD	2			
202	3' - 0"	6' - 8"	1 3/4"	FG	WD	--	G3		WD	3			
203	3' - 0"	7' - 0"	2"	FG	WD	--	G3		WD	3			
204	3' - 0"	6' - 8"	1 1/2"	F	WD	--			WD	3			2
205	3' - 0"	6' - 8"	1 1/2"	F	WD	--			WD	3			
206	3' - 0"	6' - 8"	1 3/4"	FG	WD	--	G3		WD	3			
207	3' - 0"	7' - 0"	2"	FG	WD	--	G3		WD	3			
208	3' - 0"	6' - 8"	1 1/2"	F	WD	--			WD	3			2
209	3' - 0"	6' - 8"				--							

NOTES:
1. PART OF ALUMINUM FRAMED STOREFRONT WINDOW SYSTEM - REFER TO WINDOW SCHEDULE & NOTES.
2. PROVIDE A 45F LOUVER ON DOOR.

Door & Hardware Notes

A. ALUMINUM DOORS ARE TO BE PART OF ALUMINUM STOREFRONT SYSTEM - BASIS OF DESIGN KAWNEER TRIFAB 400 FRAMING SYSTEM OR APPROVED EQUAL.

B. ALL DOORS AND DOOR HARDWARE MANUFACTURERS TO BE APPROVED BY OWNER PRIOR TO ANY ITEMS BEING ORDERED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING WITH SUPPLIER COMPLIANCE OF NEW DOORS WITH ANY STATE OR LOCAL BUILDING CODES. ANY DISCREPANCIES SHALL BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY. FINAL SELECTION OF DOOR MATERIALS & FINISHES SHALL BE BY ARCHITECT. NO MATERIALS WILL BE ORDERED UNTIL FINAL APPROVAL FROM IS PROVIDED.

C. ALL DOORS SHALL INCLUDE HARDWARE APPROPRIATE TO LOCATION AND USE. ALL APPLICABLE HARDWARE COMPONENTS MUST BE CERTIFIED FOR ACCESSIBILITY GUIDELINES AND REQUIREMENTS AND BE OF A TYPE (LEVER) ACCEPTABLE TO ALL CODES. ALL APPLICABLE HARDWARE SHALL BE MOUNTED AT HEIGHTS REQUIRED BY ACCESSIBILITY GUIDELINES AND REQUIREMENTS.

D. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.

E. REFER TO PLANS FOR SWING DIRECTION.

F. PROVIDE REINFORCING/BLOCKING AT ALL WALL MOUNTED DOOR STOP LOCATIONS.

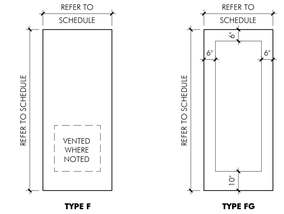
G. REFER TO HARDWARE SCHEDULE & SPECIFICATIONS FOR HARDWARE INFORMATION.

H. ALL DOORS TO BE LOCATED 6" OF ADJACENT WALLS UNLESS OTHERWISE NOTED.

Door Hardware Schedule

HARDWARE SET NUMBER	LOCKSET FUNCTION
1.	ENTRY (OFFICE FUNCTION) LOCKSET - PART OF ALUMINUM STOREFRONT SYSTEM
2.	ENTRY (OFFICE FUNCTION) LOCKSET - PART OF ALUMINUM STOREFRONT SYSTEM - TO ALLOW FOR FREE EGRESS

Door Types



General Glazing Notes & Types

A. ALL GLAZING PANELS SHALL MEET ALL APPLICABLE REQUIREMENTS FOR MANUFACTURE AND INSTALLATION AS LAID OUT BY 2025 BUILDING CODE OF NEW YORK STATE CHAPTER 24.

B. INDIVIDUAL GLAZING AREAS WITHIN 9'-0" OF THE ENTRY AND AS PART OF THE ENTRY SYSTEM SHALL BE TYPE 1 PER THE REQUIREMENTS OF 2025 BUILDING CODE OF NEW YORK STATE SECTION 2406 - SAFETY GLAZING.

C. EXCEPT WHERE NOT REQUIRED BY CODE EACH PANE OF SAFETY GLAZING SHALL BE LABELED WITH ALL REQUIRED IDENTIFICATION DESIGNATIONS.

G1 GLAZING TYPE 1: EXTERIOR TEMPERED INSULATED LOW-E GLAZING

G2 GLAZING TYPE 2: EXTERIOR INSULATED LOW-E GLAZING

G3 GLAZING TYPE 3: INTERIOR TEMPERED NON-INSULATED GLAZING

G4 GLAZING TYPE 4: INTERIOR NON-INSULATED GLAZING

11/16/2026 11:09:12 \\quinlet\projects\P26022 2081 Kensington Ave - Commerical Development\P26022 R\T\P26022 2081 Kensington Ave - Commercial **Revit** Version: 2026 Model: P26022 2081 Kensington Ave - Commercial_Development_detached_to_local.rvt **Document Set** Issued on the date(s) of this Document Set. Unless otherwise noted, the contents of this Document Set are expressly prohibited. All rights reserved. Copyright Abstract Architecture PC. The architect only accepts liability for documents marked with a wet stamp located in the boundaries of the titleblock of a drawing sheet marked with the company name - Abstract Architecture PC - No digital representation of a seal will be considered acceptable.

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2081 Kensington Avenue - Commerical Development

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Nickel City Dentistry

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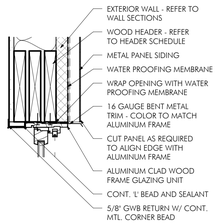
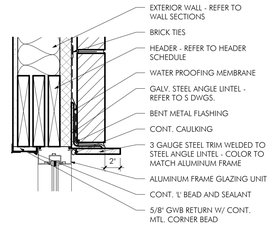
Door & Window Schedules, Notes & Details

A-601



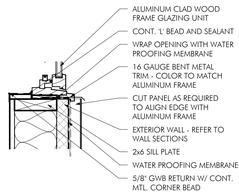
A1 Window Head Detail

1 1/2" = 1'-0"



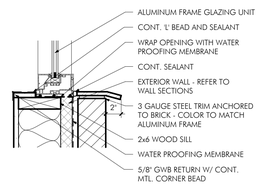
A2 Window Head Detail

1 1/2" = 1'-0"



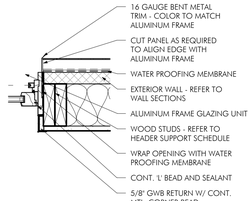
B1 Window Sill Detail

1 1/2" = 1'-0"



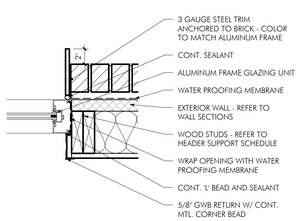
B2 Window Sill Detail

1 1/2" = 1'-0"



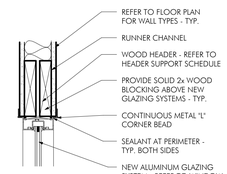
C1 Window Jamb Detail

1 1/2" = 1'-0"



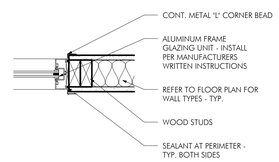
C2 Window Jamb Detail

1 1/2" = 1'-0"



D2 Window Head Detail

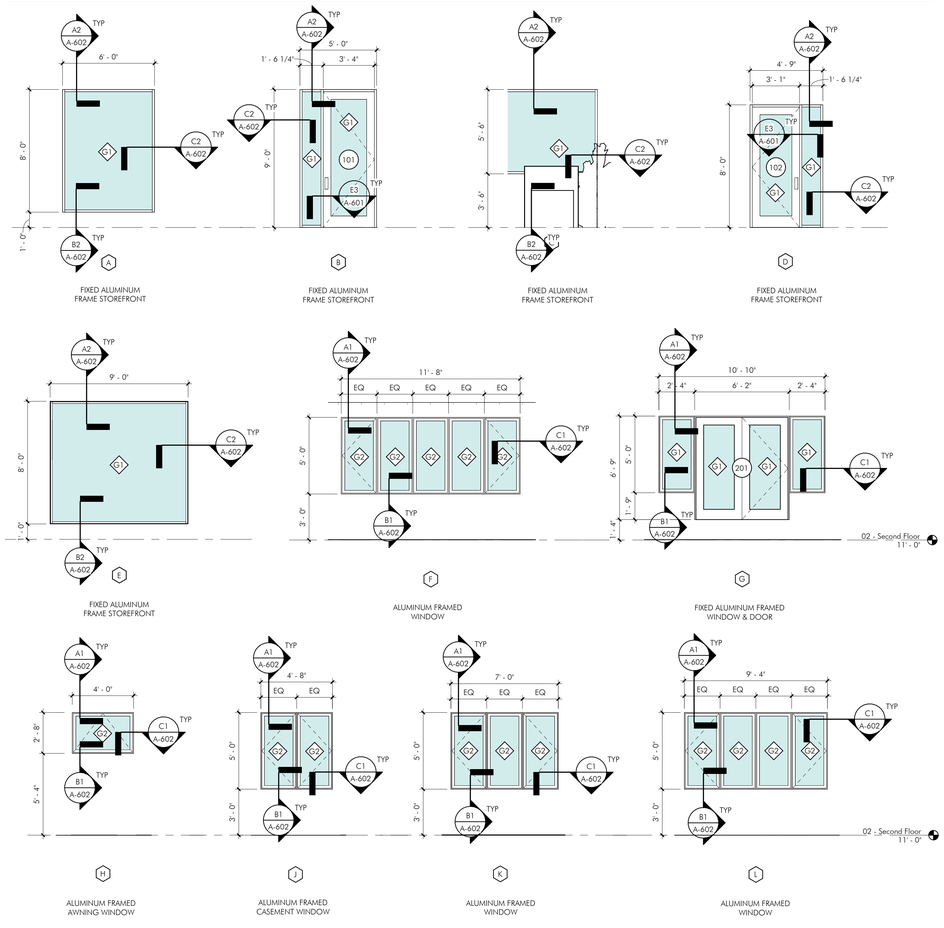
1 1/2" = 1'-0"



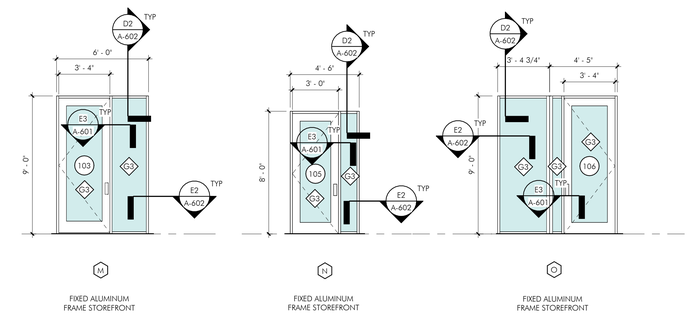
E2 Window Jamb Detail

1 1/2" = 1'-0"

Window Schedule - Exterior



Window Schedule - Interior



General Glazing Notes & Types

A. ALL GLAZING PANELS SHALL MEET ALL APPLICABLE REQUIREMENTS FOR MANUFACTURE AND INSTALLATION AS LAID OUT BY 2025 BUILDING CODE OF NEW YORK STATE CHAPTER 24.

B. INDIVIDUAL GLAZING AREAS WITHIN 9'-0" OF THE ENTRY AND AS PART OF THE ENTRY SYSTEM SHALL BE TYPE 1 PER THE REQUIREMENTS OF 2025 BUILDING CODE OF NEW YORK STATE SECTION 2406 - SAFETY GLAZING.

C. EXCEPT WHERE NOT REQUIRED BY CODE EACH PANE OF SAFETY GLAZING SHALL BE LABELED WITH ALL REQUIRED IDENTIFICATION DESIGNATIONS.

- G1 — GLAZING TYPE 1: EXTERIOR TEMPERED INSULATED LOW-E GLAZING
- G2 — GLAZING TYPE 2: EXTERIOR INSULATED LOW-E GLAZING
- G3 — GLAZING TYPE 3: INTERIOR TEMPERED NON-INSULATED GLAZING
- G4 — GLAZING TYPE 4: INTERIOR NON-INSULATED GLAZING

General Window Notes

A. FINAL APPROVAL OF WINDOWS SHALL BE BY OWNER.

B. CONTRACTOR TO VERIFY ALL INDIVIDUAL OPENING DIMENSIONS FOR WINDOWS PRIOR TO INSTALLATION.

C. INDIVIDUAL GLAZING PANES IN ALUMINUM STOREFRONT SYSTEMS TO BE FIXED U.N.O.

D. BASIS OF DESIGN FOR ALUMINUM STOREFRONT SYSTEM: KAWNEER TRIBAB 400 FRAMING SYSTEM.

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Buffalo, NY 14216

Window Schedule, Notes & Details

A-602

11/16/2026 11:09:14 \\quinjet\projects\P26022 2081 Kensington Ave - Commercial Development\P26022 R-VT\P26022 2081 Kensington Ave - Commercial
Plotted: 11/16/2026 11:09:14 By: Daniel Schaefer Xref: none Xref Overlay: none Xref Path: none
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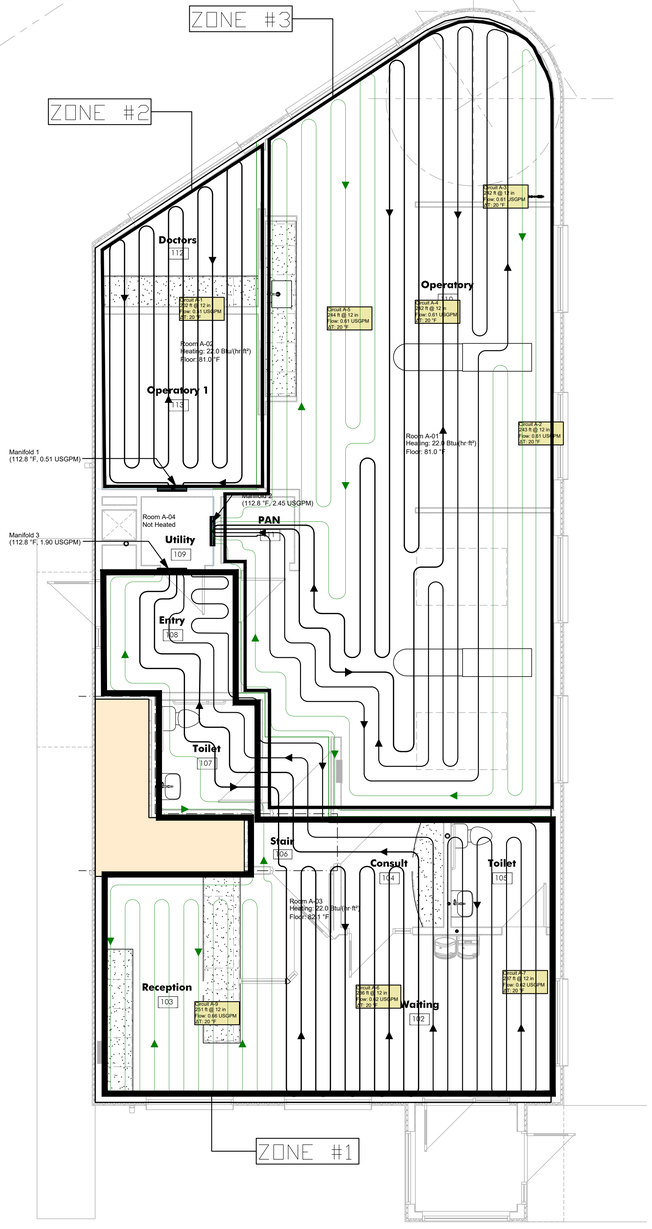
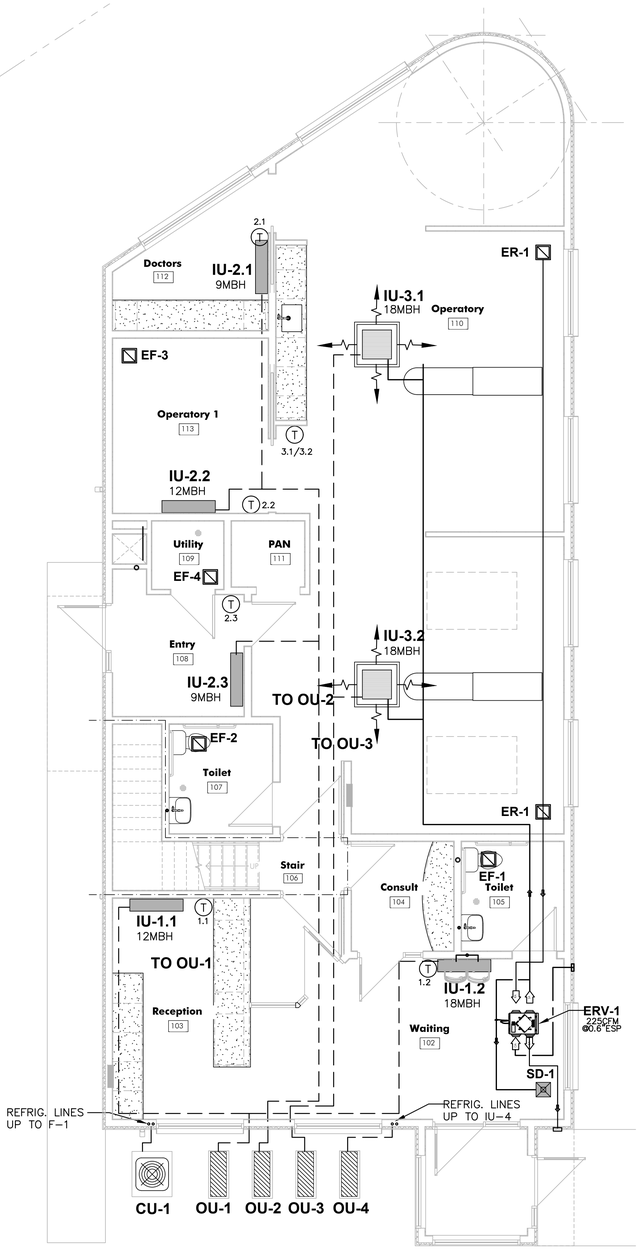


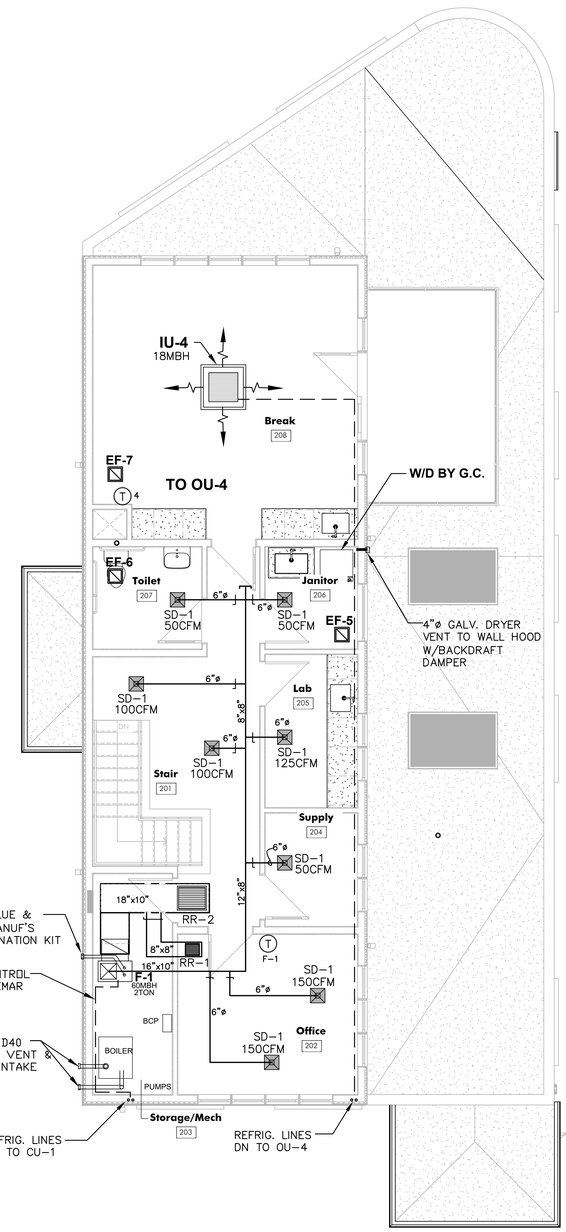
FIRST FLOOR PLAN - RADIANT HEAT

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



FIRST FLOOR PLAN - A/C SYSTEMS

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



SECOND FLOOR PLAN

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

GENERAL NOTES:

1. COORDINATE FINAL LOCATION OF EQUIPMENT AND DUCT ROUTING WITH STRUCTURAL FRAMING PLANS.
2. PROVIDE 2HR FIRE RATED SEALANT AT ALL WALL PENETRATIONS.
3. ALL MATERIALS USED SHALL BE PLENUM RATED WHERE EXPOSED.
4. COORDINATE ALL ROOF AND WALL OPENINGS WITH G.C.
5. PAINT INSIDE DUCTWORK FLAT BLACK BEHIND REGISTERS.
   EXCEPTIONS: WHERE DUCTWORK IS LINED OR NOT VISIBLE THROUGH REGISTER FROM FLOOR LEVEL.
6. PROVIDE COMPLETE IN-SLAB RADIANT HEAT SYSTEM FOR ZONES INDICATED.

SYMBOLS & SCHEDULES

SD-1	⊠	12x12 SUPPLY DIFFUSER EH PRICE MODEL SPD 4 WAY, LAY-IN
RR-1	■	12x12 RETURN REGISTER EH PRICE MODEL 635
RR-2	▥	24x24 RETURN REGISTER EH PRICE MODEL 635
RR-3	▥	24x20 RETURN REGISTER EH PRICE MODEL 630
ER-#	⊠	EXHAUST REGISTER EH PRICE MODEL 635

NOTE: SOUND LEVELS SHALL BE <NC 30

RETURN DUCT

SUPPLY DUCT

5/26/2026 12:52:20 P:\P24177 9795 County Road - Commercial Addition\P24177 RVT\P24177 9795 County Road - Commercial Addition.rvt
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HVAC Plans

M-100

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CITY MULTI SYSTEM SCHEMATIC DWG.

DRAWING INDEX	CONTROL
PAGE	
POWER WIRE	
CONTROL WIRE	
REFRIGERANT PIPE	

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record. Additional refrigerant charge is needed depending on the size and length of extended piping. Refer to the installation manual for pipe charge and the amount of insulation which is mandated on the data book.

12mm(½ IMC) | 12mm(½ IMC) or more, 0.7mm(22 IMC) between 12mm(½ IMC) and 0.7mm(22 IMC)

BRANCH AND CONTROLS	
BC	BRANCH CONTROLLER
BS	BRANCH SELECTOR
CH	CHANGE OVER
CS	CONTROL SWITCH
DP	DRAIN PUMP
EH	ELECTRIC HEATER
FS	FLOW SWITCH
HBC	HEAT RECOVERY BRANCH CONTROLLER
HBS	HEAT RECOVERY BRANCH SELECTOR
HP	HEAT PUMP
HR	HEAT RECOVERY
HUM	HUMIDIFIER
LEV	LINEAR EXPANSION VALVE
MV	MOTORIZED VALVE
OA	OUTDOOR AIR
PH	PRE-HEATER
PMV	PULSE MOTOR VALVE
RA	RETURN AIR
SA	SUPPLY AIR
SV	SOLENOID VALVE

Factory installed components are not shown.

Record Suction Address
a= 5.130.26
ab= 5.130.44
9/1/2026
3:01 PM

REMARKS
Refrigerant Line Sizing
Contractor to verify

IU-1.1 IU-1.2 IU-2.3 IU-2.2 IU-2.1 IU-3.2 IU-3.1 IU-4

DU-1 (S) 051 TB7 208-230V/60Hz FUSE SM36NA-HZ

DU-2 (S) 053 TB7 208-230V/60Hz FUSE SM36NA-HZ

DU-3 (S) 056 TB7 208-230V/60Hz FUSE SM36NA-HZ

DU-4 N/A 208-230V/60Hz FUSE 51/72NA-HZ

208-230V FUSE 001 002 003 004 005 006 007

Ø9.5 AWG0 Ø9.5 AWG0 Ø9.5 AWG0 Ø9.5 AWG0 Ø9.5 AWG0 Ø9.5 AWG0 Ø9.5 AWG0

Ø15.9 Ø15.9 Ø15.9 Ø15.9 Ø15.9 Ø15.9 Ø15.9

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14

WH

Ductless System Schematics

M-101

Nickel City Dentistry

1603 Hertel Avenue
Buffalo, NY 14216

9.10.2026

Project N

2081 Kensington Avenue - Commerical Development

Permit / Construction Documents

P- 26022

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MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE

System Tag	Tag Reference	M-NET Address	Model Number	Modules	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Design Cooling Outdoor Temp DB (°F)	Design Heating Outdoor Temp WB (°F)	Corrected Cooling Total Capacity (BTU/h)	Corrected Heating Capacity (BTU/h)	Electrical-Per Module 208/230V				Notes / Options
											Voltage / Phase	MCA 208/230	RFS	MOCP	
OU-1	OU-1	51	MXZ-SM36NLHZ	P36	36,000	42,000	88.0	1.2	35,897.6	39,491.9	208/230V / 1-phase	45	40	80	1, 2, 3, 5, 6
OU-2	OU-2	53	MXZ-SM36NLHZ	P36	36,000	42,000	88.0	1.2	35,333.8	39,138.3	208/230V / 1-phase	45	40	80	1, 2, 3, 5, 6
OU-3	OU-3	56	MXZ-SM36NLHZ	P36	36,000	42,000	88.0	1.2	35,451.3	39,207.3	208/230V / 1-phase	45	40	80	1, 2, 3, 5, 6
OU-4	OU-4	N/A	SUZ-AA18NLHZ		18,000	20,000	88.0	1.2	18,353.2	17,290.2	208/230V / 1-phase	25	30	42	1, 2, 4, 5, 6

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
4 Efficiency values for EER2, SEER2, COP are based on AHRI 210/240 test method for mixture of ducted & non-ducted indoor units.
5 For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module twinning.
6 Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE

System Tag	Room Name	Tag Reference	Model	Type	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Design Entering Temp DB/WB (°F) / [Water in temp]	Heating Design Entering Temp DB/WB (°F) / [Water in temp]	Corrected Capacity: Cooling Diversity Full/Partial (See Note 5, 6)	Corrected Capacity: Cooling Total Capacity (BTU/h)	Corrected Capacity: Cooling Sensible Capacity (BTU/h)	Corrected Capacity: Heating Diversity Full/Partial (See Note 5, 6)	Corrected Capacity: Heating Capacity (BTU/h)	Refrig Pipe Dim Liquid/Suction (inch)	Fan Speed Setting	Peak Fan Airflow (cfm) / [Design gpm G(US)/min]	Max Fan ESP Setting 208V/230V (IN WG)	Voltage / Phase	Electrical MCA/MFS	Notes / Options
OU-1		IU-1.1	TPKFYP012LM1M0A	Wall -Mounted	12,000	13,500	80.0/67.0	70	FULL DEMAND	11,423.1	8,296.1	FULL DEMAND	12,828.3	1/4 / 1/2	HIGH	297		208/230V/1-phase	0.24/15	1, 2, 3, 4
OU-1		IU-1.2	TPKFYP018LM1M0A	Wall -Mounted	18,000	20,000	80.0/67.0	70	FULL DEMAND	17,134.7	12,351.5	FULL DEMAND	19,004.9	1/4 / 1/2	HIGH	438		208/230V/1-phase	0.24/15	1, 2, 3, 4
OU-2		IU-2.3	TPKFYP012LM1M0A	Wall -Mounted	12,000	13,500	80.0/67.0	70	FULL DEMAND	11,423.1	8,296.1	FULL DEMAND	12,828.3	1/4 / 1/2	HIGH	297		208/230V/1-phase	0.24/15	1, 2, 3, 4
OU-2		IU-2.2	TPKFYP012LM1M0A	Wall -Mounted	12,000	13,500	80.0/67.0	70	FULL DEMAND	11,423.1	8,296.1	FULL DEMAND	12,828.3	1/4 / 1/2	HIGH	297		208/230V/1-phase	0.24/15	1, 2, 3, 4
OU-2		IU-2.1	TPKFYP012LM1M0A	Wall -Mounted	12,000	13,500	80.0/67.0	70	FULL DEMAND	11,423.1	8,296.1	FULL DEMAND	12,828.3	1/4 / 1/2	HIGH	297		208/230V/1-phase	0.24/15	1, 2, 3, 4
OU-3		IU-3.2	TPLFYP018EM1M0A	Ceiling-Cassette (Four-Way)	18,000	20,000	80.0/67.0	70	FULL DEMAND	17,134.7	12,817.8	FULL DEMAND	19,004.9	1/4 / 1/2	HIGH	812		208/230V/1-phase	0.54/15	1, 2, 3, 4
OU-3		IU-3.1	TPLFYP018EM1M0A	Ceiling-Cassette (Four-Way)	18,000	20,000	80.0/67.0	70	FULL DEMAND	17,134.7	12,817.8	FULL DEMAND	19,004.9	1/4 / 1/2	HIGH	812		208/230V/1-phase	0.54/15	1, 2, 3, 4
OU-4		IU-4	SLZ-AF18NL	Ceiling-Cassette (Four-Way)	18,000	21,800	80.0/67.0	70	FULL DEMAND	18,353.2	12,761.4	FULL DEMAND	17,290.2	1/4 / 1/2	HIGH	475		208/230V/1-phase	Powered by Outdoor	1, 2, 3, 4

Notes & Options:
1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3 See outdoor unit schedule for outdoor ambient conditions, connected capacity, and other factors associated with corrected capacities
4 See schematic piping/control diagram for indication of required indoor unit remote controllers, system controllers, and integration devices.
5 Full demand corrected capacity includes de-rate associated with indoor vs. outdoor connected capacity indicated on outdoor unit schedule for associated system.
Partial corrected capacity assumes sufficient diversity exists such that the connected capacity de-rate does not apply.
It is the designer's responsibility to ensure "Diamond System Builder" is set in the appropriate output capacity setting (full demand/partial demand) prior to generating this schedule.
6 It is recommended to always base heating corrected capacity on full demand.

ERV-1 SCHEDULE

	SUMMER			WINTER		
	Outdoor Air	Return Air	Supply Air	Outdoor Air	Return Air	Supply Air
Standard Flow Rate SCFM	225	225	225	225	225	225
Actual Flow Rate ACFM	240	235	236	202	232	224
Dry Bulb °F	86.4	75.0	77.9	3.6	70.0	53.1
Wet Bulb °F	71.3	62.4	66.7	2.3	51.3	40.4
Enthalpy (H) BTU/lb	35.5	28.4	31.6	1.6	21.1	15.5
Moisture Ratio (MR) grains/lb	93.9	66.4	82.5	4.5	27.8	17.9
Supply Air - External Static Pressure in w.g.		0.60			0.60	
Exhaust Air - External Static Pressure in w.g.		0.60			0.60	
Sensible effectiveness %		74.5			74.5	
Total effectiveness %		54.4			71.3	
Enthalpy Recovery Ratio (ERR) %		54.4			71.3	
Sensible Energy Recovery Ratio %		74.5			74.5	
Moisture removed grains/lb		11.4			-13.4	
	Sen	Lat	Tot	Sen	Lat	Tot
Original load BTUH [Tons]	2770 [0.2]	4423 [0.4]	7193 [0.6]	16135	3687	19823
Load with RenewAire BTUH [Tons]	706 [0.1]	2571 [0.2]	3277 [0.3]	4110	1587	5697
Total energy saved BTUH [Tons]	2064 [0.2]	1852 [0.2]	3916 [0.3]	12025	2101	14126

Note: Sensible cooling design conditions were used for the summer performance results.

FURNACE SCHEDULE

Unit Tags	Model Number	Max system airflow cooling (cfm)	SEER2 @ AHRI	Minimum circuit ampacity (A)	Cooling EDB (F)	Cooling EWB (F)	Maximum over-current protection (A)	Heating entering air temperature (F)	Heating airflow (cfm)	Heating EDB (F)	Coil width (in)	Indoor line size OD gas (in)	Indoor line size OD liquid (in)	Burner qty	Blower fan HP (hp)	Blower fan FLA (A)	Recommended qty and size	Minimum circuit ampacity (A)	Maximum over-current protection (A)	# stages	Burner Type	AFUE	Input Capacity (Btuh)	Output Capacity - stage #1 (Btuh)
F-1	S9X1B060U4PSB, 5TXCB003AS3HC	800	14.3	14	80	67	25	70	650	70	17.5	0.75	0.375	3	0.75	8.4	(1) 16" x 25" x 1" Filter	13	15	1	Multiport Inshot	96	60000	58300

1) Include Sidewall vent Termination Kit
2) Touchscreen Programmable 4H/2C
3) 1st Year labor warranty

CONDENSING UNIT SCHEDULE

Unit Tags	Model Number	Design cooling outdoor DB (F)	Cooling elecrical characteristics	System refrigerant type	Capacity @ AHRI (Btuh)	Design cooling EDB (F)	Design cooling EWB (F)	Min system airflow cooling (cfm)	Cooling airflow (cfm)	Max system airflow cooling (cfm)	Cooling net total capacity (Btuh)	Cooling net sensible capacity (Btuh)	Cooling net latent capacity (Btuh)	Calculated cooling LDB (F)	Calculated cooling LWB (F)	SEER2 @ AHRI	Minimum circuit ampacity (A)	Outdoor line size OD gas (in)	Outdoor line size OD liquid (in)	EER2 @ AHRI	Net weight (lb)	Refrigerant charge #1 (lb)	ASHRAE 90.1 S6.4.1 compliant	Cooling EDB (F)	Cooling EWB (F)	Maximum over-current protection (A)	Heating entering air temperature (F)
CU-1	5TTR4024A1	95	200-230/60/1	R-454B	23400	80	67	625	650	800	23657	16245	7412	56.5	54.8	14.3	14	0.75	0.313	12	156	3.6	Yes	80	67	25	70

1) vibration pad

** RADIANT HEAT EQUIPMENT TO BE CONFIRMED BYMANUFACTURER/SUPPLIER **

RADIANT HEAT EQUIPMENT

BOILER CONTROL PANEL:
TEKMAR #519

BOILER:
LOCKINVAR #KHB055N
51MBH, 95%AFUE

CIRCULATING PUMPS:
MANIFOLD #1 - GRUNDFOS
#UPSe 15-58 F
MANIFOLD #2 - GRUNDFOS
#UPSe 26-99 F
MANIFOLD #3 - GRUNDFOS
#UPSe 26-99 F

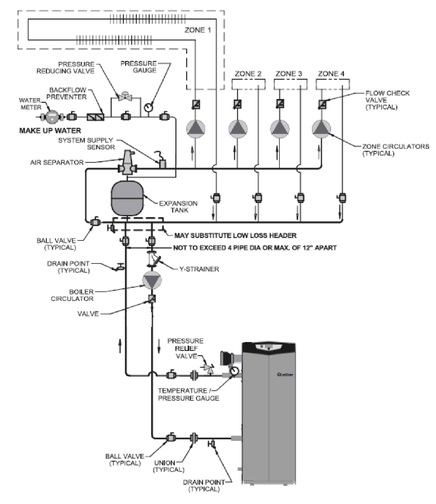
EXPANSION TANK:
WATTS #ETX-30

COMB. FILL VALVE AND BFP:
WATTS #911, 1/2"

AIR SEPARATOR:
SPIROTHERM #VDR100FTM, 1", 10GPM

MANIFOLD WALL CABINET:
RECESSED MOUNT, 42" W x 31" H x 3.5" D
UPONOR #A2603142

SCHEMATIC - Single Boiler - Single Temperature Zoned with Circulators



EXHAUST FAN SCHEDULE

UNIT	ROOM SERVED	CFM	EXTERNAL S.P. (IN.)	AMPS/ WATTS	RPM	VOLTS/PH/Hz	SONES	MANUF./MODEL #	ACCESSORIES/REMARKS	WEIGHT
EF-1,2,3,5	RESTROOMS/JAN.	100	0.25	1A/53W	1100	120/1/60	1.3	GREENHECK / SP-A125	1,2,3,5	17
EF-4	UTILITY RM	225	0.375	1/81W	1050	120/1/60	3.0	GREENHECK / SP-A290	1,2,3,6	24
EF-7	BREAK RM	225	0.375	1/81W	1050	120/1/60	3.0	GREENHECK / SP-A290	1,2,3,4,5	24

REMARKS/ACCESSORIES:
1. ENERGY STAR
2. GREENHECK MODEL WC HOODED WALL CAP.
3. 8"x6" (A125) TO 6"ø ADAPTER.
4. PROVIDE EF MANUFACTURER'S SPEED CONTROL SWITCH – INSTALLED BY ELEC. CONTRACTOR).
5. CONTROLLED THROUGH CENTRAL TIMER (BY ELEC. CONTRACTOR).
6. PROVIDE EF MANUFACTURER'S COOLING ONLY THERMOSTAT (50-90°F) – INSTALLED BY ELEC. CONTRACTOR).

AIR DEVICE SCHEDULE

TYPE	DESCRIPTION	CFM RANGE	NECK SIZE/ CONN.	MANUFACTURER	MODEL	REMARKS
SD-1	SUPPLY DIFFUSER 12X12	50-125	6"ø	E.H. PRICE	SPD	NOTES 1,2,3,4,7
SD-2	SUPPLY DIFFUSER 24X24 LAY-IN	100-150	6"ø	E.H. PRICE	SPD	NOTES 1,2,3,4,7
SD-3	SUPPLY DIFFUSER 24X24 LAY-IN	175-275	8"ø	E.H. PRICE	SPD	NOTES 1,2,3,4,7
SR-1	SUPPLY REGISTER 12X8 SURFACE MOUNT	125-350	–	E.H. PRICE	535D	NOTES 1,2,3
RG-1	RETURN GRILLE, LOUVERED 24X24 LAY-IN	100-600	12"x12"	E.H. PRICE	535	NOTES 1,2,3,4,6
RG-2	RETURN GRILLE, LOUVERED 24X24 LAY-IN	200-1400	22"x22"	E.H. PRICE	PDDR	NOTES 1,2,3,4,6

1. REFER TO ARCH. RCP FOR LOCATIONS AND CEILING TYPES.
2. FINISH WHITE (STANDARD)
3. BLADE ORIENTATION: FRONT BLADES PARALLEL W/LONG DIMENSION (L).
4. NOISE LEVEL SHALL NOT EXCEED NC 35.
5. PROVIDE ADAPTER AS REQUIRED.
6. PROVIDE PLENUMS, CONNECTORS, AND END CAPS AS REQUIRED.
7. ADJUSTABLE HANDLE FOR INTEGRAL BUTTERFLY DAMPER.

NOTE: ALL SUPPLY DIFFUSERS ARE 4-WAY THROW UNLESS NOTED OTHERWISE ON PLAN.

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HVAC Plans

M-102

5/26/2026 12:52:20 P:\P24177 9795 County Road - Commercial Addition\P24177 RVT\P24177 9795 County Road - Commercial Addition.rvt
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MECHANICAL SPECIFICATIONS

BASIC MECHANICAL MATERIALS AND METHODS — SECTION 23 05 00

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. GENERAL REQUIREMENTS.

B. MOTORS.

C. VIBRATION ISOLATION.

D. STEM-TYPE THERMOMETERS.

E. MECHANICAL IDENTIFICATION.

1.2 QUALITY ASSURANCE

A. GUARANTEE: EACH CONTRACTOR SHALL GUARANTEE EACH COMPLETE SYSTEM FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER TO BE FREE OF DEFECTS OF MATERIAL AND WORKMANSHIP AND THAT ANY FAULTY MATERIAL OR WORKMANSHIP WILL BE REPAIRED OR REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.

B. MATERIAL AND EQUIPMENT: ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE BEST QUALITY USED FOR THE PURPOSE IN GOOD COMMERCIAL PRACTICE AND SHALL BE THE STANDARD PRODUCT OF REPUTABLE MANUFACTURERS. THE MATERIAL AND EQUIPMENT MUST MEET APPROVAL OF STATE AND LOCAL CODES IN THE AREA IT IS BEING USED.

C. WARRANTIES: EQUIPMENT AND DEVICES SHALL BE PROVIDED WITH THE WARRANTY AS SPECIFIED HEREIN. AT FINAL ACCEPTANCE, DELIVER TO THE OWNER ALL WARRANTIES WITH TERMS EXTENDING BEYOND THE ONE YEAR GUARANTEE PERIOD. EACH WARRANTY INSTRUMENT SHALL BE ADDRESSED TO THE OWNER AND STATING COMMENCEMENT DATE AND TERM.

D. NOISE CRITERIA: MAINTAIN ASHRAE CRITERIA FOR AVERAGE NOISE CRITERIA CURVES FOR ALL EQUIPMENT AT FULL LOAD CONDITION. EQUIPMENT NOISE SHALL MEET OWNER'S SATISFACTION AT FINAL ACCEPTANCE.

1.3 MECHANICAL GENERAL REQUIREMENTS

A. THIS SECTION APPLIES TO ALL MECHANICAL WORK. THE MECHANICAL CONTRACTOR SHALL REVIEW ALL SECTIONS OF THE SPECIFICATIONS IN ADDITION TO THE PARTICULAR SECTION COVERING THEIR SPECIFIC TRADE. EACH DISTINCT SECTION OF THE SPECIFICATIONS AIMED FOR ONE TRADE MAY HAVE DETAILED INFORMATION WITH REGARDS TO OTHER TRADES. THEREFORE, IT IS IMPERATIVE THAT ALL OTHER TRADES COORDINATE FUNCTIONS AND WORK REQUIRED.

B. THE OWNER DRAWINGS, WHICH CONSTITUTE AN INTEGRAL PART OF THIS CONTRACT, SHALL SERVE AS THE WORKING PLANS. THEY INDICATE THE GENERAL LAYOUT OF THE COMPLETE MECHANICAL SYSTEMS.

1. FIELD VERIFICATION OF SCALED DIMENSIONS ON PLANS IS DIRECTED SINCE ACTUAL LOCATIONS, DISTANCES, AND LEVELS WILL BE GOVERNED BY ACTUAL FIELD CONDITIONS. ALL MEASUREMENTS SHALL BE VERIFIED AT THE JOB SITE.
2. THE MECHANICAL CONTRACTORS SHALL CHECK ARCHITECTURAL, STRUCTURAL, PLUMBING, HEATING, VENTILATION, AIR CONDITIONING, AND ELECTRICAL PLANS TO AVERT POSSIBLE INSTALLATION CONFLICTS. SHOULD DRASTIC CHANGES FROM THE ORIGINAL PLANS BE NECESSARY TO RESOLVE SUCH CONFLICT, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND SECURE APPROVAL BEFORE ANY WORK IS STARTED. MINOR ADJUSTMENT BEFORE THE INSTALLATION IS STARTED.
3. DISCREPANCIES SHOWN BETWEEN PLANS, OR BETWEEN PLANS AND ACTUAL FIELD CONDITIONS, OR BETWEEN PLANS AND SPECIFICATIONS SHALL PROMPTLY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER FOR A DECISION.
4. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO COVER THE COMPLETE MECHANICAL INSTALLATIONS. IN CASE OF DISCREPANCY, THE OMISSION OF THE EXPRESSED REFERENCE TO ANY ITEM OF LABOR AND MATERIAL NECESSARY TO COMPLY TO PRACTICE CODES, ORDINANCES ETC. SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH ADDITIONAL LABOR AND MATERIAL.
5. THE CONTRACT DRAWINGS SERVE AS WORKING DRAWINGS FOR THE MECHANICAL TRADES IN THE MATTER OF PLANNING. HOWEVER, LAYOUT OF EQUIPMENT ACCESSORIES, SPECIALTIES, PIPING SYSTEMS, AND CONDUIT RUNS ARE DIAGRAMATIC UNLESS SPECIFICALLY DIMENSIONED AND NOTE NECESSARILY INDICATE EVERY REQUIRED VALVE, FITTING, TRANSITION, TURNING VANE, ETC. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE FIELD VERIFICATION OF ALL SERVICES, SYSTEMS, ETC. AS PART OF THE TOTAL WORK REQUIRED AND THE COST TO BE INCLUDED IN THIS BASE BID.

C. ACCESSIBILITY: DO NOT LOCATE TRAPS, CONTROLS, UNIONS, ETC IN ANY SYSTEM AT A LOCATION THAT WILL BE INACCESSIBLE AFTER CONSTRUCTION IS COMPLETED. MAINTAIN ACCESSIBILITY FOR ALL COMPONENTS IN MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.

D. CUTTING AND PATCHING: ALL CUTTING AND PATCHING SHALL BE DONE BY THE CONTRACTOR WHOSE WORK IS INVOLVED WITHOUT EXTRA COST TO THE OWNER. ALL PATCHING AND RESTORATION INCLUDING THE FINISHING AND INSTALLATION OF ACCESS PANELS IN THE CEILING, WALLS, ETC. WITHIN THE BUILDING LINES SHALL BE DONE BY THE RESPECTIVE, RESPONSIBLE CONTRACTOR. NO CUTTING OF STRUCTURAL STEEL, CONCRETE, OR WOOD SHALL BE DONE WITHOUT PRIOR APPROVAL AND EXPLICIT DIRECTIONS OF THE ARCHITECT AND ENGINEER. ALL OPENINGS OR OPENINGS IN WALLS, FLOORS, CEILINGS, AND ROOF SHALL BE CUT AND PATCHED BY THE RESPECTIVE, RESPONSIBLE CONTRACTOR.

E. RELOCATION OF EXISTING CONDUITS, DUCTWORK, PIPES, AND UTILITIES: THE CONTRACTOR, UNDER WHOSE JURISDICTION THE WORK MAY FALL, SHALL PROVIDE LABOR, MATERIALS, AND TOOLS REQUIRED TO CUT, REMOVE, PROTECT, SUPPORT, AND RELOCATE EXISTING PIPES, CONDUITS, OR UTILITIES INTERFERING WITH OR UNCOVERED DURING WORK FOR REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION.

F. DAMAGE TO OTHER WORK: EACH CONTRACTOR SHALL BE HELD RIGIDLY RESPONSIBLE FOR ALL DAMAGES TO THEIR OWN OR ANY OTHER TRADE'S WORK RESULTING FROM THE EXECUTION OF THE INVOLVED CONTRACTOR'S WORK.

G. ROUGH-IN FOR CONNECTION OF EQUIPMENT: IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO STUDY THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS, CONFERRING WITH THE VARIOUS TRADES INVOLVED AND CHECKING WITH THE SUPPLIER OF EQUIPMENT IN ORDER TO PROPERLY ROUGH-IN FOR ALL EQUIPMENT.

H. PERFORMANCE OF WORK: ALL WORK OUTLINED IN THE VARIOUS MECHANICAL AND ELECTRICAL SECTIONS SHALL BE DONE BY THE CONTRACTOR UNDER WHOSE JURISDICTION THE WORK MAY FALL. SEE DRAWINGS AND SPECIFICATIONS.

I. ELECTRICAL WIRING: SEE ELECTRICAL SPECIFICATIONS, DIVISION 26.

J. TESTING: ALL TESTING RESULTS SHALL BE IN THE FORM OF WRITTEN REPORTS.

1.4 SUPPLEMENTARY CONDITIONS

A. REFER TO OTHER REQUIREMENTS OF MECHANICAL AND ELECTRICAL WORK IN DIVISION 26 WITHOUT EXCEPTION.

B. PERMITS, INSPECTIONS, AND TESTS: ALL WORK IS TO BE EXECUTED IN COMPLIANCE WITH, AND EACH CONTRACTOR IS TO OBSERVE AND ABIDE BY, ALL APPLICABLE LAWS, REGULATIONS, ORDINANCES, AND RULES OF THE NATIONAL, STATE, COUNTY, AND LOCAL GOVERNING AGENCIES OR ANY DULY CONSTITUTED PUBLIC AUTHORITY. EACH CONTRACTOR IS TO GIVE NOTICES, OBTAIN PERMITS, PAY FEES, AND PROVIDE SAFE ACCESS FOR INSPECTION OF ALL PARTS OF THE WORK AND TO THE SHOPS WHEREIN THE WORK IS IN PREPARATION. NO WORK WILL BE ENCLOSED OR COVERED UNTIL APPROVED BY THE ARCHITECT AND SHOULD ANY WORK BE ENCLOSED OR COVERED BEFORE ALL NECESSARY INSPECTIONS ARE COMPLETED, SAME WILL BE OPENED FOR EXAMINATION AT THE CONTRACTOR'S EXPENSE. ALL FEES, LICENSES, TEST COSTS, ETC. ARE THE CONTRACTOR'S RESPONSIBILITY.

C. RULES, REGULATIONS, AND CODES:

1. ALL MATERIAL AND EQUIPMENT SHALL CONFORM TO THE STANDARDS, WHERE AVAILABLE, OF THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), NATIONAL ELECTRICAL CODE (NEC), UNDERWRITERS LABORATORIES (UL), AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS (ASHRAE), SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION (SMACNA), AND AMERICAN WATER WORKS ASSOCIATION (AWWA).
2. ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES AND UTILITY COMPANIES' REGULATIONS.

D. WORKMANSHIP AND INSTALLATION: THE OWNER SHALL DECIDE WHETHER OR NOT THE FINISHED WORK IS SATISFACTORY IN THEIR JUDGMENT, IF ANY MATERIAL AND/OR EQUIPMENT HAS NOT BEEN PROPERLY INSTALLED OR FINISHED, THIS CONTRACTOR IS OBLIGATED TO REPLACE THE MATERIAL AND/OR EQUIPMENT WHENEVER REQUIRED AND TO REINSTALL THE MATERIAL AND EQUIPMENT IN A MANNER ENTIRELY SATISFACTORY WITHOUT ADDITIONAL COST TO THE OWNER.

E. COOPERATION: THERE SHALL BE COMPLETE COOPERATION WITH ALL TRADES IN THE MATTER OF PLANNING AND EXECUTION OF THE WORK. EVERY REASONABLE EFFORT SHALL BE MADE TO PREVENT CONFLICT AS TO SPACE REQUIREMENTS, DIMENSIONS, LOCATIONS, LEAVING OF OPENINGS, OR OTHER MATTERS THAT OBSTRUCT OR DELAY WORK.

PART 2 – PRODUCTS – REFER TO DRAWINGS

2.1 VIBRATION ISOLATION

A. VIBRATION ISOLATORS:

1. HANGERS: OPEN SPRING MOUNT WITH STIFF SPRINGS, HEAVY MOUNTING FRAME, AND LIMIT STOP.
2. PADS: NEOPRENE WAFFLE PADS, 30 DUROMETER, 1/2" THICK MINIMUM, MAXIMUM LOADING OF 40 PSI.

2.4 MECHANICAL IDENTIFICATION

A. PLASTIC TAGS: LAMINATED PLASTIC WITH ENGRAVED LETTERS ON CONTRASTING BACKGROUND COLOR. TAG SIZE MINIMUM OF 1-1/2" SQUARE.

B. STENCILED TAGS: SEMI-GLOSS ENAMEL PAINTED, MINIMUM 2" HIGH LETTERS.

C. PLASTIC TAPE PIPE MARKERS: FLEXIBLE, VINYL FILM TAPE WITH PRESSURE SENSITIVE ADHESIVE BACKING AND PRINTED MARKINGS.

PART 3 – EXECUTION

3.1 INSTALLATION

A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. PROVIDE VIBRATION ISOLATION ON MOTOR DRIVEN EQUIPMENT AND CONNECTED PIPING AND/OR DUCTWORK.

C. PROVIDE SPRING ISOLATORS ON PIPING CONNECTED TO ISOLATED EQUIPMENT AS FOLLOWS:

1. UP TO 4" DIAMETER: ISOLATORS ON FIRST 3 POINTS OF SUPPORT.

D. INSTALL THERMOMETERS IN PIPING SYSTEMS IN SHORT COUPLINGS. ENLARGE PIPES SMALLER THAN 2-1/2" FOR INSTALLATION OF THERMOMETER SOCKETS. ENSURE SOCKETS ALLOW CLEARANCE FROM INSULATION.

E. INSTALL GAUGES AND THERMOMETERS IN LOCATIONS WHERE THEY ARE EASILY READ FROM OPERATING LEVEL. INSTALLATION SHALL BE BETWEEN 0 AND 45 DEGREES FROM VERTICAL.

F. IDENTIFY ROOFTOP UNITS WITH STENCILED TAGS.

G. IDENTIFY FAN COIL UNITS WITH PLASTIC TAGS.

END OF SECTION

SUPPORTS AND ANCHORS — SECTION 23 05 29

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. PIPE, EQUIPMENT HANGERS, AND SUPPORTS.

PART 2 – PRODUCTS

2.1 PIPE HANGERS AND SUPPORTS

A. MANUFACTURERS:

1. B-LINE.
2. GRINNELL.

B. PLUMBING PIPING:

1. CONFORM TO ASME B31.9.
2. HANGERS FOR PIPE SIZES 1/2" TO 1-1/2": MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
3. HANGERS FOR PIPE SIZES 2" AND LARGER: CARBON STEEL, ADJUSTABLE, CLEVIS.
4. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS.
5. WALL SUPPORT FOR PIPE SIZES 3" AND SMALLER: CAST IRON HOOK.
6. WALL SUPPORT FOR PIPE SIZES 4" AND LARGER: WELDED STEEL BRACKET AND WROUGHT STEEL CLAMP.
7. VERTICAL SUPPORT: STEEL RISER CLAMP, ANGLE RING.
8. FLOOR SUPPORT: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.
9. COPPER PIPE SUPPORT: CARBON STEEL RING, ADJUSTABLE, COPPER PLATED.

C. DUCTWORK: IN ACCORDANCE WITH SMACNA STANDARDS.

2.2 ACCESSORIES

A. HANGER RODS: MILD STEEL THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUS THREADED.

2.4 SLEEVES

A. SLEEVES FOR PIPES THROUGH NON-FIRE RATED FLOORS: 18 GAUGE GALVANIZED STEEL.

B. SLEEVES FOR PIPES THROUGH FIRE RATED AND FIRE RESISTIVE FLOORS AND WALLS AND FIRE PROOFING: PREFABRICATED FIRE RATED SLEEVES INCLUDING SEALS, UL LISTED.

C. SLEEVES FOR ROUND DUCTWORK: GALVANIZED STEEL.

D. SLEEVES FOR RECTANGULAR DUCTWORK: GALVANIZED STEEL.

E. STUFFING INSULATION: GLASS FIBER TYPE, NON-COMBUSTIBLE.

F. SEALANT: ACRYLIC.

PART 3 – EXECUTION

3.1 INSTALLATION

A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. SUPPORT HORIZONTAL PIPING AS SCHEDULED.

C. PLACE HANGERS WITHIN 12 INCHES OF EACH HORIZONTAL ELBOW.

D. USE HANGERS WITH 1-1/2 INCH MINIMUM VERTICAL ADJUSTMENT.

E. SUPPORT HORIZONTAL CAST IRON PIPE ADJACENT TO EACH HUB WITH 5 FEET MAXIMUM SPACING BETWEEN HANGERS.

F. WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION, PROVIDE MULTIPLE OR TRAPEZE HANGERS.

G. SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING.

H. PROVIDE COPPER PLATED HANGER AND SUPPORTS FOR COPPER PIPING.

I. DESIGN HANGER FOR PIPE MOVEMENT WITHOUT DISENGAGEMENT OF SUPPORTED PIPE.

J. PRIME COAT EXPOSED STEEL HANGERS AND SUPPORTS.

K. PROVIDE FLEXIBLE FLASHING AND METAL COUNTER FLASHING WHERE PIPING AND DUCTWORK PENETRATE WATERPROOFED WALLS AND FLOORS.

L. WHERE PIPING OR DUCTWORK PENETRATES FLOOR, CEILING, OR WALL CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND ADJACENT WORK WITH FIRE STOPPING INSULATION AND CAULK. PROVIDE CLOSE FITTING METAL COLLAR OR ESCUTCHEON COVERS AT BOTH SIDES OF PENETRATION.

M. INSTALL CHROME PLATED STEEL ESCUTCHEONS AT FINISHED SURFACES.

3.2 SCHEDULES

A. HANGER SPACING AND HANGER ROD SIZES:

PIPE SIZE (INCHES)	MAX. HANGER SPACING (FEET)	HANGER ROD DIAMETER (INCHES)
1/2 TO 1-1/2	6-1/2	3/8
1-1/2 TO 2	10	3/8
2-1/2 TO 3	10	1/2
4 TO 6	10	5/8
PVC	6	3/8
C.I. BELL & SPIGOT (OR NO-HUB) AND AT JOINTS	5	1/2

END OF SECTION

TESTING, ADJUSTING, AND BALANCING — SECTION 23 05 93

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. PRE-START, TESTING, ADJUSTING AND BALANCING OF AIR SYSTEMS.

1.2 SUBMITTALS FOR REVIEW

A. GENERAL CONTRACTOR TO SUBMIT COPIES OF PRE-START REPORT FOR REVIEW PRIOR TO COMMENCEMENT OF TEST AND BALANCE AND FINAL ACCEPTANCE OF PROJECT. THE PROJECT'S TEST AND BALANCE CONTRACTOR TO PROVIDE FINAL COPIES OF CERTIFIED TEST AND BALANCE REPORT TO ARCHITECT/ENGINEER, AND FOR INCLUSION IN OPERATING AND MAINTENANCE MANUALS.

1.3 QUALIFICATIONS: MECHANICAL CONTRACTOR RESPONSIBLE FOR PRE-START OF MECHANICAL SYSTEMS, EQUIPMENT AND TESTING AND BALANCING SHALL BE PERFORMED BY THE AIR BALANCE CONTRACTOR.

PART 2 – EXECUTION

2.1 PRE-START REQUIREMENTS (BY MECHANICAL CONTRACTOR)

B. VERIFY THAT SYSTEMS ARE COMPLETE AND OPERABLE PRIOR TO COMMENCEMENT OF TEST AND BALANCE. ENSURE THE FOLLOWING CONDITIONS:

1. SYSTEMS ARE STARTED AND OPERATING IN SAFE AND NORMAL CONDITION.
2. ROOF TOP UNIT SET-UP HAS BEEN COMPLETED PER MANUFACTURERS RECOMMENDATIONS.
3. PROPER THERMAL OVERLOAD PROTECTION IS IN PLACE FOR ELECTRICAL EQUIPMENT.
4. FILTERS ARE CLEAN AND IN PLACE. IF REQUIRED, INSTALL TEMPORARY MEDIA IN ADDITION TO FINAL FILTERS.
5. BELTS ARE TENSIONED RIGHT FOR DRIVES.
6. FANS ARE ROTATING CORRECTLY.
7. VOLUME DAMPERS ARE IN PLACE AND OPEN.
8. AIR COIL FINS ARE CLEANED AND COMBED.
9. ACCESS DOORS ARE CLOSED AND DUCT ENDS ARE IN PLACE.
10. AIR OUTLETS ARE INSTALLED AND CONNECTED.
11. DUCT SYSTEM LEAKAGE IS MINIMIZED.
12. SUBMIT FIELD REPORTS. REPORT DEFECTS AND DEFICIENCIES NOTED DURING PERFORMANCE OF SERVICES WHICH PREVENT SYSTEM BALANCE.

2.2 PREPARATION

A. TEST AND ADJUST ALL MECHANICAL SYSTEMS AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION. PERFORM TESTS IN ACCORDANCE WITH THE LATEST CURRENT ASHRAE, SMACNA, AND AABC STANDARDS. ELIMINATE OBJECTIONABLE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF CONTROLS. BALANCING CONTRACTOR SHALL BE AN INDEPENDENT CERTIFIED TEST AND BALANCE CONTRACTOR, WITH NEBB OR AABC CERTIFICATION. SUBMIT COMPLETED AND CERTIFIED TEST AND BALANCE REPORT TO OWNER'S REPRESENTATIVE.

B. PROVIDE INSTRUMENTS REQUIRED FOR TESTING, ADJUSTING, AND BALANCING OPERATIONS. ALL INSTRUMENTS SHALL BE RECENTLY TESTED AND CALIBRATED.

C. PROVIDE ADDITIONAL BALANCING DEVICES AS REQUIRED.

2.3 INSTALLATION TOLERANCES

A. AIR HANDLING SYSTEMS: ADJUST TO WITHIN ±5 PERCENT OF DESIGN FOR SUPPLY SYSTEMS AND WITHIN ±10 PERCENT OF DESIGN FOR RETURN AND EXHAUST SYSTEMS.

B. AIR OUTLETS AND INLETS: ADJUST TOTAL TO WITHIN PLUS 10 PERCENT AND MINUS 5 PERCENT OF DESIGN TO SPACE.

C. HYDRONIC SYSTEMS AT FAN COILS: ADJUST TOTAL TO WITHIN PLUS 10 PERCENT AND MINUS 5 PERCENT OF FAN COIL DESIGN LISTED IN SCHEDULE.

2.4 AIR SYSTEM PROCEDURE

B. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE REQUIRED SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES.

C. MAKE AIR QUANTITY MEASUREMENTS IN DUCTS BY PITOT TUBE TRAVERSE OF ENTIRE CROSS SECTIONAL AREA OF DUCT.

D. MEASURE AIR QUANTITIES AT AIR INLETS AND OUTLETS.

E. ADJUST DISTRIBUTION SYSTEM TO OBTAIN UNIFORM SPACE TEMPERATURES FREE FROM OBJECTIONABLE DRAFTS AND NOISE.

F. USE VOLUME CONTROL DEVICES TO REGULATE AIR QUANTITIES ONLY TO THE EXTENT THAT ADJUSTMENTS DO NOT CREATE OBJECTIONABLE AIR MOTION OR SOUND LEVELS.

G. VARY TOTAL SYSTEM AIR QUANTITIES BY ADJUSTMENT OF FAN SPEEDS. VARY MAIN TRUNK DUCT AIR QUANTITIES BY DAMPER REGULATION.

END OF SECTION

DUCT INSULATION — SECTION 23 07 19

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. PIPING INSULATION.

B. DUCT INSULATION.

C. JACKETS AND ACCESSORIES

PART 2 – PRODUCTS

2.1 PIPE INSULATION

A. CELLULAR FOAM

1. MANUFACTURER/MODEL:
   a. ARMSTRONG ARMAFLEX 22.
   b. OWENS CORNING O-C.
   c. CERTAINTEED CORE.
2. JOINTS: SEALED WITH WATERPROOF ELAST-EASTOMERIC MOLDED SHEET.
3. JOINTS: SEALED WITH WATERPROOF ADHESIVE.
4. ADHESIVES MANUFACTURER/MODEL:
   a. ARMSTRONG 520.
   b. OWENS CORNING 500.

B. GLASS FIBER

1. INSULATION: ASTM C547, RIGID MOLDED, NON-COMBUSTIBLE.
   a. "K" VALUE: ASTM C177, 0.24 AT 75° F.
   b. MAXIMUM SERVICE TEMPERATURE: 850° F.
   c. MAXIMUM MOISTURE ABSORPTION: 0.2 PERCENT BY VOLUME
2. VAPOR BARRIER JACKET:
   a. ASTM C921, WHITE KRAFT PAPER WITH GLASS FIBER YARN, BONDED TO ALUMINIZED FILM.
   b. MOISTURE BARRIER TRANSMISSION: ASTM E96, 0.02 PERM-INCHES.
   c. SECURE WITH PRESSURE SENSITIVE TAPE.
3. VAPOR BARRIER FITTING:
   a. KRAFT PAPER REINFORCED WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM WITH PRESSURE SENSITIVE RUBBER BASED ADHESIVE.

B. JACKETS:

1. CANVAS JACKET: UL LISTED.
   a. FABRIC: ASTM C921, 6 OZ/YD^2, PLAIN WEAVE COTTON TREATED WITH DILUTE FIRE RETARDANT LAGGING ADHESIVE.

C. LINING:

1. MANUFACTURER/MODEL: OWENS CORNING QUIETR ROTARY DUCT LINER.
2. UL LISTED, ANTIMICROBIAL, R-2.2 FOR 1" THICK.

2.3 INSULATION RATINGS

A. FLAME SPREAD SHALL BE 25 OR LESS IN ACCORDANCE WITH ASTM E84.

B. SMOKE DEVELOPED SHALL BE 50 OR LESS IN ACCORDANCE WITH ASTM E84.

PART 3 – EXECUTION

3.1 INSTALLATION

A. INSTALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

B. ALL PIPE FITTINGS TO BE INSULATED WITH MITER CUT PIECES OF CELLULAR FOAM INSULATION ASSEMBLED ON SITE USING SPECIFIED ADHESIVE.

C. FIBER DUCTWORK IS NOT ACCEPTABLE.

D. DO NOT INSTALL INSULATION AND COVERINGS UNTIL DUCTWORK OR PIPING HAVE BEEN TESTED OR APPROVED.

E. ENSURE SURFACES ARE CLEAN AND DRY PRIOR TO INSULATING.

F. LOCATE INSULATION SEAMS IN LEAST VISIBLE LOCATION.

G. FINISH INSULATION NEATLY AT HANGERS, SUPPORTS, AND OTHER PROTRUSIONS.

H. ENSURE INSULATION IS CONTINUOUS INSIDE WALLS.

3.2 SCHEDULES

A. DUCTWORK INSULATION
   THICKNESS

1. FLEXIBLE FIBERGLASS
   a. RECTANGULAR AND ROUND
      SUPPLY DUCT ABOVE CEILINGS 2"
2. LINING
   a. RETURN PLENUMS, TRANSFER AND RETURN DUCTS 1/2"
3. EXTERIOR INSULATION
   a. MATERIAL: MINERAL-FIBER BLANKET.
   b. THICKNESS: 2 INCH
   c. FIELD-APPLIED JACKET: ALUMAGUARD FLEXIBLE WEATHER-PROOF JACKETING. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

END OF SECTION

METAL DUCT AIR DISTRIBUTION — SECTION 23 31 13

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. SHEET METAL DUCTWORK.

B. FLEXIBLE DUCTWORK.

C. DUCT SEALANT.

D. DUCT LINER.

E. DUCT ACCESSORIES.

F. GRILLES, REGISTERS, AND DIFFUSERS.

G. DUCT CLEANING.

1.2 QUALITY ASSURANCE

A. PERFORM WORK IN ACCORDANCE WITH SMACNA – HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE.

B. TEST DUCT LEAKAGE IN ACCORDANCE WITH SMACNA – HVAC AIR DUCT LEAKAGE TEST MANUAL, SEAL CLASS "A".

1.3 REGULATORY REQUIREMENTS

A. CONSTRUCT DUCTWORK TO NFPA 90A STANDARDS.

PART 2 – PRODUCTS

2.1 DUCTWORK

A. MATERIALS:

4. GALVANIZED STEEL DUCTS: ASTM A653/A653M GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY, HAVING G60 ZINC COATING OR GREATER IN CONFORMANCE WITH ASTM A90.
5. FLEXIBLE DUCTS: UL 181, CLASS 1, TWO PLY ALUMINIZED FOIL FILM SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE. FIBERGLASS INSULATION, VAPOR BARRIER FILM, PRESSURE SENSITIVE ADHESIVE JOINT OVERLAP TAPE, AND MASTIC AS NEGATIVE, RATED FOR PLENUM SERVICE WITH FLAME SPREAD BELOW 25 AND SMOKE PRODUCTION BELOW 50. MINIMUM INSULATION VALUE R-4.0.
6. PVC COATED STEEL DUCTS: G90 GALVANIZED STEEL DUCT COATED WITH POLYVINYL CHLORIDE PLASTIC, 4 MIL THICK ON OUTSIDE, MANUFACTURED BY FOREMOST MANUFACTURING CO., SOUTHFIELD MI, MODEL PCD.

B. METAL DUCTWORK:

1. FABRICATE AND SUPPORT IN ACCORDANCE WITH ASHRAE AND SMACNA – HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE.
2. SHEETMETAL DUCTWORK SHALL BE FABRICATED AND INSTALLED FOR 1" W.G. PRESSURE CLASS, SEAL CLASS "A".
3. CONSTRUCT TEE, BENDS, AND ELBOWS WITH RADIUS 1-1/2 TIMES THE WIDTH OF DUCT ON CENTER LINE OR PROVIDE TURNING VANES MANUFACTURED BY TITUS OR BARBER-COLEMAN.
4. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 30 DEGREES DIVERGENCE AND 45 DEGREES CONVERGENCE.
5. WEIGHT OF RECTANGULAR SHEET METAL DUCT (IN UNITED STATES STANDARD GAUGES):
   a. UP TO 12 INCHES: 26 GAUGE.
   b. 13 TO 30 INCHES: 24 GAUGE.
   c. 31 TO 54 INCHES: 22 GAUGE.
6. WEIGHT OF ROUND SHEET METAL DUCT (IN UNITED STATES STANDARD GAUGES):
   a. UP TO 8 INCHES: 28 GAUGE.
   b. 9 TO 14 INCHES: 26 GAUGE.
   c. 15 TO 26 INCHES: 24 GAUGE.
   d. 27 TO 36 INCHES: 22 GAUGE.
   e. 37 TO 50 INCHES: 20 GAUGE.
6. HORIZONTAL AND VERTICAL SURFACES OF DUCTWORK SHALL HAVE STIFFENER ANGLES OF SIZE, WEIGHT, AND SPACING AS FOLLOWS:
   a. UP TO 24 INCHES: TRANSVERSE JOINT CONNECTIONS OF S SHAPE SOCKET OR BAR SLIPS ON 7 FOOT 10 INCH CENTERS.
   b. 25 TO 36 INCHES: TRANSVERSE JOINT CONNECTIONS OF 1 INCH POCKET OR BAR SLIPS ON 7 FOOT 10 INCH CENTERS WITH 1 X 1 X 1/8 ANGLE BRACING 4 FEET FROM JOINTS.
   c. 41 TO 60 INCHES: TRANSVERSE JOINT CONNECTIONS OF 1-1/2 INCH POCKET OR BAR SLIPS WITH 1-3/8 X 1-3/8 X 1/8 INCH BAR REINFORCING ON 7 FOOT 10 INCH CENTERS WITH 1-1/2 X 1-1/2 X 1/8 ANGLE BRACING 4 FEET FROM JOINTS.
   d. 61 TO 80 INCHES: TRANSVERSE JOINT CONNECTIONS OF 1-1/2 INCH POCKET OR BAR SLIPS WITH 1-3/8 X 1/8 INCH BAR REINFORCING ON 7 FOOT 10 INCH CENTERS WITH 1-1/2 X 1-1/2 X 1/2 ANGLE BRACING 4 FEET FROM JOINTS.
   e. 81 TO 96 INCHES: TRANSVERSE JOINT CONNECTIONS OF 1-1/2 INCH POCKET OR BAR SLIPS WITH 1-3/8 X 1/8 INCH BAR REINFORCING ON 7 FOOT 10 INCH CENTERS WITH 1-1/2 X 1-1/2 X 1/2 ANGLE BRACING 4 FEET FROM JOINTS.
   f. ENSURE NO SHEETS TO STIFFENER ANGLES SHALL NOT EXCEED 6 INCHES ON CENTER.
   g. THE SPACING OF STIFFENERS ON ELBOWS AND CURVES SHALL NOT EXCEED 30 INCHES.

2.2 FLEXIBLE DUCTS

A. INSULATION: COMPLY WITH UL 181, CLASS 1, FACTORY FABRICATED, INSULATED ROUND DUCT WITH AN OUTER JACKET ENCLOSING R-6 GLASS FIBER INSULATION AROUND A CONTINUOUS INNER LINER.

   a. REINFORCEMENT: STEEL WIRE HELIX ENCAPSULATED IN INNER LINER.
   b. OUTER JACKET: BI-DIRECTIONAL FIBERGLASS SCRIM REINFORCED ALUMINUM FOIL.
   c. INNER LINER: ACOUSTICALLY RATED BLACK CPE CORE PERMANENTLY BONDED TO COATED STEEL WIRE HELIX.
   d. PRESSURE RATING: 6 INCH W.C. POSITIVE, 1/2 INCH W.C. NEGATIVE.

2.3 DUCT SEALANT

A. DUCT SEALANT: PROVIDE WATER BASED SYNTHETIC LATEX EMULSION PERMANENTLY FLEXIBLE HIGH VELOCITY DUCT SEALANT, DUCTMATE INDUSTRIES, INC. PRO SEAL OR EQUAL. SEALANT TO BE LOW VOC LEED COMPLIANT CAPABLE OF 15" W.G., NFPA 90A AND 90B APPROVED, UL 1818-M LISTED AND UL 723 CLASSIFIED. INSTALL PER MANUFACTURER INSTRUCTIONS. SEALANT SHALL BE APPROVED FOR PLENUM INSTALLATIONS AND MEET FLAME SPREAD AND SMOKE DEVELOPED RATINGS FOR PLENUM APPLICATIONS.

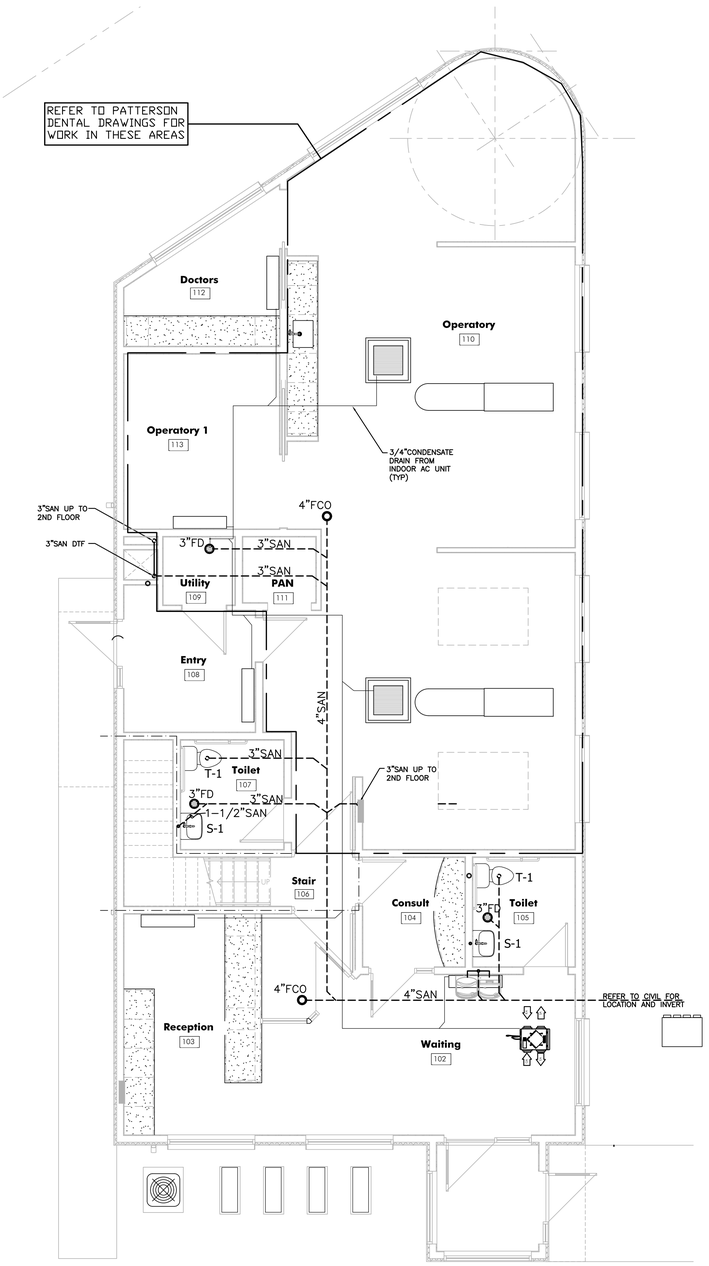
2.4 DUCT LINER

A. DUCT LINER (PROVIDE ON ALL RECTANGULAR RETURN DUCT): PROVIDE MINIMUM 1" THICK, 1 PCF DENSITY, LONG TEXTILE FIBER TYPE DUCT LINER WITH COATING ON THE AIR STREAM SIDE CONFORMING TO NFPA 90A. DUCT LINER SHALL BE SECURED TO DUCT WITH BOTH ADHESIVE AND MECHANICAL FASTENERS. ADHESIVE SHALL BE LEED COMPLIANT LOW VOC AS RECOMMENDED BY DUCT LINER MANUFACTURER, AND SHALL COMPLY WITH ASTM C-916. DUCT LINER FASTENERS SHALL COMPLY WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS", LATEST EDITION. THERMAL CONDUCTIVITY SHALL BE EQUAL TO OR LESS THAN 0.23 AT 75°F.

2.5 DUCT ACCESSORIES

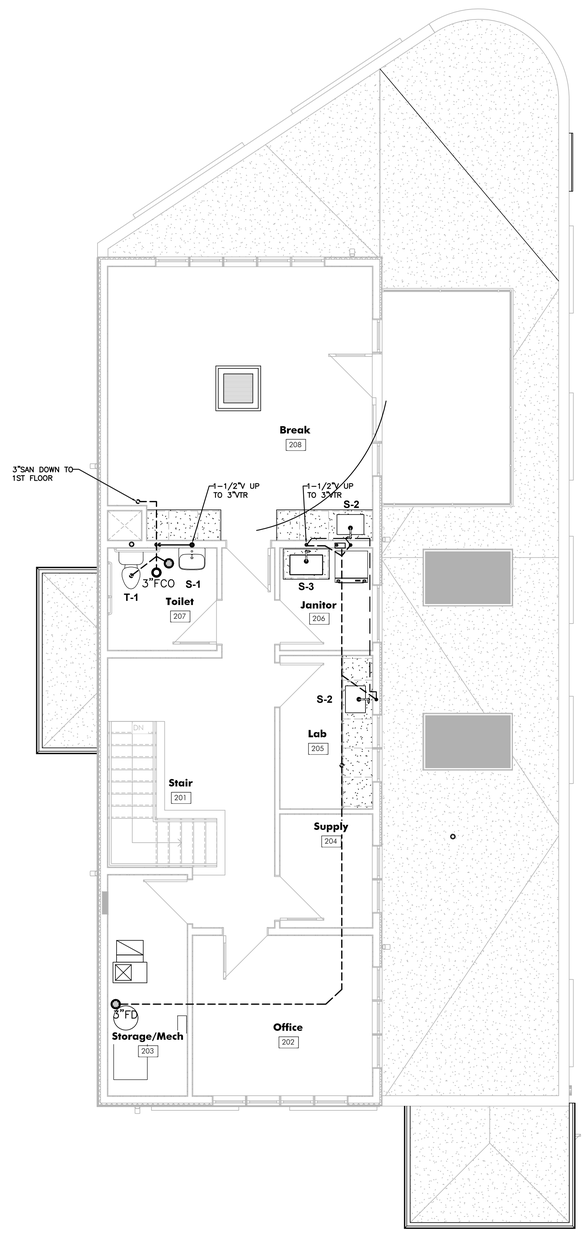
A. VOLUME CONTROL DAMPERS:

   a. FABRICATION



FIRST FLOOR PLAN - DRAIN & VENT

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



SECOND FLOOR PLAN - DRAIN & VENT

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

GENERAL NOTES:

1. PRIOR TO DEMO WORK, TRACE OUT AND VERIFY EXACT LOCATION AND INVERTS OF EXISTING UNDER FLOOR SANITARY LINES.
2. PROVIDE 2HR FIRE RATED SEALANT AT ALL 2ND FLOOR AND WALL PENETRATIONS.
3. ALL MATERIALS ABOVE CEILING SHALL BE PLENUM RATED.
4. COORDINATE ALL TRENCHING, BACK-FILLING, PATCHING AND REPAIRS WITH G.C.
5. ALL HOT AND COLD WATER AND HEATED PRESSURE WASH SUPPLY PIPING SHALL BE COPPER AND INSULATED WITH 1" FIBERGLASS.
6. ALL SANITARY AND VENT PIPING SHALL BE DWV COPPER.
7. REFER TO FIXTURE CONNECTION SCHEDULE FOR RUN-OUT SIZES.
8. LABEL ALL PIPING WITH FLOW DIRECTION ARROWS EVERY 25FT OR WITHIN 10FT FROM CHANGE IN DIRECTION.

PLUMBING FIXTURE SCHEDULE

LETTER	TYPE OF FIXTURE	DRAINAGE		SUPPLY	
		SS	V	DCW	DHW
T-1	FLR MTD TOILET MANUAL TANK TYPE, ADA HEIGHT	3"	2"	½"	
S-1	WALL MOUNT – ADA	1½"	1½"	½"	½"
S-2,S-3	UNDERMOUNT STAINLESS STEEL SINK	1½"	1½"	½"	½"
FD	FLOOR DRAIN W/INLINE TRAP SEAL	4"	2"		
WHA	WATER HAMMER ARRESTER			½"	½"

WATER CONNECTION SCHEDULE

NUMBER OF FIXTURES SUPPLIED

BRANCH PIPE SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
1/2" FIXTURE CONN.	2	3 TO 4	5 TO 7	8 TO 13	14 TO 23	–	–
3/4" FIXTURE CONN.	–	1	2	3 TO 4	5 TO 9	9 TO 24	–
3/4" FLUSH VALVE	–	1	2	3	4 TO 7	8 TO 24	–
1" FLUSH VALVE	–	–	1	2	3 TO 4	5 TO 12	13 TO 25

GENERAL SCHEDULE NOTES:
1. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS.
2. PROVIDE ALL FAUCETS, TRIM, TAIL PIECES, TRAPS, ESCUTCHEONS, AND SERVICE VALVES AS REQUIRED.

SYMBOLS & ABBREVIATIONS

DOMESTIC COLD WATER (CW)
DOM. HOT WATER (HW)
DOM. HOT WATER RETURN (HWR)
NATURAL GAS (NEW)
SANITARY (ABOVE GROUND)
SANITARY (BELOW GROUND)
OIL/WATER WASTE (OW)
VENT (ABOVE GROUND)
VENT (BELOW GROUND)
COMPRESSED AIR (A)

AAV	AIR ADMITTANCE VALVE
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN W/TRAP & PRIMER
HD	HUB DRAIN W/TRAP
NFWH	NON-FREEZE WALL HYDRANT
DTF	DOWN THROUGH FLOOR
MV	MIXING VALVE
RP	RECIRC PUMP
VTR	VENT THROUGH ROOF
WCO	WALL CLEAN OUT
WHA	WATER HAMMER ARRESTOR

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2081 Kensington Avenue - Commerical Development

Permit / Construction Documents

P. 26022

9.10.2026

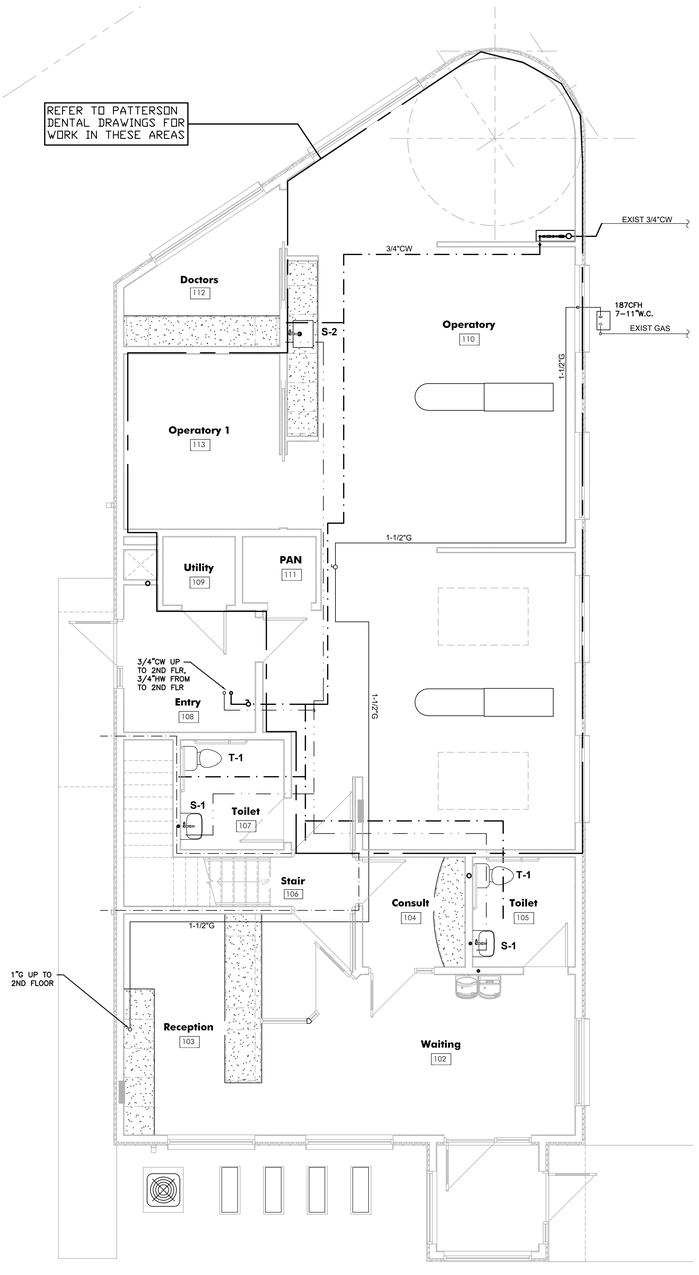
Project N

Nickel City Dentistry

1603 Hertel Avenue
Buffalo, NY 14216

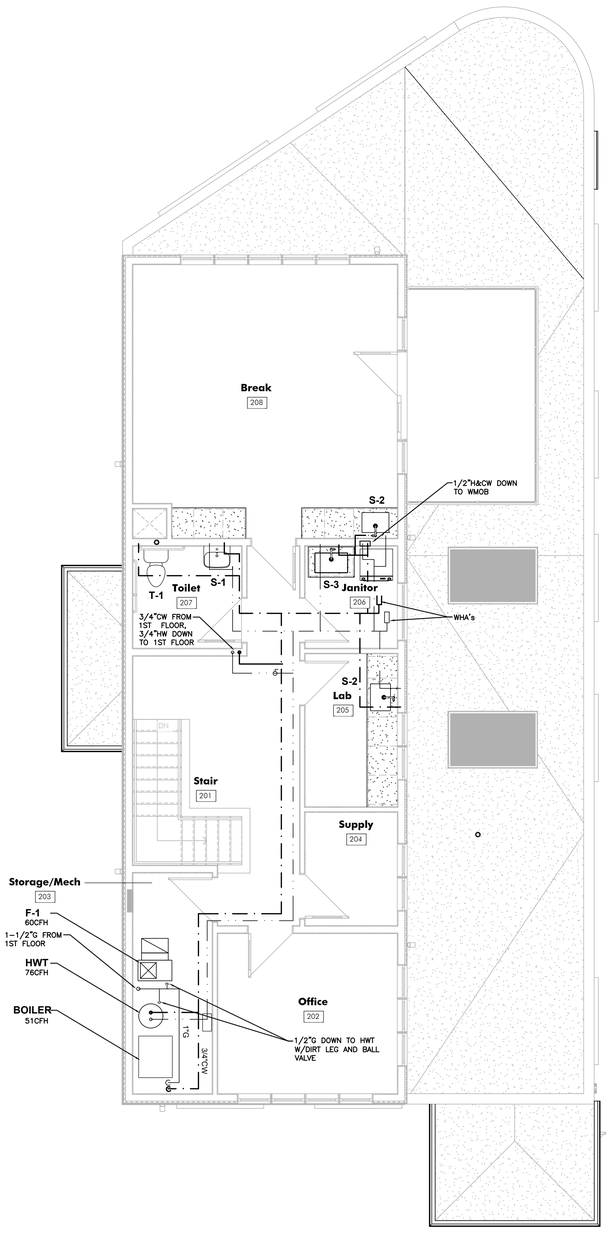
Plumbing Plans - Drain & Vent

P-100



FIRST FLOOR PLAN - WATER & GAS

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



SECOND FLOOR PLAN - WATER & GAS

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

GENERAL NOTES:

1. PRIOR TO DEMO WORK, TRACE OUT AND VERIFY EXACT LOCATION AND INVERTS OF EXISTING UNDER FLOOR SANITARY LINES.
2. PROVIDE 2HR FIRE RATED SEALANT AT ALL 2ND FLOOR AND WALL PENETRATIONS.
3. ALL MATERIALS ABOVE CEILING SHALL BE PLENUM RATED.
4. COORDINATE ALL TRENCHING, BACK-FILLING, PATCHING AND REPAIRS WITH G.C.
5. ALL HOT AND COLD WATER AND HEATED PRESSURE WASH SUPPLY PIPING SHALL BE COPPER AND INSULATED WITH 1" FIBERGLASS.
6. ALL SANITARY AND VENT PIPING SHALL BE DWV COPPER.
7. REFER TO FIXTURE CONNECTION SCHEDULE FOR RUN-OUT SIZES.
8. LABEL ALL PIPING WITH FLOW DIRECTION ARROWS EVERY 50FT OR WITHIN 15FT FROM CHANGE IN DIRECTION.

PLUMBING FIXTURE SCHEDULE

LETTER	TYPE OF FIXTURE	DRAINAGE		SUPPLY	
		SS	V	DCW	DHW
T-1	FLR MTD TOILET MANUAL TANK TYPE, ADA HEIGHT	3"	2"	½"	
S-1	WALL MOUNT – ADA	1½"	1½"	½"	½"
S-2,S-3	UNDERMOUNT STAINLESS STEEL SINK	1½"	1½"	½"	½"
FD	FLOOR DRAIN W/INLINE TRAP SEAL	4"	2"		
WHA	WATER HAMMER ARRESTER			½"	½"

WATER CONNECTION SCHEDULE

	NUMBER OF FIXTURES SUPPLIED						
BRANCH PIPE SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
1/2" FIXTURE CONN.	2	3 TO 4	5 TO 7	8 TO 13	14 TO 23	–	–
3/4" FIXTURE CONN.	–	1	2	3 TO 4	5 TO 9	9 TO 24	–
3/4" FLUSH VALVE	–	1	2	3	4 TO 7	8 TO 24	–
1" FLUSH VALVE	–	–	1	2	3 TO 4	5 TO 12	13 TO 25

GENERAL SCHEDULE NOTES:
1. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS.
2. PROVIDE ALL FAUCETS, TRIM, TAIL PIECES, TRAPS, ESCUTCHEONS, AND SERVICE VALVES AS REQUIRED.

SYMBOLS & ABBREVIATIONS

DOMESTIC COLD WATER (CW)
DOM. HOT WATER (HW)
DOM. HOT WATER RETURN (HWR)
NATURAL GAS (NEW)
SANITARY (ABOVE GROUND)
SANITARY (BELOW GROUND)
OIL/WATER WASTE (OW)
VENT (ABOVE GROUND)
VENT (BELOW GROUND)
COMPRESSED AIR (A)

AAV	AIR ADMITTANCE VALVE
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN W/TRAP & PRIMER
HD	HUB DRAIN W/TRAP
NFWH	NON-FREEZE WALL HYDRANT
DTF	DOWN THROUGH FLOOR
MV	MIXING VALVE
RP	RECIRC PUMP
VTR	VENT THROUGH ROOF
WCO	WALL CLEAN OUT
WHA	WATER HAMMER ARRESTOR

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Plumbing Plans - Water & Gas

P-101

PLUMBING SPECIFICATIONS

1. GENERAL

A. ALL PLUMBING WORK IS SUBJECT TO THE GENERAL REQUIREMENTS OF THE CONTRACT. ALL OTHER ARTICLES EITHER SHOWN ON THE PLANS OR MENTIONED IN THE SPECIFICATIONS, TOGETHER WITH ALL ACCOUTREMENTS NECESSARY TO COMPLETE THE WORK, SHALL BE FURNISHED AND INSTALLED BY THIS PLUMBING CONTRACTOR, UNLESS OTHERWISE STATED. ALL ADJUSTMENTS SHALL BE MADE AND SYSTEM TURNED OVER TO THE OWNER IN PERFECT WORKING ORDER.

2. LAWS, CODES, PERMITS AND INSPECTIONS

A. FILE ALL PLANS AND PAY FOR NECESSARY PERMITS AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER THIS WORK.

B. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, ENERGY CONSERVATION AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION OVER THIS WORK. THESE CODES SHALL SUPERSEDE THE SPECIFICATIONS AND DRAWINGS.

C. AT THE COMPLETIONS OF THE WORK, THE PLUMBING CONTRACTOR SHALL DELIVER TO THE OWNER A CERTIFICATE OF INSPECTION AND ACCEPTANCE OF THE WORK BY THE LOCAL INSPECTION AUTHORITY.

3. GUARANTEE

A. THE CONTRACTOR SHALL GIVE A WRITTEN GUARANTEE UPON FINAL ACCEPTANCE OF THE WORK AGAINST DEFECTIVE WORKMANSHIP, MATERIALS, OR OPERATION THAT MAY RESULT WITHIN ONE (1) YEAR OF FINAL ACCEPTANCE BY THE OWNER.

4. EQUIPMENT AND MATERIALS

A. ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THIS CONTRACT SHALL BE NEW (UNLESS OTHERWISE SPECIFIED). LISTED BY THE UNDERWRITERS LABORATORIES, AND SHALL BE OF THE SAME MAKE WHERE USED FOR SIMILAR PURPOSES.

5. MARKING AND LABELING

A. PROVIDE ENGRAVED NAMEPLATES FOR ALL PLUMBING EQUIPMENT AS WELL AS PLASTIC PIPE MARKERS TO IDENTIFY ALL PIPING SYSTEMSFOR THIS PROJECT.

6. FINAL CLEANING

A. AFTER TESTS HAVE BEEN MADE AND THE INSTALLATION HAS BEEN FOUND SATISFACTORY BY THE ENGINEER, THOROUGHLY CLEAN THE ENTIRE INSTALLATION, BOTH EXPOSED SURFACES AND INTERIORS. REMOVE ALL DEBRIS CAUSED BY THE WORK UNDER THIS CONTRACT FROM ALL SPACES INSIDE AND OUTSIDE THE BUILDING. AT COMPLETION OF WORK, CLEAN ALL FIXTURES AND METAL WORK AND LEAVE IN POLISHED CONDITION.

7. PLUMBING PIPING

A. BELOW GRADE DOMESTIC WATER PIPING AND FITTINGS SHALL BE TYPE "K" COPPER WITH SOLDER JOINTS. JOINTS SHALL BE AS PER ASTM B 32 WITH LEAD–FREE SOLDER AND FLUXES. USE PEX–A WHERE INDICATED ON PLANS. USE PREINSULATED PEX–A FOR PIPE SIZES 3/4" OR LARGER.
B. ABOVE GRADE DOMESTIC WATER PIPING AND FITTINGS:
   1. TYPE "L" COPPER WITH SOLDER JOINTS. JOINTS SHALL BE AS PER ASTM B 32 WITH LEAD–FREE SOLDER AND FLUXES. (OR)
C. ABOVE AND BELOW GRADE SANITARY SEWER, VENT PIPING AND FITTINGS SHALL BE SCHEDULE 40 PVC.
D. ABOVE GRADE NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK IRON PIPE. FITTINGS SHALL BE CLASS 150 MALLEABLE IRON ASTM A197, THREADED UP TO 2", WELDED OVER 2". ALL PIPING TO BE INSTALLED AND TESTED PER NFPA 54.

8. PLUMBING PIPING INSULATION

A. LOCATION – COLD WATER PIPING AND HOT WATER PIPING (EXCEPT WHERE CHROME PLATED EXPOSED IN ROOMS).

B. TYPE – FIBERGLASS 25 ASJ (ALL SERVICE JACKET) GLASS FIBER ON ALL CONCELED AND EXPOSED PIPING. GLASS FIBER SHALL BE HEAVY DENSITY RIGID FIBER MOLDED SNAP ON SECTIONS.

C. MAKE – OWENS –CORNING, CERTAINTEED, KNAUF.

D. APPLICATION – ALL SEAMS LAPS AND END JOINTS ON GLASS FIBER WILL BE SEALED BY SELF–SEALING LAPON JACKET OR JOINT SEALING STRIPS INSTALLED IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDARTIONS. WHERE STAPLES ARE USED, THEY SHALL BE SEALED WITH BENJAMIN FOSTER 30–36 MASTIC.

E. FITTINGS – INCLUDE VALVES, FLANGES AND ALL OTHER PIPING COMPONENTS INSULATED WITH GLASS FIBER. INSUL–SURE MOLDED FIBERGLASS FITTINGS OR FABRICATED MITERED SEGMENTS SHALL BE COVERED WITH 1/4" COAT HARD SETTING FINISH CEMENT. ALL FITTINGS SHALL BE COVERED WITH GLASS FIBER LAGGING CLOTH EMBEDDED INTO BENJAMIN–FOSTER 30–35 MASTIC AND GIVEN FLOODING BRUSH COAT OF MASTIC OR ZESTIN'S ONE PIECE PREMOLDED INSULATED FITTINGS WITH JOINTS SEALED WITH Z–TAPE, PER MANUFACTURE'S RECOMMENDATIONS.

F. SIZE: HOT & COLD WATER INSULATION SCHEDULE:
   1. UP TO 3/4" PIPE SIZE: 1" THICK.
   2. 1" PIPE SIZE OR LARGER: 1½" THICK.

9. GENERAL DUTY VALVES:

A. SHUT–OFF: USE BALL VALVES FOR DOMESTIC WATER.
B. USE LUBRICATED PLUG VALVES FOR NATURAL GAS PIPING.

10. SHOP DRAWINGS AND MANUFACTURER'S DATA.

A. THE CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF ALL SHOP DRAWINGS OR DESCRIPTIVE LITERATURE ON ALL EQUIPMENT TO BE SUPPLIED.

11. AS BUILT DRAWINGS

A. AT THE COMPLETION OF THE PLUMBING WORK, THE CONTRACTOR RESPONSIBLE FOR THE WORK PERFORMED UNDER THIS CONTRACT SHALL PROVIDE AS–BUILTS DRAWINGS.

12. EXCAVATION

A. PERFORM ALL EXCAVATION REQUIRED FOR THE INSTALLATION OF WORK IN THIS CONTRACT. EXCAVATION TO PROVIDE SUFFICIENT CLEARANCE FOR INSTALLATION OF WORK.

12. BACK FILLING

A. BACK FILLING UPON INSPECTION TEST AND APPROVAL BY LOCAL AUTHORITIES AND ARCHITECT. NO CINDERS OR OTHER CORROSIVE MATERIAL WILL BE PERMITTED. FILL MUST BE WELL TAMPED AND PACKED FOR GREATEST POSSIBLE SETTLEMENT. NO ROCK SHALL BE USED.

14. TESTING & CLEANING

A. ALL WATER PIPING TO BE DISINFECTED IN ACCORDANCE WITH AWWA C–601–1954 AND CITY OF BUFFALO DEPT. OF WATER REQUIREMENTS.
B. PRESSURE TEST
   1. HOT & COLD WATER: 150PSIG HYDROSTATIC FOR 4 HOURS.
   2. NATURAL GAS: 15PSIG AIR PRESSURE FOR 1 HOUR.
   3. SANITARY WASTE & VENT: FILL WITH WATER TO 10FT ABOVE HIGHEST FIXTURE FOR 8 HOURS.
   4. REPAIR AS NECESSARY AND RETEST.

15. PLUMBING FIXTURES

A. MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED IN SETTING FIXTURES AND ALL ROUGHING TO BE CENTERED.

16. CHROMIUM WORK

B. ALL FITTINGS AND EXPOSED PIPE, SCREWS, NUTS, WASHERS, WALL PLATES, RIM GUARDS, CHROMIUM PLATED BRASS, TEFLON TAPE SHALL BE USED ON ALL SCREWED JOINTS FOR CHROMIUM PIPE.

17. PLUMBING FIXTURES

ALL FIXTURES TO BE FURNISHED AND INSTALLED BY CONTRACTOR AS SPECIFIED BELOW OR EQUAL AS APPROVED BY OWNER.

T–1
17" HIGH FLOOR MOUNTED VITREOUS CHINA TOILET. ADA COMPLIANT, ELONGATED BOWL WITH 1–1/2" TOP SPUD, SLOAN MODEL ST–2029–STG (#2172029) OR APPROVED EQUAL, WITH BEMIS MODEL #1655SSCT EXTRA HEAVY–DUTY OPEN FRONT SEAT W/SELF–SUSTAINING HINGE, W/O COVER, AND REGAL 111–1.28 (#3080050) MANUAL FLUSHOMETER – 1.28GPF. PROVIDE RING AND BOLTS, SUPPLY PIPING CHROME PLATED ESCUTCHEON. COLOR OF WATER CLOSET AND SEAT SHALL BE WHITE.

S–1
WALL HUNG VITREOUS CHINA SINK, ADA COMPLIANT, 18–1/4"x20–3/4" BOWL, SLOAN MODEL SS–3003 (#3873003), HOLES AT 4" CENTERS, CONCEALED CARRIER, WITH SINGLE LEVER HANDLE BRUSHED NICKEL SPOT–RESISTANT FAUCET MOEN 'ADLER' MODEL #WSL84502, LESS POP–UP DRAIN, 1.2GPM, TEMPERATURE LIMITED TRAVEL, OFFSET DRAIN, GRID STRAINER, LOOSE KEY STOP CONTROL, CHROME PLATED ESCUTCHEON AND SUPPLIES.

UNDER COUNTER SUPPLY AND WASTE PIPING SHALL BE COVERED WITH LAV GUARD2 PIPE COVERS AS MANUFACTURED BY TRUBRO, INC OR APPROVED EQUAL. COLOR OF PIPE COVERS SHALL BE WHITE.

S–2
DROP–IN STAINLESS STEEL, SINGLE BOWL, 20"x20"x10–1/8"D, SATIN FINISH, OFFSET DRAIN, GRID STRAINER, LOOSE KEY STOP CONTROL, CHROME PLATED ESCUTCHEON AND SUPPLIES, ELKAY MODEL # DPC12020101, WITH CHICAGO FAUCET MODEL #350–317XKABCP.

S–3
DROP–IN STAINLESS STEEL, DOUBLE BOWL, 33"X22"X10–1/8"D, SATIN FINISH, OFFSET DRAIN, GRID STRAINER, LOOSE KEY STOP CONTROL, CHROME PLATED ESCUTCHEON AND SUPPLIES, ELKAY MODEL # DSE233191, WITH CHICAGO FAUCET MODEL #350–317XKABCP.

TRIM FOR G.C. FURNISHED SOLID SURFACE SINKS
PROVIDE OFFSET DRAIN, GRID STRAINER, LOOSE KEY STOP CONTROL, CHROME PLATED ESCUTCHEON AND SUPPLIES, CHICAGO FAUCET MODEL #350–317XKABCP.

FD–1
FLOOR DRAIN SHALL BE WATTS MODEL FD–100–A, EPOXY COATED CAST IRON BODY, PIPE SIZE PER DRAWING. ADJUSTABLE HEEL–PROOF NICKLE–BRONZE STRAINER, NO–HUB OUTLET, WITH 4" INLINE TRAP SEAL (RECTORSEAL 'SURESEAL' MODEL #97044 OR EQUAL).

HWT–1
HIGH EFFICIENCY POWER VENT GAS–FIRED HOT WATER TANK, NOMINAL 75GAL CAPACITY, 82GPH WITH 90°F RISE, 76MBH, 1/2"GAS AND 3/4"HOT & COLD WATER CONNECTIONS (BRADFORD WHITE MODEL #RG2PV75H6N, 120V BLOWER WITH 10FT CORD). PROVIDE 3"CPVC FLUE VENT PIPING TO WALL TERMINATION VENT KIT. INSTALL PER MANUF.'S INSTRUCTIONS.

EWC–1
ADA COMPLIANT, DUAL HEIGHT, REFRIGERATED, FILTERED WATER COOLER WITH BOTTLEFILLING STATION, 8GPH, 115V, 6A, 370W, (ELKAY MODEL #LZSTLBWSLK. PROVIDE SIX (6) MODEL #51300C REPLACEMENT FILTERS, VALVES, WATER SUPPLY TUBING, AND TRAPS.

END

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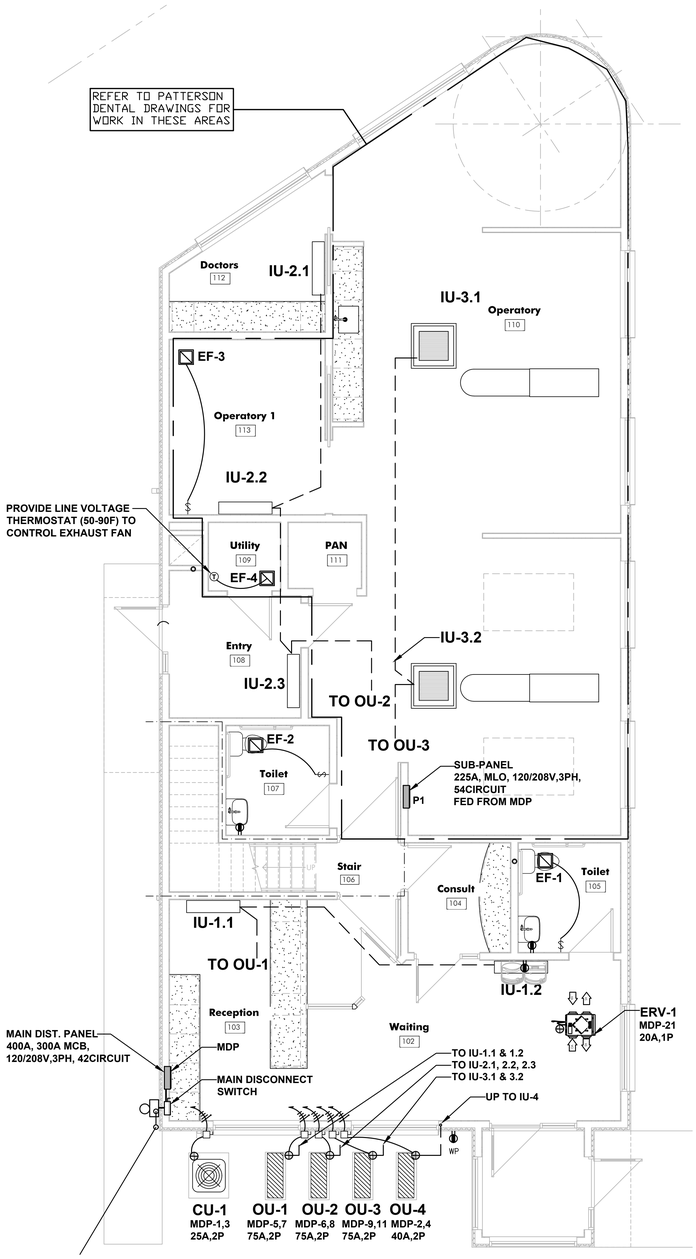
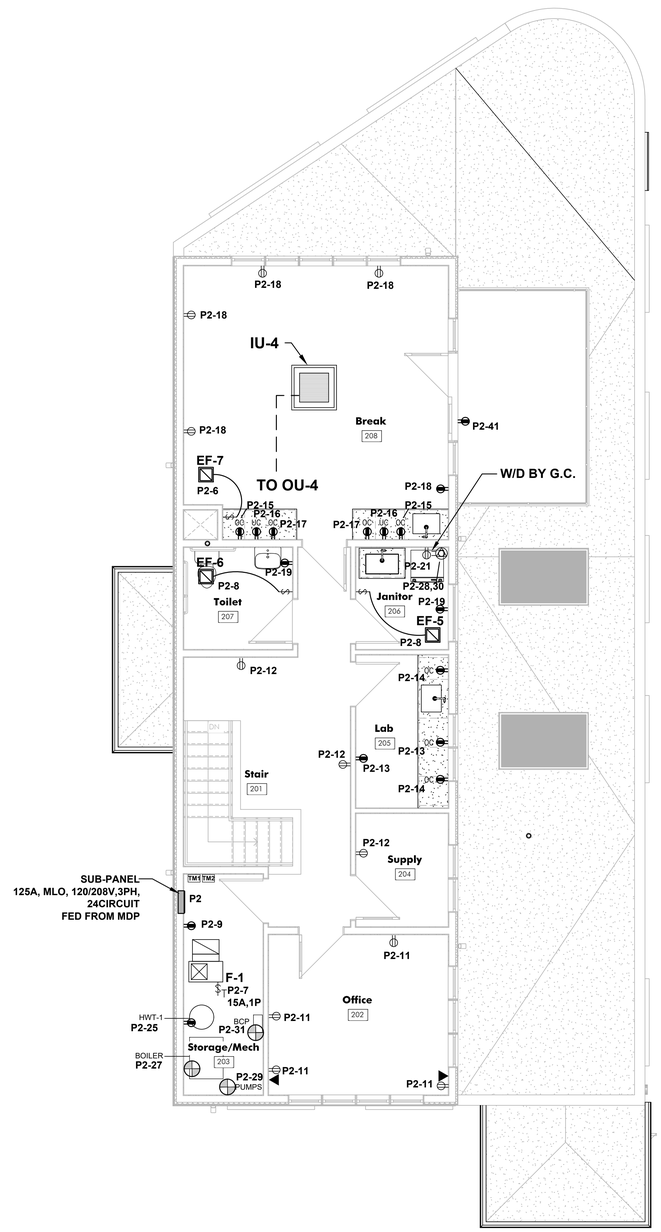
Plumbing Specifications

P-102



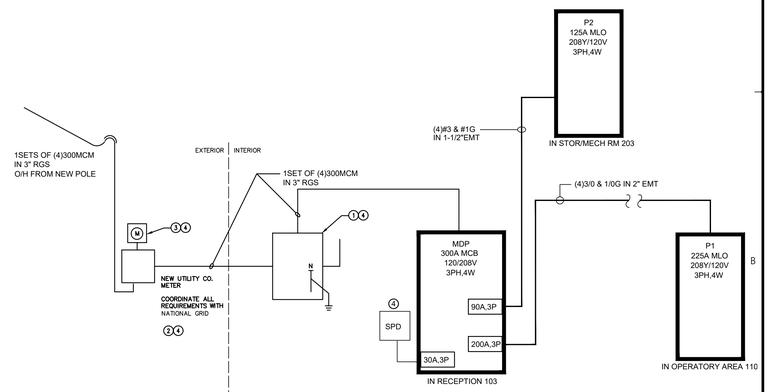
FIRST FLOOR PLAN - A/C SYSTEMS
SCALE : 1/4" = 1'-0"



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

GENERAL NOTES:

1. PROVIDE RECEPTACLES, DEVICES AND CIRCUITS FOR ALL DENTAL EQUIPMENT. REFER TO PATTERSON DENTAL DRAWINGS.
2. COORDINATE WITH NATIONAL GRID FOR DISCONNECTION OF EXISTING SERVICE AND INSTALLATION OF UPGRADED SERVICE. INSTALLATION SHALL BE PER MOST CURRENT NATIONAL GRID ELECTRICAL SYSTEM BULLETINS AND SUPPLEMENTAL REQUIREMENTS.
3. PROVIDE AS-BUILT DRAWINGS WITH PANEL SCHEDULES FOR OWNER AND TOWN BLDG DEPT.
4. EF-1,2,3,5,6 AND ERV-1 TO BE CONTROLLED FROM NEW PROGRAMMABLE TIMER (TM1: 24/7 DIGITAL, 40A, 120/277V (TORK MODEL #E103B OR EQUAL). CONFIRM HOURS OF OPERATION WITH OWNER.
5. WHERE REQUIRED COORDINATE ACCESS PANELS WITH G.C.
6. ALL DEVICES AND WIRING IN PATIENT EXAM AND OPERATORY AREAS SHALL BE HOSPITAL GRADE PER NEC 517.



ELECTRICAL SINGLE LINE DIAGRAM–NEW WORK
SCALE: NONE

ELECTRICAL SINGLE LINE DIAGRAM KEYED NOTES:

1. FURNISH AND INSTALL MAIN SERVICE DISCONNECT SWITCH. SWITCH SHALL BE RATED AS SERVICE ENTRANCE EQUIPMENT, 400 AMP, 3 POLE, NEMA 3R, HEAVY DUTY TYPE FUSED WITH 300A, MINIMUM 100KAIC CLASS "T" FUSES, SOLID NEUTRAL, AND EQUIPMENT GROUNDING KIT.
2. RECEIVE AND INSTALL METER CHANNEL, FURNISHED BY UTILITY CO. FURNISH AND INSTALL RGS CONDUIT BETWEEN METER CHANNEL AND SWITCH. COORDINATE ALL REQUIREMENTS WITH NATIONAL GRID PRIOR TO PERFORMING ANY WORK.
3. COORDINATE HOT OR COLD SEQUENCING WITH NYSEG PRIOR TO PERFORMING ANY WORK.
4. FURNISH AND INSTALL NEW SURGE PROTECTION DEVICE. KEEP WIRING LEADS STRAIGHT AND AS SHORT AS POSSIBLE FROM PANEL TO SPD. COORDINATE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO PERFORMING ANY WORK.

GENERAL NOTES

1. CONDUCTORS SHALL BE COPPER & HAVE THHN/THWN2 INSULATION. ALL WIRE SHALL BE NEW AND HAVE SIZE AND INSULATION TYPE INDICATED ON ITS COVER. ALL WIRE TO HAVE BEEN MANUFACTURED WITHIN ONE (1) YEAR OF INSTALLATION. CONDUCTORS SHALL BE #12 AWG UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL BE IN ACCORDANCE WITH N.E.C., OSHA, AND LOCAL CODES. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DO ANY WORK NOT IN ACCORDANCE WITH THE CODES.
3. PROVIDE PANELBOARD SCHEDULES WITH CORRECT NOTES PERTAINING TO EQUIPMENT.
4. CONDUIT SHALL BE EMT WITH ALL REQUIRED FITTINGS UNLESS OTHERWISE NOTED. GROUND CONDUCTOR WITH GREEN INSULATION SHALL BE INSTALLED IN ALL BRANCHES AND IN RACEWAYS AS AN EQUIPMENT GROUND.
5. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES AND SUPPLIERS OF EQUIPMENT.
6. INSPECT THE SITE PRIOR TO BID.
7. SUBMIT SHOP DRAWINGS FOR ALL ELECTRICAL DEVICES FOR ENGINEER'S REVIEW/APPROVAL BEFORE ORDERING.
8. PROVIDE BUSHING FOR ALL OPEN CONDUIT ENDS.
9. PROVIDE FIRESTOPPING AT SMOKE AND FIRE PARTITIONS.
10. PROVIDE A NYLON PULL STRING IN ALL EMPTY CONDUITS.
11. THE EXACT LOCATION OF ALL SWITCHES, OUTLETS, ETC. ARE TO BE COORDINATED WITH ARCHITECT OR AS DETAILED OR DIMENSIONED ON DRAWINGS WHERE APPLICABLE.
12. PROVIDE TEMPORARY POWER AND LIGHT REQUIRED FOR THE CONSTRUCTION. ALL TEMPORARY INSTALLATION SHALL BE REMOVED BY THIS CONTRACTOR BY THE END OF THE PROJECT.

ELECTRICAL SYMBOLS

- INDICATES A HOME-RUN CIRCUITS AS SPECIFIED TO THE INDICATED PANELBOARD & CIRCUIT. ALL WIRING SO INDICATED IS MINIMUM SIZE #12 THHN COPPER IN EMT OR AC CABLE HOSPITAL GRADE PER NEC 517.
- INDICATED COMMERCIAL GRADE G.F.C.I. TYPE NEMA 5-20R DUPLEX RECEPTACLE AS SPECIFIED. MOUNTING HEIGHT ABOVE COUNTER OR AS INDICATED.
- INDICATED COMMERCIAL GRADE NEMA 5-20R DUPLEX RECEPTACLE AS SPECIFIED. MOUNTING HEIGHT 18" A.F.F. UNLESS OTHERWISE SPECIFIED.
- INDICATED COMMERCIAL GRADE NEMA 5-20R QUADPLEX RECEPTACLE AS SPECIFIED. MOUNTING HEIGHT 18" A.F.F. UNLESS OTHERWISE SPECIFIED.

  OC = OVER COUNTER WP = IN-SERVICE WEATHER PROOF COVER
  UC = UNDER COUNTER
- NEMA 6-20L 20A TWIST LOCK ISOLATED GROUND RECEPTACLE. MOUNTING HEIGHT 18" A.F.F. UNLESS OTHERWISE SPECIFIED. HUBBELL TRADE SELECT OR APP EQUAL.
- INDICATES THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE COMPLETE ELECTRICAL CONNECTION OF EQUIPMENT AS MAY BE REQUIRED BY THE EQUIPMENT INCLUDING DISCONNECT, JUNCTION BOX, SEAL-TITE.
- $T SINGLE POLE, 20A THERMAL OVERLOAD DISCONNECT SWITCH
- F 3R SAFETY DISCONNECT SWITCH. F = FUSED (OTHERWISE NON-FUSED) 3R = NEMA 3R ENCL. (OTHERWISE NEMA1)
- INTERLOCKING DISCONNECT SWITCH WITH BOTTOM 60A RECEPTACLE, NEMA 3R, FUSED (APPLETON MODEL WSR6352 OR EQUAL)
- J STEEL JUNCTION BOX
- PLENUM RATED NETWORK CAT6 WIRE BACK TO IT SWITCH
- T PLENUM RATED TELEPHONE CABLE WIRE BACK TO PHONE DEMARC

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Power Plans

E-100

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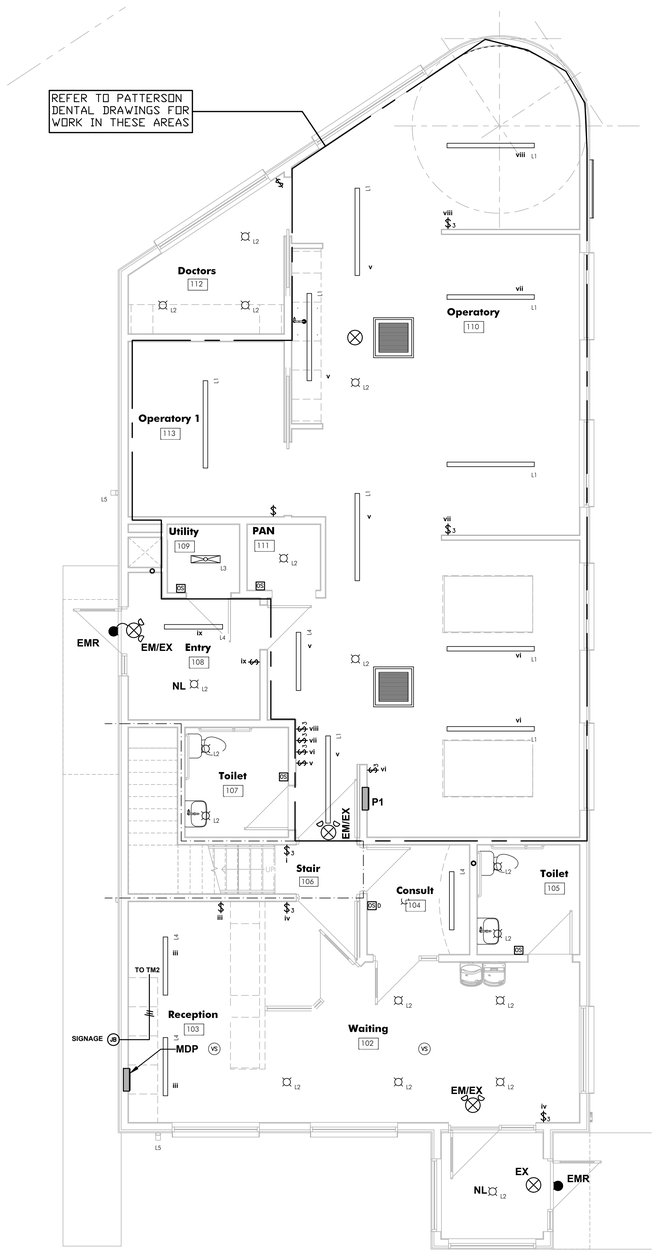
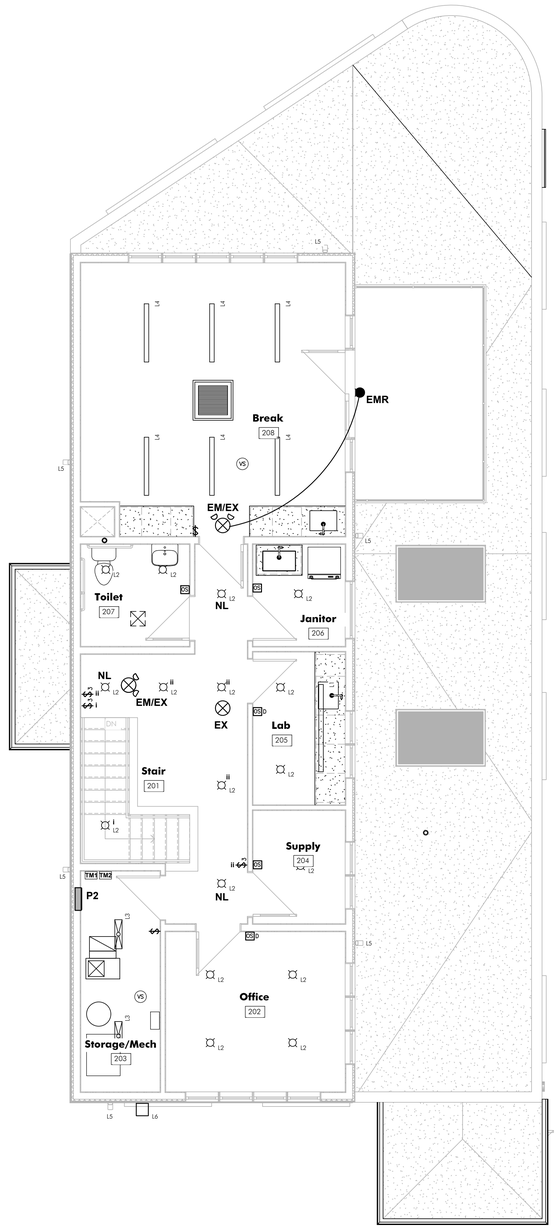


FIRST FLOOR PLAN

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



SECOND FLOOR PLAN

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

GENERAL NOTES:

1. CONFIRM FINAL LOCATIONS AND MOUNTING HEIGHTS OF ALL CEILING FIXTURES AND DEVICES WITH THE ARCHITECT AND OWNER.
2. VERIFY EXACT LOCATION AND HEIGHTS OF ALL RECEPTACLES WITH OWNER PRIOR TO ROUGH-IN.
3. PROVIDE EXIT AND EM LIGHTING FIXTURE WIRED UN-SWITCHED TO LOCAL LIGHTING AREA BRANCH CIRCUIT AHEAD OF SWITCH.
4. FIXTURES DESIGNATED AS NIGHTLIGHTS 'NL' AND EXIT SIGNS SHALL BE ON UNSWITCHED BRANCH CIRCUIT CONNECTION FOR CONTINUOUS OPERATION.
5. SEAL ALL WALL PENETRATIONS WITH UL LISTED FIRE RATED CAULKING.
6. ALL SWITCHES, RECEPTACLES AND COVERPLATES TO BE COLOR PER OWNER.
7. EXTERIOR FIXTURES AND ILLUMINATED SIGNAGE TO BE CONTROLLED FROM NEW PROGRAMMABLE TIMER (TM2: 24/7 DIGITAL, 40A, 120/277V (TORK MODEL #E103B OR EQUAL). CONFIRM HOURS OF OPERATION WITH OWNER.
8. COORDINATE REQUIREMENTS FOR ILLUMINATED SIGNAGE WITH SIGN SUPPLIER. PROVIDE RECESSED WEATHERPROOF BOX FOR CONNECTION.
9. COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL EXTERIOR FIXTURES WITH THE ARCHITECTURAL ELEVATIONS.

LIGHTING SYMBOLS

SWITCHES AND SENSORS

- OCCUPANCY SENSOR W/MANUAL ON & AUTO OFF CONFIG. (DUAL TECHNOLOGY, WALL MOUNTED) WATTSTOPPER #DSW-301 OR EQUAL.
- $_D$ OCCUPANCY SENSOR W/MANUAL ON & AUTO OFF CONFIG. DIMMER SWITCH, 120/277V (DUAL TECHNOLOGY, WALL MOUNTED) WATTSTOPPER #DW-311 OR EQUAL.
- OS / VS OCCUPANCY & VACANCY SENSOR (DUAL TECHNOLOGY, CEILING MOUNTED, LINE VOLTAGE, 120V) WATTSTOPPER #DT-355 OR EQUAL.
- $ SINGLE POLE, 20 AMP 120V SWITCH
- $_D$ DIMMER SWITCH
- $_3$ 3-WAY SWITCH
- J NEMA 3R STEEL JUNCTION BOX

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Lighting Plans

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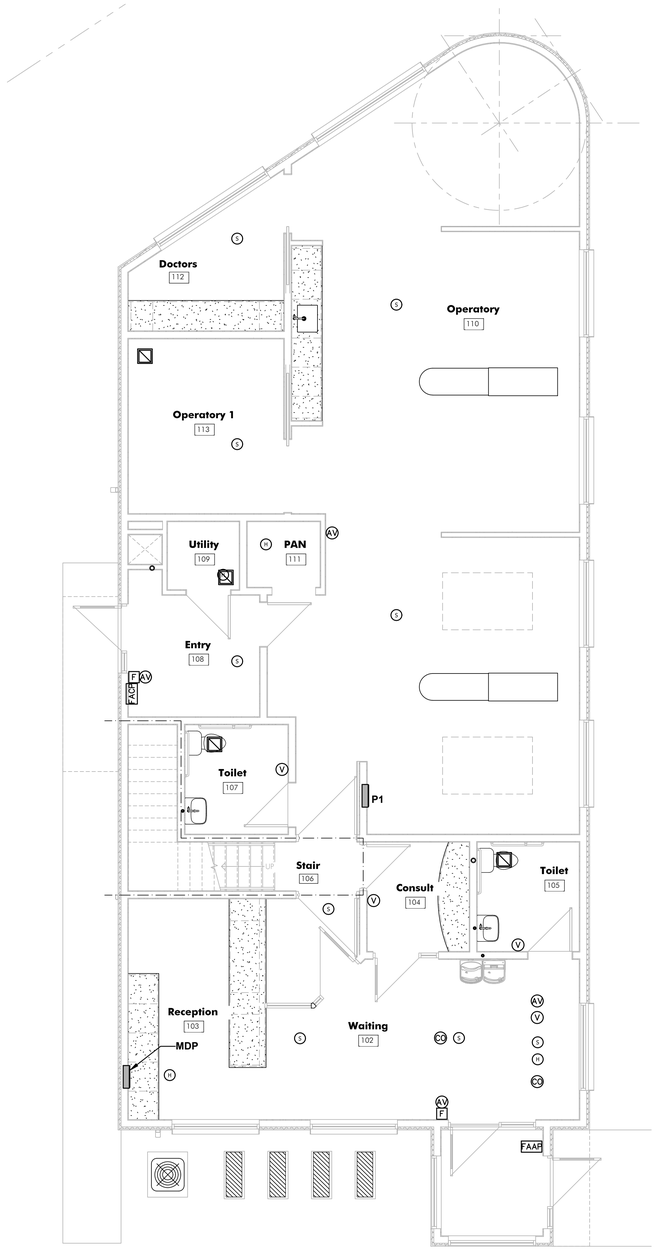
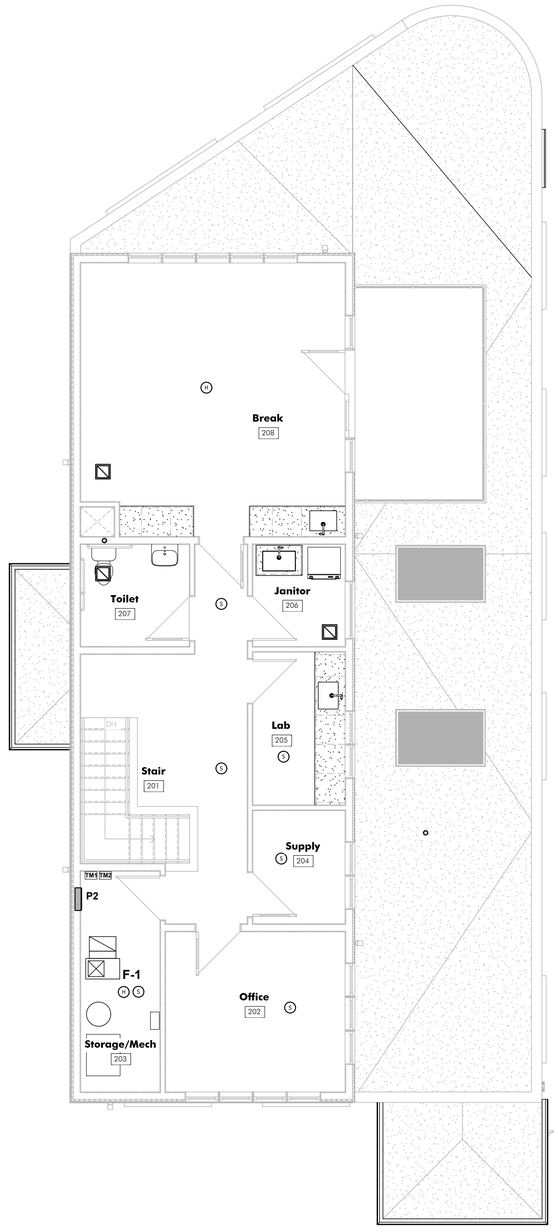


FIRST FLOOR PLAN - A/C SYSTEMS

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



SECOND FLOOR PLAN

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

GENERAL NOTES:

1. INSTALL FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA 72.
2. PROVIDE SHOP DRAWINGS, BATTERY CALCULATIONS, PANEL AND DEVICE SPEC SHEETS, AND INSTALLER QUALIFICATIONS FOR ENGINEERING AND BUILDING DEPARTMENT APPROVALS.
3. ALL FIRE ALARM WIRING SHALL BE RUN IN EMT CONDUIT AND CONCEALED WITHIN CONSTRUCTION WHERE POSSIBLE.
4. SEAL ALL WALL PENETRATIONS WITH UL LISTED FIRE RATED CAULKING.

FIRE ALARM SYMBOLS

- HORN-STROBE LIGHT
- STROBE LIGHT
- SMOKE DETECTOR
- HEAT DETECTOR
- CARBON MONOXIDE DETECTOR
- PULL STATION
- FACP FIRE ALARM CONTROL PANEL
- FAAP FIRE ALARM ANNUNCIATOR PANEL

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2081 Kensington Avenue - Commerical Development

Permit / Construction Documents

P- 26022

9.10.2026

Project N

Nickel City Dentistry

1603 Hertel Avenue
Buffalo, NY 14216

Fire Alarm Plans

E-102

PANELBOARD SCHEDULE

MDP | VOLTS: 208Y/120 | PHASE: 3 | WIRE: 4 | MAINS RATING: | MCB: 300A | MLO: | A.I.C. RATING: 42K | BRKR SPACE: 90* | MTG./NEMA #: 1 | LOCATION: RECEPTION AREA | SOURCE: MAIN DISCONNECT | MAKE: EATON

#	LOAD TYPE	LOAD DESCRIPTION	BREAKER AMP	BREAKER POLE	CONNECTED LOAD (AMPS) PH. A	PH. B	PH. C	BREAKER POLE	BREAKER AMP	LOAD DESCRIPTION	LOAD TYPE	#
1	HVAC	CU-1	25	2	15 20			2	40	OU-4	HVAC	2
3	HVAC					15 20					HVAC	4
5	HVAC	OU-1	75	2			40 40	2	75	OU-2	HVAC	6
7	HVAC				40 40						HVAC	8
9	HVAC	OU-3	75	2		40 5		1	20	WATER COOLER	PWR	10
11	HVAC						40	1	20	SPARE	PWR	12
13	PWR	RECEPTACLES	20	1	6 4			1	20	LIGHTING - SOUTH	PWR	14
15	PWR	RECEPTACLES	20	1		6 4		1	20	LIGHTING - NORTH	LTG	16
17	PWR	RECEPTACLES	20	1			6	1	20	SPARE	LTG	18
19	PWR	RECEPTACLES	20	1	6 6			1	20	LIGHTING - EXTERIOR	LTG	20
21	HVAC	ERV-1	20	1		10		1	20	SPARE	PWR	22
23	PWR	SPARE	20	1				1	20	SPARE	PWR	24
25	PWR	SPARE	20	1				1	20	SPARE	PWR	26
27	PWR	SPARE	20	1						SPACE	PWR	28
29	PWR	SPARE	20	1						SPACE	PWR	30
31	PWR	SPARE	20	1	100						PWR	32
33	PWR	SPACE				114		3	200	NEW SUBPANEL P1	PWR	34
35	PWR	SPACE					92				PWR	36
37	PWR				17 42						PWR	38
39	PWR	SURGE PROT. DEVICE	30	3		17 55		3	90	NEW SUBPANEL P2	PWR	40
41	PWR						17 63				PWR	42
		TOTAL CONNECTED LOAD:			296.0	286.0	298.0	NOTE: PROVIDE LOCKABLE HINGED COVER				
		TOTAL CONNECTED KVA:			105.6							

DEMAND/DIVERSITY FACTOR SCHEDULE

LOAD TYPE	DEMAND	DIVERSITY	PH. A (AMPS)	PH. B (AMPS)	PH. C (AMPS)	KVA
LIGHTING [LTG]	100%	100%	6	4	0	1.2
POWER [PWR]						
- 1ST 10 KVA	100%	50%	14	14	14	5.04
- ADDITIONAL KVA	50%	50%	36.75	42.25	17.5	11.58
HVAC	100%	75%	86.25	63.75	90	28.8
ELECTRIC HEAT [EH]	100%	100%	0	0	0	0
OTHER [OT]	100%	50%	0	0	0	0
TOTAL ANTICIPATED LOAD:			143	124	121.5	46.62

PANELBOARD SCHEDULE

P1 | VOLTS: 208Y/120 | PHASE: 3 | WIRE: 4 | MAINS RATING: | MCB: | MLO: 225A | A.I.C. RATING: 10K | BRKR SPACE: 54-POLE | MTG./NEMA #: 1 | LOCATION: OPERATORY AREA | SOURCE: MDP | MAKE: EATON

#	LOAD TYPE	LOAD DESCRIPTION	BREAKER AMP	BREAKER POLE	CONNECTED LOAD (AMPS) PH. A	PH. B	PH. C	BREAKER POLE	BREAKER AMP	LOAD DESCRIPTION	LOAD TYPE	#
1	LTG	EXIT LIGHTING	20	1	2			1	20	SPARE	PWR	2
3	LTG	NIGHT LIGHTING CIRCUIT	20	1		4		1	20	SPARE	PWR	4
5	PWR	SPARE	20	1				1	20	SPARE	PWR	6
7	PWR	SPARE	20	1				1	20	SPARE	PWR	8
9	PWR	DENTAL CHAIR (1)	20	1		7 10		2	20	PAN MACHINE (36)	PWR	10
11	PWR	DENTAL CHAIR (1A)	20	1			7 10				PWR	12
13	PWR	DENTAL CEILING LIGHT (13)	20	1	3 8			2	20	HYDRIM UNDERCOUNTER (53)	PWR	14
15	PWR	TREATMENT CONSOLE (19)	20	1		15 8					PWR	16
17	PWR	SIDE CABINET (20)	20	1			15 10	2	20	COMPRESSOR (60)	PWR	18
19	PWR	CENTRAL CABINET (21)	20	1	15 10						PWR	20
21	PWR	MODEL TRIMMER (41)	20	2		10 10		2	20	DRY VACUUM SYSTEM (61)	PWR	22
23	PWR	ULTRASONIC CLEANER (52)					10 10				PWR	24
25	PWR	AMALGAM SEPARATOR (63)	20	1	10 15					STERILIZATION CABINET (22)	PWR	26
27	PWR	AUTOCLAVE (54)	20	1		15 11				STATIM (54A)	PWR	28
29	PWR	SPARE	20	1			6			RCPT	PWR	30
31	PWR	REAR CABINET (19A)	20	1	15 6					RCPT	PWR	32
33	PWR	RCPT	20	1		6 6		1	20	RCPT	PWR	34
35	PWR	RCPT	20	1			6 6	1	20	RCPT	PWR	36
37	PWR	RCPT	20	1	6 6			1	20	RCPT	PWR	38
39	PWR	RCPT	20	1		6 6		1	20	RCPT	PWR	40
41	PWR	RCPT	20	1			6 6	1	20	RCPT	PWR	42
43	PWR	EF-4	20	1	4			1	20	SPARE	PWR	44
45	PWR	SPARE	20	1				1	20	SPARE	PWR	46
47	PWR	SPARE	20	1				1	20	SPARE	PWR	48
49	PWR	SPARE	20	1				1	20	SPARE	LTG	50
51	PWR	SPARE	20	1				1	20	SPARE	LTG	52
53	PWR	SPARE	20	1				1	20	SPARE	LTG	54
		TOTAL CONNECTED LOAD:			100	114	92	NOTE:				
		TOTAL CONNECTED KVA:			36.7							

DEMAND/DIVERSITY FACTOR SCHEDULE

LOAD TYPE	DEMAND	DIVERSITY	PH. A (AMPS)	PH. B (AMPS)	PH. C (AMPS)	KVA
LIGHTING [LTG]	100%	100%	2	4	0	0.72
POWER [PWR]						
- 1ST 10 KVA	100%	50%	14.0	14.0	14.0	5.0
- ADDITIONAL KVA	50%	50%	13.5	17.5	13.0	5.3
HVAC	100%	75%	0.0	0.0	0.0	0.0
ELECTRIC HEAT [EH]	100%	100%	0.0	0.0	0.0	0.0
OTHER [OT]	100%	50%	0.0	0.0	0.0	0.0
TOTAL ANTICIPATED LOAD:			29.5	35.5	27.0	11.0

PANELBOARD SCHEDULE

P2 | VOLTS: 208Y/120 | PHASE: 3 | WIRE: 4 | MAINS RATING: | MCB: | MLO: 125A | A.I.C. RATING: 10K | BRKR SPACE: 42-POLE | MTG./NEMA #: 1 | LOCATION: STORAGE RM 102 | SOURCE: MDP | MAKE: EATON

#	LOAD TYPE	LOAD DESCRIPTION	BREAKER AMP	BREAKER POLE	CONNECTED LOAD (AMPS) PH. A	PH. B	PH. C	BREAKER POLE	BREAKER AMP	LOAD DESCRIPTION	LOAD TYPE	#
1	LTG	EXIT LIGHTING	20	1	2			1	20	SPARE	PWR	2
3	LTG	NIGHT LIGHTING CIRCUIT	20	1		6		1	20	SPARE	PWR	4
5	HVAC	EF-1, 2	20	1			6 3	1	20	EF-7	HVAC	6
7	HVAC	FURNACE (F-1)	15	1	10 8			1	20	EF-5, 6	HVAC	8
9	PWR	RCPT	20	1		3		1	20	EF-6	HVAC	10
11	PWR	RCPT	20	1			6 9	1	20	RCPT	PWR	12
13	PWR	RCPT	20	1	6 6			1	20	RCPT	PWR	14
15	PWR	RCPT	20	1		6 6		1	20	RCPT	PWR	16
17	PWR	RCPT	20	1			6 6	1	20	RCPT	PWR	18
19	PWR	RCPT	20	1				1	20	SPARE	PWR	20
21	PWR	RCPT - WASHER	20	1		7		1	20	SPARE	PWR	22
23	PWR	SPARE	20	1				1	20	SPARE	PWR	24
25	PWR	RCPT - HWT-1	20	1				1	20	SPARE	PWR	26
27	PWR	BOILER	20	1		4 15		2	30	DRYER	PWR	28
29	PWR	PUMPS	20	1			6 15				PWR	30
31	PWR	BOILER CONTROL PANEL	20	1	2			1	20	SPARE	PWR	32
33	PWR	SPARE	20	1				1	20	SPARE	PWR	34
35	PWR	SPARE	20	1				1	20	SPARE	PWR	36
37	PWR	SPARE	20	1	8			1	20	LIGHTING - NORTH	LTG	38
39	PWR	SPARE	20	1		8		1	20	LIGHTING - SOUTH	LTG	40
41	PWR	RCPT - EXTERIOR	20	1			6	1	20	SPARE	PWR	42
		TOTAL CONNECTED LOAD:			42	55	63	NOTE:				
		TOTAL CONNECTED KVA:			19.2							

DEMAND/DIVERSITY FACTOR SCHEDULE

LOAD TYPE	DEMAND	DIVERSITY	PH. A (AMPS)	PH. B (AMPS)	PH. C (AMPS)	KVA
LIGHTING [LTG]	100%	100%	10	14	0	2.88
POWER [PWR]						
- 1ST 10 KVA	100%	50%	7.0	14.0	14.0	4.2
- ADDITIONAL KVA	50%	50%	0.0	2.5	6.5	1.1
HVAC	100%	75%	13.5	2.3	6.8	2.7
ELECTRIC HEAT [EH]	100%	100%	0.0	0.0	0.0	0.0
OTHER [OT]	100%	50%	0.0	0.0	0.0	0.0
TOTAL ANTICIPATED LOAD:			30.5	32.8	27.3	10.9

LUMINAIRE SCHEDULE

Tag	Type	Manufacturer	Product Name	Product Number	Size	Color/Finish
L-1	Linear Recessed	Alcon Lighting	3.75-Inch Color Temperature Switch Louver LED Linear Suspension Light, 4000K, 20W Dn/10W Up, dimmable	12100-33-R-FLT	72"	White
L-2	Round, recessed downlight	WAC Lighting	3-Inch LED, 4000K, 35W Dn/15W Up, dimmable	12100-23-P-LVR	48"	White
L-3	Utility Room, Suspended LED Wrap Fixture	Maxim Lighting	Maxim integrated LED strip light, 4000K, 40W	57521WT	48"	White
L-4	Linear Recessed	Alcon Lighting	3.75-Inch Color Temperature Switch Louver LED Linear Suspension Light, 4000K, 20W Dn/10W Up, dimmable	12100-33-R-FLT	48"	White
L-5	Exterior Wall Sconce	WAC Lighting	Boxi wall sconce, 2700K, black finish, 6W, 243Lumens, listed for damp locations	WS-45105	5"	Black
L-6	Parking area	Cooper McGraw-Edison	Wall mount (adjustable), 2700K, 120V, 164W, 22,600Lumens, Type II distribution, 4 Light Squares, Black, Motion sensor for dimming operation.	GALN-SA-4-B-827-T2-WA	16" x 22"	Black
EX	Exit sign	Lithonia	LED, 90 min. battery back up, test switch, 2.8W	EXRG	-	White, red letters
EM/EX	Combination Emergency light and Exit sign	Lithonia	LED, 90 min. battery back up, test switch, 2.8W, remote capacity.	ECRG HO RD M6	-	White, red letters
EMR	Remote Emergency light	Lithonia	Outdoor, UL listed, 2 head remote, black	ERE B T WP RD	-	Black

General Notes:

1. Confirm office fixture CCT's with Architect.
2. Provide all mounting and suspension hardware.

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Electrical Schedules

E-103

ELECTRICAL SPECIFICATIONS

1. GENERAL

A. ALL ELECTRICAL WORK IS SUBJECT TO THE GENERAL REQUIREMENTS OF THE CONTRACT.

2. LAWS, CODES, PERMITS & INSPECTIONS

A. ALL WORK SHALL BE PERFORMED IN COMPLIANCE W/ ALL APPLICABLE FEDERAL, STATE & LOCAL CODES & ORDINANCES, AS WELL AS THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE INCLUDING SUBSEQUENT AMENDMENTS.

B. AT COMPLETION OF WORK, THE ELECTRICAL CONTRACTOR SHALL DELIVER TO THE OWNER A CERTIFICATE OF INSPECTION & ACCEPTANCE OF THE WORK BY THE LOCAL INSPECTION AUTHORITY.

3. GUARANTEE

A. THE CONTRACTOR SHALL GIVE A WRITTEN GUARANTEE UPON FINAL ACCEPTANCE OF THE WORK AGAINST DEFECTIVE WORKMANSHIP, MATERIALS, OR OPERATION THAT MAY APPEAR WITHIN ONE (1) YEAR OF FINAL ACCEPTANCE BY THE OWNER.

4. EQUIPMENT & MATERIALS

A. ALL EQUIPMENT & MATERIALS FURNISHED UNDER THIS CONTRACT SHALL BE NEW (UNLESS OTHERWISE SPECIFIED), LISTED BY THE UNDERWRITERS LABORATORIES, & SHALL BE OF THE SAME MAKE WHERE USED FOR SIMILAR PURPOSES.

5. TESTS & INSPECTIONS

A. THE ENTIRE INSTALLATION SHALL BE TESTED & VERIFIED TO BE FREE FROM SHORT CIRCUITS, IMPROPER GROUNDS, & OPEN CIRCUITS.

B. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL CONDUCT A TWO (2) HOUR TEST W/ ALL ELECTRICAL UTILIZATION EQUIPMENT ENERGIZED. DURING THIS PERIOD A CLOSE WATCH SHALL BE KEPT ON ALL PANELS & EQUIPMENT TO LOCATE ANY DEFECTIVE APPARATUS OR WORKMANSHIP. PARTICULAR ATTENTION SHALL BE PAID TO THE LOAD BALANCE ON VARIOUS PANELS & FEEDERS. WIRING DEVICES & APPLIANCES FOUND TO BE FUNCTIONING IMPROPERLY SHALL BE PROMPTLY REPLACED AT THE CONTRACTOR'S EXPENSE. ANY REQUIRED BALANCING OF CIRCUITS THAT BECOME APPARENT SHALL BE CARRIED OUT IMMEDIATELY.

C. THE CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF THE START OF THE TEST SO THAT HE OR HIS REPRESENTATIVE CAN PLAN TO BE PRESENT DURING THE TESTING PERIOD.

6. MARKING & LABELING

A. PROVIDE ENGRAVED NAMEPLATES FOR ALL DISCONNECTS, STARTERS, PANELBOARDS, TIMERS, CABINETS, ENCLOSURES, ETC. NAMEPLATES SHALL IDENTIFY THE ASSOCIATED EQUIPMENT BEING SERVED. THE NAMEPLATES SHALL BE PLASTIC LAMINATE W/ 3/16" BLACK ENGRAVED LETTERS ON A WHITE BACKGROUND, ATTACHED USING BOLTS, NUTS, & WASHERS.

B. MAKE CERTAIN THAT ALL CIRCUIT BREAKERS IN ALL PANEL BOARDS ARE IDENTIFIED BY ROOM NUMBER &/OR NAME, EQUIPMENT SERVED, OR OTHER APPROPRIATE DESIGNATION. PANELS SHALL BE PROVIDED W/ DOOR MOUNTED, TYPE WRITTEN DIRECTORIES UNDER CLEAR PLASTIC; UPDATE EX. PANEL BOARD DIRECTORIES.

7. INSTRUCTION

A. THOROUGHLY INSTRUCT THE OWNER'S REPRESENTIVE IN THE PROPER OPERATIONS OF ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.

8. FINAL CLEANING

A. AFTER TESTS HAVE BEEN MADE & THE INSTALLATION HAS BEEN FOUND SATISFACTORY BY THE ENGINEER, THOROUGHLY CLEAN THE ENTIRE INSTALLATION, BOTH EXPOSED SURFACES & INTERIORS. REMOVE ALL DEBRIS CAUSED BY THE WORK UNDER THIS CONTRACT FROM ALL SPACES INSIDE & OUTSIDE THE BUILDING.

9. CONDUIT & RACEWAYS

A. ALL CONDUIT SHALL BE ELECTRICAL METALLIC TUBING W/ SET SCREW FITTINGS (INTERIOR) OR PVC SCHEDULE 40 (EXTERIOR). EMT SHALL BE DELIVERED TO THE JOB SITE IN TEN-FOOT LENGTHS & SHALL BEAR THE UL LABEL & MANUFACTURER'S NAME OR TRADEMARK. MINIMUM SIZE: ½ INCH TRADE SIZE.

B. THE ELECTRICAL RACEWAY SYSTEM SHALL BE INDEPENDENTLY ATTACHED OR SUPPORTED FROM THE BUILDING STRUCTURE & SHALL RUN PARALLEL W/ OR PERPENDICULAR TO THE STRUCTURAL MEMBERS.

C. SUPPORTS & ATTACHMENTS PROVIDED SHALL BE SPECIFICALLY DESIGNED FOR THE INSTALLATION. PERFORATED HANGERS OR WIRE TIE SUPPORTS ARE NOT ACCEPTABLE.

D. ALL RACEWAYS PASSING THROUGH A RATED FIRE SEPARATION SHALL HAVE A UL LISTED FIRE RATED INSTALLATION EQUAL TO THAT RATING. INSTALL WATER TIGHT SEAL FOR CONDUITS WHICH PENETRATE EXTERIOR WALLS.

E. CONDUIT SHALL BE INSTALLED IN ORDER THAT A CONTINUOUS GROUNDING PATH IS ESTABLISHED THROUGHOUT THE ENTIRE RUN. PROVIDE A SEPERATE GREEN GROUNDING EQUIPMENT CONDUCTOR IN EACH CONDUIT.

10. CONDUCTORS

A. ALL WIRE & CABLE SHALL BE NEW WITHIN ONE (1) YEAR OF MANUFACTURE WHEN DELIVERED TO THE JOB SITE & BEAR THE UL LABEL, INSULATION TYPE, VOLTAGE RATING, & MANUFACTURER'S NAME AT REGULAR INTERVALS ON THE INSULATION JACKET.

B. ALL SINGLE CONDUCTOR WIRING IN RACEWAYS SHALL BE STRANDED COPPER, 600 VOLT RATED, TYPE THHN/THWN, 90°C. MINIMUM SIZE: #12 AWG.

C. ALL MULTI-CONDUCTOR CABLE FOR BRANCH CIRCUIT WIRING SHALL BE TYPE "MC" METAL CLAD CABLE (COPPER). MINIMUM SIZE: #12 AWG.

D. ALL CONTROL CABLE RUN EXPOSED IN THE CEILING SPACE FOR COMMUNICATIONS, TELEPHONE, DATA, ETC, SHALL BE TEFLON JACKETED & BE UL LISTED FOR USE IN AN AIR HANDLING PLENUM.

E. JOINTS, TAPS & SPLICES OF WIRE OF SIZE #10 & SMALLER SHALL BE MADE W/ "SCOTCHLOK" TYPE SPRING CONNECTORS; SIZES #8 & LARGER SHALL BE MADE W/ COMPRESSION CONNECTORS.

11. OUTLETS & WIRING DEVICES

A. BOXES & FITTINGS FOR CONCEALED WORK SHALL BE PRESSED SHEET STEEL, CADMIUM COATED, OR ZINC GALVANIZED AS MANUFACTURED BY RACO, STEEL CITY, UNIVERSAL, OR EQUAL. IN CONCEALED WORK, INSTALL ALL BOXES SO THAT THE FRONT EDGES DO NOT PROTRUDE BEYOND THE FINISHED WALL SURFACE. OUTLET BOXES SHALL BE 4" SQUARE OR OCTAGONAL & NOT LESS THAN 1-1/2" DEEP. IN ALL CASES THEY SHALL BE OF A SIZE & SHAPE ESPECIALLY ADAPTED TO THE PARTICULAR USE TO WHICH THEY ARE PUT. WHERE SPACE LIMITATIONS DICTATE, 2" x 4" BOXES MAYBE USED, IF PROPER VOLUME AS DICTATED BY THE NEC.

B. RECEPTACLES SHALL BE DUPLEX GROUNDING TYPE 20A, NEMA 5-20R, 120V, SPECIFICATION GRADE, W/ WHITE PLASTIC COVER PLATE. GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE RECEPTACLES SHALL BE UL 914 LISTED & PROVIDED IN LOCATIONS AS INDICATED. COLOR SHALL BE WHITE PLASTIC.

C. GROUND FAULT CURRENT INTERRUPTER (GFCI) DUPLEX RECEPTACLES SHALL BE AN INTEGRAL UNIT, SUITABLE FOR MOUNTING IN A STANDARD OUTLET BOX. GFCI RECEPTACLES SHALL BE SELF-TEST RECEPTACLES IN ACCORDANCE WITH UL 943.

D. SWITCHES SHALL BE SINGLE POLE, OR THREE-WAY AS INDICATED, 20A, 120V-277V, SPECIFICATION GRADE, QUITE TYPE, W/ WHITE PLASTIC COVER.

E. MANUFACTURES:
(1) HUBBELL
(2) LEVITON
(3) BRYANT
(4) PASS & SEYMOUR
(5) COOPER WIRING SYSTEM

12. LIGHT FIXTURE REQUIREMENTS

A. ALL LIGHT FIXTURES ARE TO BE PROVIDED COMPLETED W/ ALL NECESSARY ACCESSORIES, SUPPORTS & FOR PROPER INSTALLATION. CATALOG NUMBERS SHOWN ARE BASIC FIXTURE TYPES, & ADDITIONAL FEATURES, ACCESSORIES, & OPTIONS HEREIN SPECIFIED OR SCHEDULED ARE TO BE PROVIDED FOR ALL FIXTURES PROVIDED.

13. GROUNDING

A. ALL EQUIPMENT GROUNDING CONNECTIONS SHALL BE COMPLETELY CONNECTED PRIOR TO ENERGIZING EQUIPMENT, THE ENTIRE RACEWAY SYSTEM SHALL COMPOSE A CONTINUOS GROUND FROM THE INITIAL GROUND CONNECTION TO THE FURTHEST OUTLET.

B. ALL RECEPTACLES SHALL HAVE A SEPARATE GROUNDING CONDUCTOR INSTALLED FROM THE GROUND TERMINAL ON THE DEVICE TO THE METALLIC BOX.

14. PANELBOARDS

A. AS REQUIRED NEW CIRCUIT BREAKERS SHALL BE QUICK MAKE, QUICK-BREAK, W/ THERMAL MAGNETIC TRIP, CIRCUIT BREAKERS FOR HVAC EQUIPMENT LOADS SHALL BE SPECIFICALLY RATED FOR SUCH LOADS (HACR TYPE). MULTI-POLE BREAKERS SHALL HAVE A COMMON INTERNAL TRIP, UL LISTED AS MULTI-POLE UNITS. HANDLE TIES ARE NOT PERMITTED.

15. SHOP DRAWINGS & MANUFACTURER DATA

A. THE CONTRACTOR SHALL SUBMIT W/ SUCH PROMPTNESS AS TO CAUSE NO DELAYS IN HIS WORK OR THAT OF OTHER CONTRACTORS. PROVIDE SIX (6) COPIES OF ALL SHOP DRAWINGS OR DESCRIPTIVE LITERATURE ON ALL EQUIPMENT TO BE SUPPLIED.

16. AS BUILT DRAWINGS

A. AT THE COMPLETION OF THE ELECTRICAL WORK, THE CONTRACTOR RESPONSIBLE FOR THE WORK PERFORMED UNDER THIS CONTRACT SHALL PROVIDE AS-BUILT DRAWINGS.

B. THE CONTRACTOR WILL BE FURNISHED A SET OF PRINTS OF THE CONTRACT DRAWINGS FOR THE PURPOSE OF KEEPING A COMPLETE RECORD OF ALL INSTALLATION WORK. THE CONTRACTOR SHALL KEEP A COMPLETE RECORD AF ALL WORK & SHALL INDICATE DEVIATIONS FROM THE CONTRACT DRAWINGS. ALL CHANGES, REVISIONS &/OR ADDITIONS MADE IN THE INSTALLATION OF THE WORK, WHICH DIFFER FROM THAT REQUIRED BY THERE DRAWINGS, SHALL BE NOTED.

END

FIRE ALARM SYSTEM REQUIREMENTS

1. GENERAL

1.1 REFERENCES

A. NFPA 70 – NATIONAL ELECTRICAL CODE (2008)
B. NFPA 72 – NATIONAL FIRE CODE (2007)

1.2 SYSTEM DESCRIPTION

A. PROVIDE NEW ADDRESSABLE FIRE ALARM SYSTEM (HONEYWELL FIRE-LITE OR EQUAL). THE SYSTEM SHALL BE FURNISHED, INSTALLED, TESTED & CERTIFIED BY A LICENSED FIRE ALARM INSTALLER.
B. FIRE ALARM SYSTEM: NFPA 72, MANUAL & AUTOMATIC LOCAL FIRE ALARM SYSTEM; PROVIDE ONE YEAR (1) WARRANTY (FULL PARTS & LABOR).

1.3 QUALIFICATIONS

A. MANUFACTURER: FIRE ALARM COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION W/ MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.
B. INSTALLER: HIRE SERVICES OF OWNER'S FIRE ALARM CONTRACTOR.

1.4 REGULATORY REQUIREMENTS

A. CONFORM TO REQUIREMENTS OF NFPA 70, 72 & NFPA 101.
B. FURNISH PRODUCTS LISTED & CLASSIFIED BY UL TESTING AS SUITABLE FOR FIRE ALARM SERVICE.

2. PRODUCTS

2.1 INITIATING DEVICES

A. MANUAL PULL STATIONS: SEMI-FLUSH MOUNTED, AS MANUFACTURED BY FIRE ALARM MANUFACTURE W/ ADDRESSABLE MODULE. PROVIDE MANUFACTURER'S STANDARD BACKBOX.
B. CEILING MOUNTED SMOKE DETECTORS: ADDRESSABLE PHOTOELECTRIC TYPE DETECTOR, SUITABLE FOR MOUNTING ON 4 INCH OUTLET BOX.

2.2 SIGNALING APPLIANCES

A. ALARM HORN/STROBE UNIT: HORN SHALL BE NFPA 72 SURFACE TYPE FIRE ALARM HORN. SOUND RATING: 90 DB AT 10 FEET. PROVIDE INTEGRAL STROBE LAMP & FLASHER W/ RED LETTERED "FIRE" ON WHITE LENS.
B. ALARM STROBE-ONLY UNIT: PROVIDE INTEGRAL STROBE LAMP & FLASHER W/ RED LETTERED "FIRE" ON WHITE LENS.

2.3 FIRE ALARM WIRE & CABLE

A. FIRE ALARM POWER BRANCH CIRCUITS: BUILDING WIRE AS SPECIFIED.
B. INITIATING DEVICE & INDICATING APPLIANCE CIRCUITS: ALL FIRE ALARM SIGNAL WIRING IN NEW CONSTRUCTION SHALL BE INSTALLED IN CONDUIT. WIRING SHALL BE (2) #16 COPPER, TWISTED/SHIELDED SIGNAL CABLE UL LISTED AS SUITABLE FOR USE IN FIRE ALARM SYSTEM INSTALLATIONS.

1. EXECUTION

3.1 INSTALLATION

A. INSTALL PRODUCTS IN ACCORDANCE W/ FIRE ALARM MANUFACTURER'S INSTRUCTIONS.

B. INSTALL MANUAL STATION W/ OPERATING HANDLE 3 FEET 8 INCHES ABOVE FLOOR OR AS REQUIRED BY ADA CODE. INSTALL AUDIBLE & VISUAL SIGNAL DEVICES 6 FT-10 IN ABOVE FLOOR, BUT NOT LESS THAN 6" BELOW CEILING..

C. INSTALL ALL POWER & SIGNAL WIRING IN CONDUIT.

D. MOUNT END-OF-LINE DEVICE BOX WITHIN LAST DEVICE OR SEPARATE BOX ADJACENT TO LAST DEVICE ON CIRCUIT.

END

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2081 Kensington Avenue - Commerical Development

Permit / Construction Documents

P- 26022

9.4.2026

Project N

Nickel City Dentistry

1603 Hertel Avenue
Buffalo, NY 14216

Electrical Specifications

E-104

Sheet List	
Sheet Number	Sheet Name
DA001	GENERAL NOTES
DA111	LVL 1 FLOOR PLAN
DA113	LVL 1 BACKING PLAN
DB110	LVL 1 DENTAL UTILITIES IN FLOOR
DE110	LVL 1 ELECTRICAL & LOW VOLTAGE
DP110	LVL 1 PLUMBING
DX110	DETAILS

ABBREVIATION LEGEND

AFF	ABOVE FINISHED FLOOR
DR	SUPPLIED BY DOCTOR
EC	ELECTRICAL CONTRACTOR
ER	EXISTING RELOCATED
EX	EXISTING
FT	FUTURE
GC	GENERAL CONTRACTOR
MTD	MOUNTED
NC	NO CHANGE
NIC	NOT INCLUDED
NIS	NOT IN SCOPE
NW	NEW
PC	PLUMBING CONTRACTOR
PD	PATTERSON DENTAL
TYP	TYPICAL
VFY	VERIFY
VIF	VERIFY IN FIELD

PATTERSON DENTAL:

PATTERSON DENTAL'S RESPONSIBILITIES WILL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

1. PATTERSON DENTAL WILL PROVIDE A SET OF DENTAL SPECIFIC SHOP DRAWINGS TO AID THE CONTRACTOR AND/OR ARCHITECT OF THE OWNER'S CHOOSING IN THE CONSTRUCTION OF THE OWNER'S DENTAL OFFICE. THESE DRAWINGS WILL PROVIDE CRITICAL DENTAL LOCATIONS OF ALL DENTAL EQUIPMENT. WRITTEN DIMENSIONS WILL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
2. PATTERSON DENTAL WILL ASSUME NO RESPONSIBILITY FOR DEVIATIONS FROM THE DENTAL DRAWINGS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN ENDORSEMENT.
3. PATTERSON DENTAL'S REPRESENTATIVES WILL PROVIDE ASSISTANCE AS NEEDED TO THE CONTRACTOR AND/OR ARCHITECT WITH PROPER ADVANCE NOTICE.
4. A PRE-CONSTRUCTION MEETING BETWEEN PATTERSON DENTAL'S REPRESENTATIVES AND THE CONTRACTOR, ARCHITECT, AND SUB-CONTRACTORS TO INCLUDE MECHANICAL, PLUMBING, AND ELECTRICAL IS REQUIRED. DENTAL SPECIFIC TEMPLATES AND SPECIFIC CONSTRUCTION REQUIREMENTS WILL BE PROVIDED DURING THIS MEETING.
5. PATTERSON DENTAL'S REPRESENTATIVES WILL MAKE PERIODIC VISITS TO THE JOB SITE AT CRITICAL POINTS IN THE CONSTRUCTION PROCESS. **THE CONTRACTOR IS REQUIRED TO INFORM PATTERSON WHEN INSPECTIONS OF PLUMBING, WIRING, AND BACKING IN THE WALLS CAN BE PERFORMED PRIOR TO BACKFILLING TRENCHES, POURING OF THE SLAB, SEALING PARTITIONS AND INSTALLING CEILINGS.**
6. PATTERSON DENTAL'S REPRESENTATIVES WILL COORDINATE WITH THE CONTRACTOR TO INSTALL THE DENTAL EQUIPMENT AS LAID OUT IN THE INSTALLATION GUIDELINES AT A DATE AGREED UPON BY THE CONTRACTOR AND PATTERSON. A FINAL INSPECTION PRIOR TO THE INSTALLATION OF THE DENTAL EQUIPMENT WILL BE PERFORMED TO ENSURE THAT ALL PLUMBING, ELECTRICAL AND MECHANICAL CONSTRUCTION IS COMPLETE. ALL FLOORING, PAINTING AND CEILING WORK MUST BE COMPLETED PRIOR TO EQUIPMENT INSTALLATION.
7. THE CONTRACTOR AND SUB-CONTRACTORS ARE TO PROVIDE FINAL HOOK UP TO ALL DENTAL EQUIPMENT AS SET FORTH THE INSTALLATION GUIDELINES.

BUILDING CONTRACTOR:

1. THE BUILDING CONTRACTOR WHO HAS ENTERED INTO A CONSTRUCTION CONTRACT WITH THE OWNER IS RESPONSIBLE FOR ALL WORK DEFINED BY THAT CONTRACT. IF THE PROJECT IS LET UNDER SEPARATE CONTRACTS TO MORE THAN ONE CONTRACTOR, THE RESPONSIBILITIES LISTED BELOW APPLY TO EACH CONTRACTOR.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETION OF THE PROJECT IN THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR IS TO FURNISH ALL MATERIALS AND LABOR REQUIRED TO COMPLETE THE PROJECT, THAT IS NOT SPECIFICALLY PROVIDED BY PATTERSON DENTAL, WHETHER OR NOT EACH AND EVERY ITEM IS SPECIFICALLY MENTIONED.
3. THE CONTRACTOR SHALL ADVISE THE OWNER OF ANY CONFLICT BETWEEN THESE DRAWINGS AND THE FIELD CONDITIONS BEFORE PROCEEDING WITH THE JOB. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE ACCURACY OF FIELD MEASUREMENTS AND CONDITIONS AND SHALL BE RESPONSIBLE FOR THE PROPER MODIFICATIONS TO ANY EXISTING WORK, PREVIOUSLY INSTALLED WORK, AND/OR OTHER TRADES. WRITTEN APPROVAL MUST BE OBTAINED FROM THE PATTERSON EQUIPMENT SPECIALIST ASSIGNED TO THE PROJECT BEFORE ANY CHANGES AND/OR DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS ARE MADE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE EXECUTION OF HIS/HER WORK AND FOR ANY CHANGES AND/OR DEVIATIONS FROM THE DRAWINGS OR SPECIFICATIONS MADE WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER AND/OR THE PATTERSON EQUIPMENT SPECIALIST. ANY COSTS RESULTING FROM CHANGES AND/OR DEVIATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. A COMPLETE SET OF DRAWINGS MUST BE KEPT AT THE JOB SITE AT ALL TIMES AND ANY CHANGES MUST BE NOTED THEREON AND INITIALED AT THE TIME THE CHANGE OR DEVIATION IS PERFORMED.
5. THE GENERAL CONTRACTOR SHALL DO ALL PATCHING TO CONFORM TO MATERIAL, TEXTURE AND SURFACE ALIGNMENT WITH THE ADJOINING SURFACE AND FINAL TOUCH UP/APPEARANCE OF ALL FINISHED SURFACES. THE CONTRACTOR SHALL ENSURE THE PROTECTION OF ALL EQUIPMENT FURNISHED UNDER HIS/HER CONTRACT AND BY OTHERS PRESENT AT THE JOB SITE.
6. THE CONTRACTOR SHALL REMOVE DEBRIS AND MAINTAIN THE PREMISES BROOM CLEAN AT ALL TIMES. DEBRIS IS TO INCLUDE, BUT NOT LIMITED TO SHIPPING CARTONS, BOXES, ETC., RESULTING FROM THE INSTALLATION OF DENTAL AND OTHER EQUIPMENT BY CONTRACTORS CONCURRENTLY ENGAGED.
7. THE CONTRACTOR SHALL PARTICIPATE AT ALL JOB COORDINATION MEETINGS WITH PATTERSON DENTAL AND ENSURE THE ATTENDANCE OF APPLICABLE TRADES.
8. THE CONTRACTOR IS REQUIRED TO INFORM PATTERSON DENTAL REPRESENTATIVES OF KEY EVENTS IN THE CONSTRUCTION PROCESS WITH REASONABLE ADVANCE NOTICE, TO FACILITATE THE INSPECTION OF SAID EVENTS, I.E. BACKFILLING TRENCHES, CLOSING WALLS, POURING CONCRETE TO BURY PLUMBING AND ELECTRICAL WORK IN FLOORS AND INSTALLING CEILING TILES.
9. THE CONTRACTOR SHALL AFFORD THE OWNER AND SEPARATE CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND/OR STORAGE OF THEIR MATERIALS AND EQUIPMENT AND EXECUTION OF THEIR WORK.

GENERAL NOTES:

1. THE ITEMS LISTED HERE IN THE GENERAL NOTES ARE INTENDED TO CLARIFY OVERALL GENERAL CONDITIONS FOR A SMOOTH TRANSITION BETWEEN ALL SUB-CONTRACTORS, THE GENERAL CONTRACTOR, EQUIPMENT INSTALLERS, PATTERSON DENTAL AND THE OWNER FOR FINAL APPROVAL OF ALL WORK PERFORMED BY THE RESPECTIVE TRADES. THROUGHOUT THESE PLANS ARE VARIOUS DETAILS, REQUIREMENTS AND SPECIFICATIONS TO AID IN THIS PROCESS. IT IS THE RESPONSIBILITY OF EACH TRADE, CONTRACTOR AND THE OWNER TO READ ALL NOTES AND ILLUSTRATIONS THAT PERTAIN TO THEIR SPECIFIC TASK IN THE PROCESS.
2. MOST OF THE DENTAL UTILITY AND SPECIFICATION REQUIREMENTS ARE OUTLINED IN THE TEMPLATES AND DOCUMENTATION THAT PATTERSON WILL PROVIDE TO THE CONTRACTOR. QUESTIONS WILL ARISE ON THE JOB SITE AND MOST CAN BE ANSWERED BY TELEPHONE. THE CONTRACTOR WILL BE PROVIDED CONTACT NUMBERS FOR PATTERSON DENTAL REPRESENTATIVES TO FACILITATE TIMELY ANSWERS TO THOSE QUESTIONS. IN SOME CASES IT WILL BE NECESSARY FOR THE PATTERSON REPRESENTATIVE TO BE PRESENT AT THE JOB SITE TO ANSWER QUESTIONS OR SPOT LOCATIONS FOR DENTAL SPECIFIC ITEMS. IN THESE CASES AN APPOINTMENT WILL BE REQUIRED WITH REASONABLE ADEQUATE NOTIFICATION.
3. IF A JOB SITE APPOINTMENT IS REQUIRED, ALL TRADES SHOULD BE NOTIFIED OF THE APPOINTMENT SO THE OPTION OF BEING PRESENT WITH ANY QUESTIONS CONCERNING THEIR PORTION OF THE JOB CAN BE ADMINISTERED AT THAT APPOINTMENT. THE PATTERSON DENTAL REPRESENTATIVE SHOULD BE INFORMED AS TO THE MAGNITUDE OF THE APPOINTMENT PRIOR TO ARRIVAL ON THE JOB SITE IN ORDER TO ALLOW ENOUGH TIME IN THE APPOINTMENT.
4. THE GENERAL CONTRACTOR MUST SIGN THIS SHEET STIPULATING THAT THEY UNDERSTAND AND WILL COMPLY WITH ALL SPECIFICATIONS BEFORE ANY WORK WILL COMMENCE. A SIGNED COPY OF THE PLANS ARE TO BE RETURNED TO PATTERSON DENTAL AND A SECOND SIGNED COPY KEPT ON THE JOB SITE AT ALL TIMES.
5. THE PATTERSON DENTAL REPRESENTATIVE SHALL GIVE INSTRUCTIONS TO THE GENERAL CONTRACTOR ONLY. ALL COMMUNICATIONS AND COORDINATION WITH TRADESMEN SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR UNLESS PREDETERMINED TO BE OTHERWISE.
6. ALL ELECTRICAL, MECHANICAL AND PLUMBING CONNECTIONS TO DENTAL EQUIPMENT WILL BE PERFORMED BY THE APPLICABLE TRADE RESPONSIBLE. INSTALLATION PERMITS, IF REQUIRED, WILL BE OBTAINED BY THE TRADES THAT PROVIDE THAT SERVICE.
7. IF NECESSARY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING A MED GAS CERTIFIED PLUMBING SUB-CONTRACTOR FOR ANY LEVEL 3 NITROUS-OXYGEN CONSCIOUS SEDATION SYSTEM DETAILED IN THESE PLANS. ANY NITROUS OXIDE SYSTEM DESIGN SHOWN ON THESE PLANS IS TO BE USED AS AN ILLUSTRATION ONLY FOR THE PURPOSE OF LOCATING END USER OUTLET STATIONS, CYLINDER ROOM MANIFOLD AND ALARM PANEL. THE FINAL TRUNK SYSTEM INSTALLATION SHALL STRICTLY ADHERE TO ONLY MECHANICALLY ENGINEERED DRAWINGS, IF SUPPLIED.
8. THE PLUMBING SUB-CONTRACTOR SHALL PROVIDE MED GAS CERTIFICATION IN ACCORDANCE WITH ANY REQUESTS BY THE OWNER, CONTRACTOR, BUILDING DEPARTMENT OR PATTERSON DENTAL PRIOR TO COMMENCING WORK ON ANY TYPE OF CUSTOMER INSTALLED NITROUS OXIDE SYSTEM BEING USED IN THE CONSTRUCTION PROJECT.
9. ALL PLUMBING AND ELECTRICAL LINES TO BE CONCEALED UNLESS OTHERWISE SPECIFIED.
10. ALL LABOR AND MATERIALS NECESSARY FOR CHANGES IN EXISTING PLUMBING, CARPENTRY, AND ELECTRICAL WORK MUST BE DONE AND SUPPLIED BY THE CONTRACTOR AND IS NOT INCLUDED IN THE COST OF THE DENTAL EQUIPMENT.
11. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND DO ALL PATCHING AFTER ROUGHING IN IS COMPLETED.
12. ALL ROUGH IN AND FINISH WORK FOR DENTAL EQUIPMENT IS TO BE ACCORDING TO TEMPLATES FURNISHED BY THE MANUFACTURERS OF THE EQUIPMENT BEING INSTALLED. A REPRESENTATIVE OF PATTERSON DENTAL WILL POSITION THE TEMPLATES IN THEIR PROPER LOCATIONS, AT WHICH TIME ALL SPECIFICATIONS ON THE PLANS WILL BE EXPLAINED TO THE CONTRACTOR OR SUB-CONTRACTOR(S). ALL SPECIFIED SIZES OF PIPES, TUBING, AND/OR FITTINGS, ETC., MUST BE RIGIDLY FOLLOWED AS WELL AS PROPER HEIGHTS MARKED. ANY INFRACTIONS ON SIZES OR HEIGHTS OF PIPES, TUBING AND/OR FITTINGS WILL HAVE TO BE CORRECTED BEFORE THE EQUIPMENT CAN BE INSTALLED AND SUCH EXTRA EXPENSE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND/OR SUB-CONTRACTOR.
13. THE DOCTOR/OWNER SHALL DESIGNATE RESPONSIBILITY FOR PROVIDING AND INSTALLING CABINETS AND COUNTERTOPS (OTHER THAN THOSE SPECIFIED AND/OR CONTRACTED BY PATTERSON DENTAL).
14. THE DOCTOR SHALL MAKE ARRANGEMENTS FOR INSTALLATION OF NON-DENTAL SYSTEMS BEFORE WALLS ARE CLOSED.
15. PATTERSON DENTAL SHALL NOT BE HELD RESPONSIBLE FOR MULTIMEDIA SYSTEMS SUCH AS ENTERTAINMENT TVS, MONITORS, NETWORK COMPUTER SYSTEMS OR ANY ITEMS NOT SHOWN ON THESE PLANS.
16. GC MUST CONFIRM ALL MEASUREMENTS OF SPACE CONDITIONS PRIOR TO STARTING DEMOLITION
17. GC SHOULD NOTIFY PATTERSON EQUIPMENT SPECIALIST 1(ONE GC MUST CONFIRM ALL MEASUREMENTS OF SPACE CONDITIONS PRIOR TO STARTING DEMOLITION) WEEK PRIOR TO CLOSING OF ALL WALLS, CEILINGS, FLOORS TO ALLOW FINAL INSPECTION OF INSTALLATION.
18. GC IS RESPONSIBLE FOR CONFIRMING ALL UTILITIES FOR EXISTING EQ BEING MOVED FROM EXISTING LOCATION OR EQUIPMENT NOT SUPPLIED BY PATTERSON
19. GC IS RESPONSIBLE FOR CONFIRMING ALL UTILITIES FOR EXISTING EQ BEING MOVED FROM EXISTING LOCATION OR EQUIPMENT NOT SUPPLIED BY PATTERSON
20. **RADIATION PROTECTION: THE DOCTOR'S ARCHITECT/GC ARE REQUIRED TO REVIEW ALL LOCAL AND NATIONAL RADIATION AND XRAY SHIELDING REQUIREMENTS AND SUBMIT AN APPLICATION FOR REGISTRATION OF IONIZING RADIATION SOURCES. PLANS MUST BE SUBMITTED TO RADIATION CONTROL PROGRAM, IF APPLICABLE, ALONG WITH OTHER INFORMATION THEY WILL PROVIDE A LETTER OF ACCEPTABLE X-RAY PROTECTION OR ADVISE OTHERWISE. THIS APPLICATION AND PLAN SHOULD BE SUBMITTED PRIOR TO WALLS GOING UP. COPY OF APPROVAL LETTER FROM LOCAL GOVERNING BODY MUST BE PROVIDED TO PATTERSON EQUIPMENT SPECIALIST AND SERVICE TECHNICIAN. NOTE: IF EXISTING X-RAYS TO BE REPLACED WITH NEW AND EXISTING SHIELDING IS TO BE REUSED ARCHITECT/GC MUST VERIFY NEEDS WITH LOCAL CODE OFFICER.**

PATTERSON DENTAL

1031 MENDOTA HEIGHTS ROAD
MENDOTA HEIGHTS, MN

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THE CONTRACTOR SHALL ALSO BE RESPOSIBLE FOR ALL REQUIRED BACKFLOW PREVENTERS.
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OWNER:

NICKEL CITY DENTISTRY

LOCATION:

1603 HERTEL AVE
BUFFALO, NY

DRAWN BY	EQUIPMENT REP:	EQUIPMENT REP #:
LMK	ROBERT LANGER	716-316-9687
PROJECT #: 766-3100800	ISSUE DATE: 04/02/2026	

REVISIONS			
REV #	SCOPE	DRAWN BY	DATE
1	FINAL REQS	JH	8/31/2026

SHEET NO.

DA001

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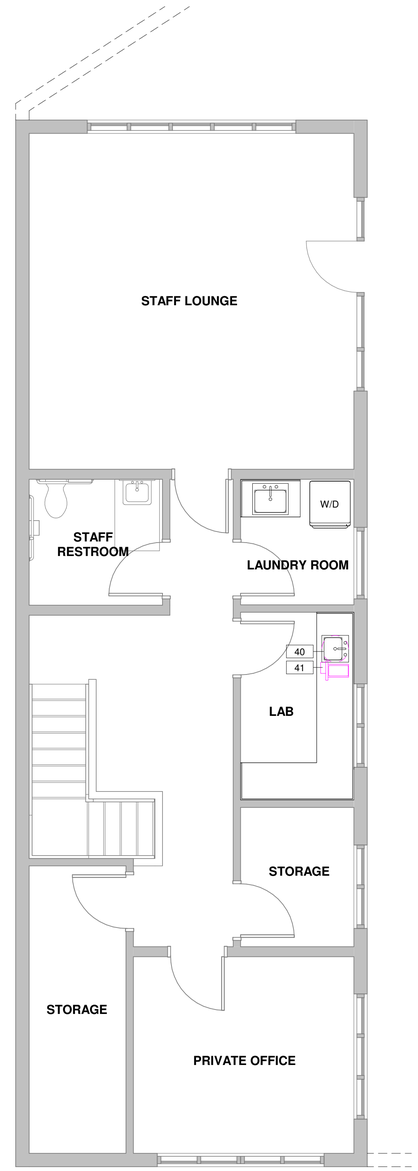
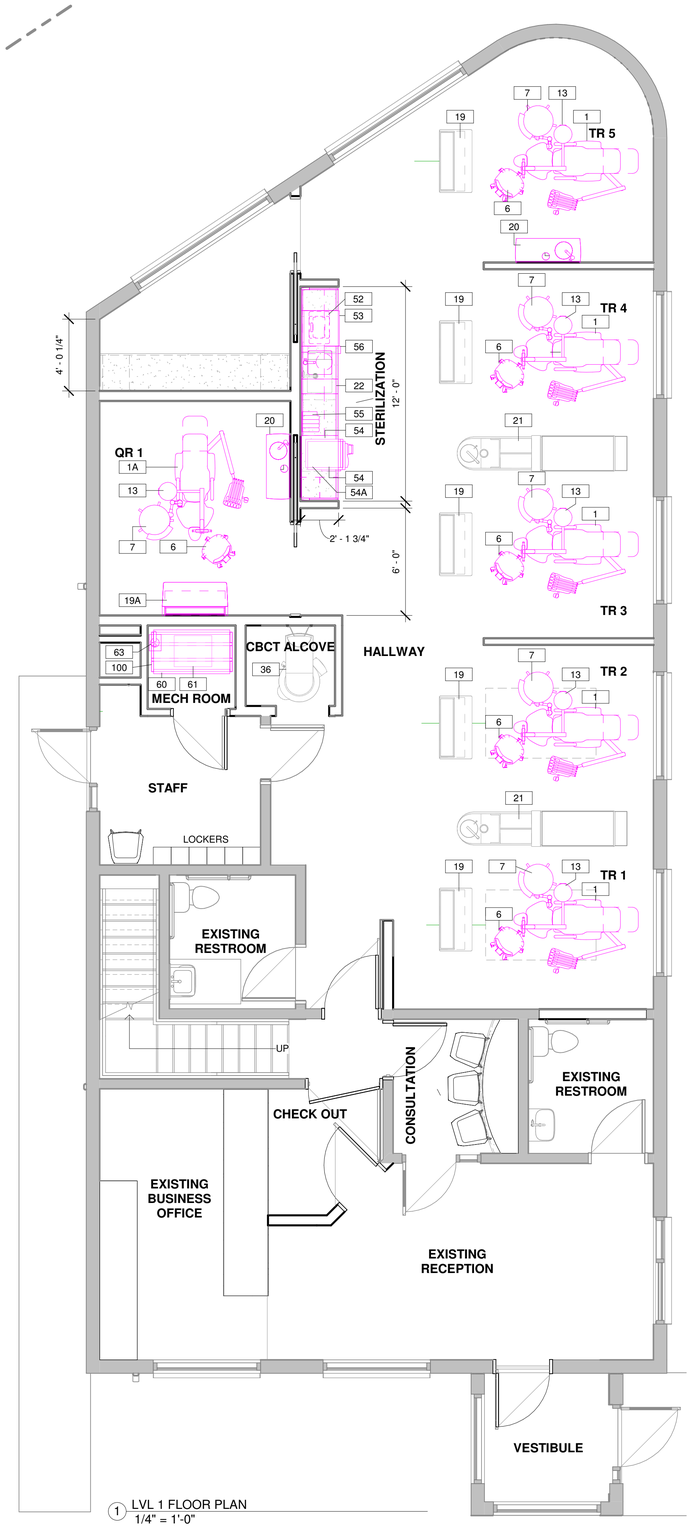
EQUIPMENT SCHEDULE

QTY	ITEM #	DESCRIPTION	STATUS	MANUFACTURER	MODEL	SUPPLIED BY	INSTALLED BY	EQUIPMENT REMARKS
		EQUIPMENT INFO						
LAB								
1	40	PLASTER TRAP	NW	PATTERSON	REMOVABLE	PD	PD	
1	41	MODEL TRIMMER	NW	PATTERSON	043-4415	PD	PD	
MECH								
1	60	COMPRESSOR	NW	AIR TECHNIQUES	AS70	PD	PD	
1	61	DRY VACUUM SYSTEM	NW	AIR TECHNIQUES	V5	PD	PD	
1	63	AMALGAM SEPARATOR	NW	SOLMETEX	HG5	PD	PC	
1	100	UTILITY STACKING RACK	NW	AIR TECHNIQUES	56650	PD	PD	
PAN								
1	36	PAN	ER	SIRONA DENTAL INC.	XG3	DR	PD	
QUIET ROOM								
1			NW	A-DEC	A-DEC 551	PD	PD	
1	1A	DENTAL CHAIR	NW	A-DEC	511	PD	PD	
1	6	STOOL DENTIST	NW	A-DEC	521	PD	PD	
1	7	STOOL ASSISTANT	NW	A-DEC	1622	PD	PD	
1	13	DENTAL CEILING LIGHT (LED)	NW	A-DEC	A-DEC LIGHT CEILING MOUNT	PD	PD	
1	19A	REAR CABINET	NW	A-DEC	591	PD	PD	
1	20	SIDE CABINET	NW	A-DEC	593	PD	PD	
STERILIZATION								
1	22	STERILIZATION CABINET	NW	A-DEC	594	PD	PD	
1	52	ULTRASONIC CLEANER	NW	MIDMARK	QUICKCLEAN SERIES- QC1-01, QC3(R)-01, QC6(R)-01	PD	PD	1/2" FLEX TUBE INDIRECT DRAIN
1	53	HYDRIM UNDERCOUNTER	NW	SCICAN	HYDRIM G4	PD	PD	
2	54	AUTOCLAVE	NW	SCICAN	STATCLAVE	PD	PD	
1	54A	STATIM	NW	SCICAN	STATIM G4	PD	PD	
1	55	ASSISTINA	NW	Kavo	Quattrocare Plus 2124A	PD	PD	
1	56	WATER TREATMENT	NW	VISTA	PURE	PD	PD	
1	57	VISTACOOL	NW	SCICAN	V7502	PD	PD	
TREATMENT								
5			NW	A-DEC	A-DEC 551	PD	PD	
5	1	DENTAL CHAIR	NW	A-DEC	511	PD	PD	
5	6	STOOL DENTIST	NW	A-DEC	521	PD	PD	
5	7	STOOL ASSISTANT	NW	A-DEC	1622	PD	PD	
5	13	DENTAL CEILING LIGHT (LED)	NW	A-DEC	A-DEC LIGHT CEILING MOUNT	PD	PD	
5	19	TREATMENT CONSOLE	ER	A-DEC	5580.42	DR	PD	
1	20	SIDE CABINET	NW	A-DEC	593	PD	PD	
2	21	CENTRAL CABINET	ER	A-DEC	5543.106.49	DR	PD	



2 LVL 2 FLOOR PLAN
1/4" = 1'-0"



1 LVL 1 FLOOR PLAN
1/4" = 1'-0"

PLAN LEGEND

	DENTAL FURNITURE & EQUIPMENT
	DENTAL FURNITURE & EQUIPMENT EXISTING RELOCATED
	DENTAL FURNITURE & EQUIPMENT FUTURE
12	EQUIPMENT NUMBER TAG (NUMBERS ARE RANDOM)

WALL LEGEND

	EXISTING WALL
	DEMO WALL
	NEW WALL
	SOUND PROOFING IN WALL
	LEAD LINED WALL

PATTERSON DENTAL

1031 MENDOTA HEIGHTS ROAD
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REV #	SCOPE	DRAWN BY	DATE
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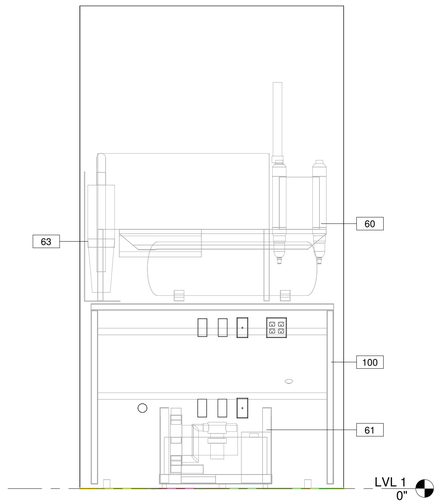
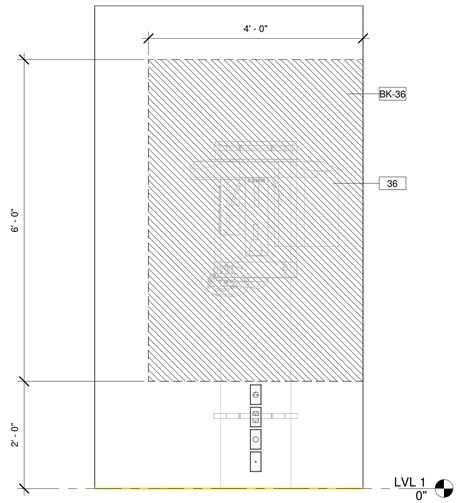
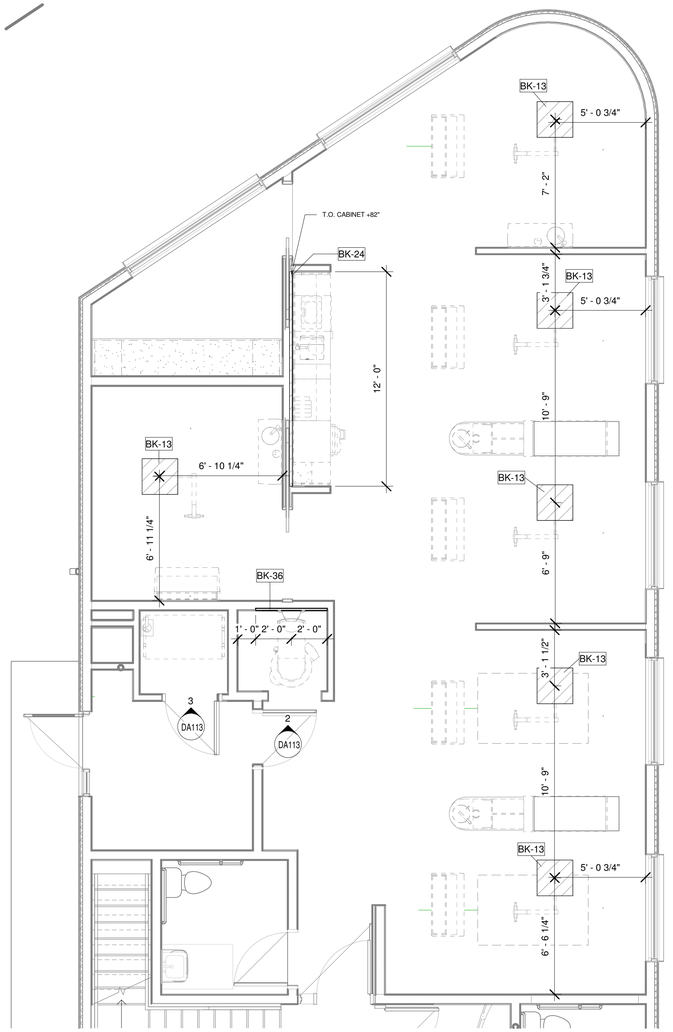


3 ELEVATION MECH RM
3/4" = 1'-0"



2 ELEVATION PANO WALL
3/4" = 1'-0"



1 LVL 1 BACKING PLAN
1/4" = 1'-0"

EQUIPMENT BACKING SCHEDULE

NOTE: ALL DBL PLYWOOD BACKING IS TO BE GLUED AND SCREWED

			WALL								CEILING			
QTY	BACKING NUMBER	EQUIPMENT DESCRIPTION	SGL 4" X 4" FLOOR TO STRUCTURE ABOVE	DBL 4" X 4" FLOOR TO STRUCTURE ABOVE	DBL 2" X 8" FLOOR TO STRUCTURE ABOVE	DBL. 3/4" PLYWOOD (GLUED & SCREWED)	SGL. 3/4" PLYWOOD	SGL 2" X 8" TOP OF BASE CABINET	SGL 2" X 8" TOP OF WALL CABINET	DBL 3/4" PLYWOOD PARALLEL TO CEILING	DBL. 3/4" PLYWOOD FLUSH WITH CEILING	OTHER	BACKING REMARKS
6	BK-13	DENTAL CEILING LIGHT (LED)								•			24" x 24"
1	BK-22	STERILIZATION CABINET							•				
1	BK-36	PAN				•							

NOT FOR CONSTRUCTION

PATTERSON DENTAL

1031 MENDOTA HEIGHTS ROAD
MENDOTA HEIGHTS, MN

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OWNER:

NICKEL CITY DENTISTRY

LOCATION:

1603 HERTEL AVE
BUFFALO, NY

DRAWN BY	EQUIPMENT REP:	EQUIPMENT REP #:
LMK	ROBERT LANGER	716-316-9687
PROJECT #: 766-3100800	ISSUE DATE: 04/02/2026	

REVISIONS			
REV #	SCOPE	DRAWN BY	DATE
1	FINAL REQS	JH	8/31/2026

SHEET NO.
DA113

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ELECTRICAL SYMBOLS IN FLOOR		
ALL DEVICES SHALL BE INSTALLED PER STATE AND LOCAL CODE. ALL LOCATIONS SHOULD BE VERIFIED WITH PATTERSON REP OR OWNER PRIOR TO PLACEMENT.		
+XX" - INDICATES HEIGHT FROM FINISHED FLOOR TO CENTER OF DEVICE UNLESS OTHERWISE NOTED BELOW, IF ITEM NOT TAGGED HEIGHT IS 18" A.F.F.		
QTY.	SYM.	DESCRIPTION
6	⊕	120v QUAD OUTLET FLOOR, MOUNTED ON FLOOR
13	◯	J-BOX FLOOR, IF TAG NOT PRESENT HEIGHT IS 1" A.F.F.

LOW VOLTAGE SYMBOLS		
ALL DEVICES SHALL BE INSTALLED PER STATE AND LOCAL CODE. ALL LOCATIONS SHOULD BE VERIFIED WITH PATTERSON REP OR OWNER PRIOR TO PLACEMENT.		
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QTY.	SYM.	DESCRIPTION
38	◯	CONDUIT FLOOR STUB OUT, IF TAG NOT PRESENT HEIGHT IS 1" A.F.F.
6	▲	DATA DEVICE FLOOR, IF TAG IS NOT PRESENT HEIGHT IS 1" A.F.F.

PLUMBING SYMBOLS IN FLOOR		
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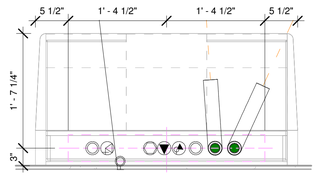
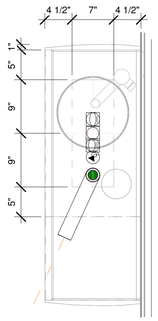
QTY.	SYM.	DESCRIPTION
16		1/2" OD. TO 3/8" OD.SHUT OFF AIR CONNECTION FLOOR HEIGHT 3" A.F.F. TO CENTER UNLESS OTHERWISE NOTED
5		DIRECT DRAIN FLOOR
1		FLOOR DRAIN FLUSH WITH FLOOR
1		HUB DRAIN FLOOR
4		SHUT OFF VALVE COLD WATER FLOOR
4		SHUT OFF VALVE HOT WATER FLOOR
12		VACUUM PIPE CONNECTION FLOOR
1		VACUUM RISER FLOOR

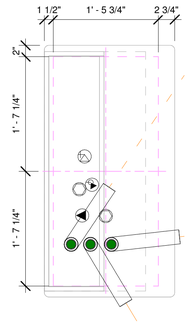
ELECTRICAL LEGEND	
	18/3 WIRE, CABLE RUN IN WALLS OR ABOVE FINISHED CEILING
	18/4 WIRE, WIRES RUN IN WALLS OR ABOVE FINISHED CEILING
	CAT5e OR BETTER CABLE, CABLE RUN IN WALLS OR ABOVE FINISHED CEILING
	MANUFACTURER CABLE, CABLE RUN IN WALLS OR ABOVE FINISHED CEILING
	ELECTRICAL CONDUIT UNDER FLOOR, SIZE AS INDICATED ON PLAN
	ELECTRICAL CONDUIT ABOVE CEILING, SIZE AS INDICATED ON PLAN



2 ENLARGED REAR CONSOLE UTILITY #19A
1" = 1'-0"

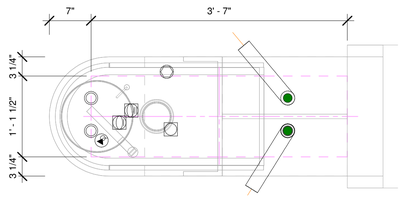


6 LVL 1 _IN FLOOR UTILITY PLAN - Callout 5
1" = 1'-0"

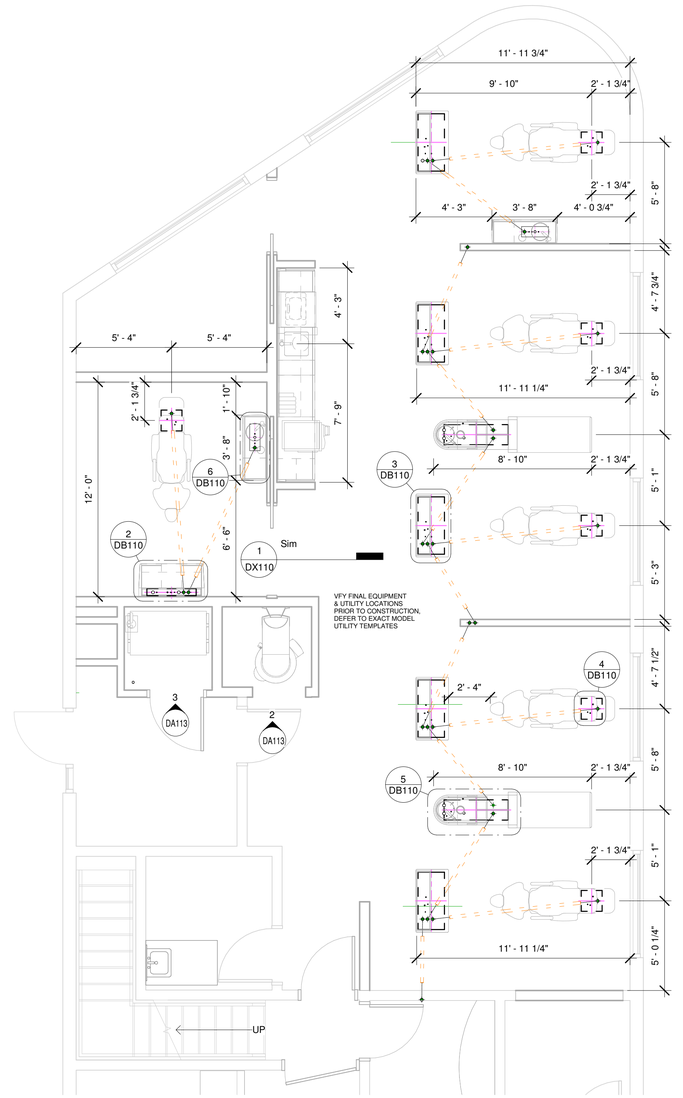


3 ENLARGED REAR CONSOLE UTILITY #19
1" = 1'-0"

4 ENLARGED CHAIR UTILITY
1" = 1'-0"



5 ENLARGED CENTRAL UTILITY (LENGTH MAY VARY)
1" = 1'-0"



1 LVL 1 UNDER FLOOR UTILITY PLAN
1/4" = 1'-0"

PATTERSON DENTAL

1031 MENDOTA HEIGHTS ROAD
MENDOTA HEIGHTS, MN

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DRAWN BY	EQUIPMENT REP:	EQUIPMENT REP #:
LMK	ROBERT LANGER	716-316-9687
PROJECT #: 766-3100800	ISSUE DATE: 04/02/2026	

REVISIONS			
REV #	SCOPE	DRAWN BY	DATE
1	FINAL REQS	JH	8/31/2026

SHEET NO.
DB110

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ELECTRICAL SYMBOLS

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QTY.	SYM.	DESCRIPTION	PDSI_Vent And Exhaust Remarks	PDSI_Exhaust Comments
5		120v DUPLEX DEDICATED OUTLET WALL, IF TAG NOT PRESENT HEIGHT IS 18" A.F.F. TO CENTER OF DEVICE		
2		120v FLUSH DUPLEX OUTLET WALL, IF TAG NOT PRESENT HEIGHT IS 18" A.F.F. TO CENTER OF DEVICE		
4		120v QUAD OUTLET WALL, IF TAG NOT PRESENT HEIGHT IS 18" A.F.F. TO CENTER OF DEVICE		
2		220v SINGLE OUTLET WALL, IF TAG NOT PRESENT HEIGHT IS 18" A.F.F. TO CENTER OF DEVICE		
1		HIGH CFM EXHAUST FAN TIED TO T-STAT IN MECHANICAL ROOM. PROVIDE VENTING IN THE ROOM FOR AIR INTAKE.		
6		J-BOX CLG, IF TAG NOT PRESENT HEIGHT IS 6" ABOVE FINISHED CEILING		
3		J-BOX WALL, IF TAG NOT PRESENT HEIGHT IS 18" A.F.F.		

LOW VOLTAGE SYMBOLS

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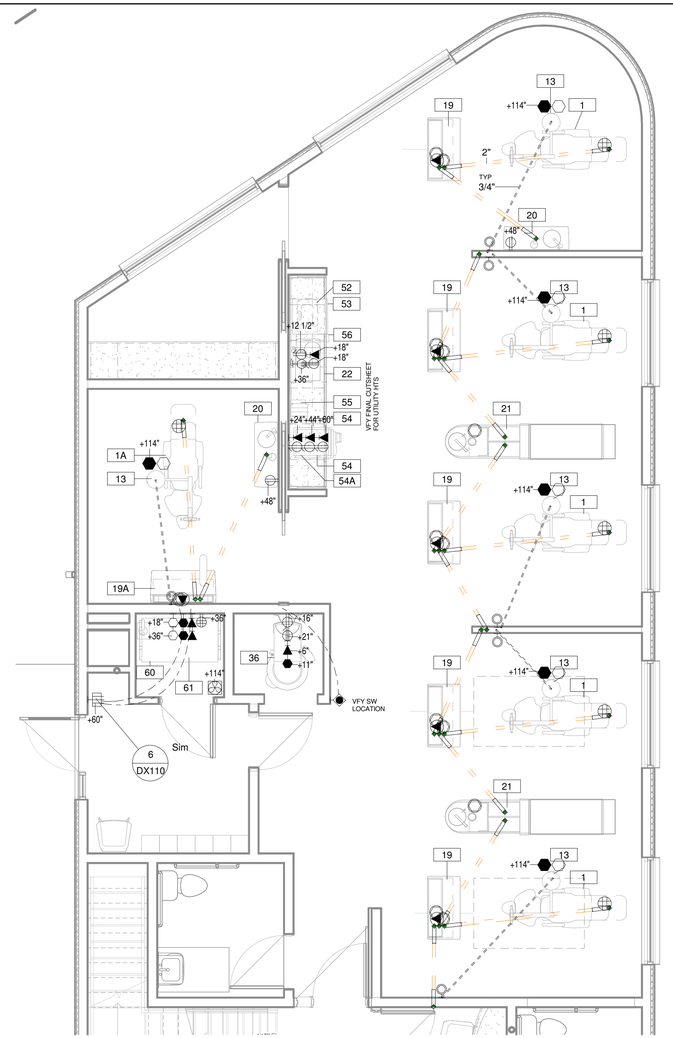
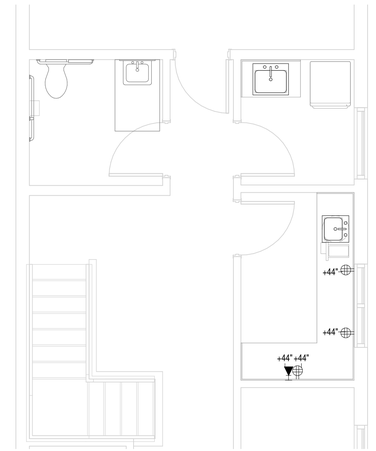
QTY.	SYM.	DESCRIPTION
6		CONDUIT WALL STUB OUT, IF TAG NOT PRESENT HEIGHT IS 3" A.F.F.
1		DATA DEVICE WALL MOUNTED
7		DATA DEVICE WALL, IF TAG NOT PRESENT HEIGHT IS 18" A.F.F.
6		J-BOX CLG LV, IF TAG NOT PRESENT HEIGHT IS 6" ABOVE FINISHED CEILING
3		J-BOX WALL,LOW VOLTAGE, IF TAG NOT PRESENT HEIGHT IS 18" A.F.F
1		MASTER SWITCH WALL, IF TAG NOT PRESENT HEIGHT IS 60" A.F.F. TO CENTER
1		REMOTE PAN SWITCH IN WALL, IF TAG NOT PRESENT HEIGHT IS 60" A.F.F.

ELECTRICAL LEGEND

	18/3 WIRE, CABLE RUN IN WALLS OR ABOVE FINISHED CEILING
	18/4 WIRE, WIRES RUN IN WALLS OR ABOVE FINISHED CEILING
	CAT5e OR BETTER CABLE, CABLE RUN IN WALLS OR ABOVE FINISHED CEILING
	MANUFACTURER CABLE, CABLE RUN IN WALLS OR ABOVE FINISHED CEILING
	ELECTRICAL CONDUIT UNDER FLOOR, SIZE AS INDICATED ON PLAN
	ELECTRICAL CONDUIT ABOVE CEILING, SIZE AS INDICATED ON PLAN



1 LVL 1 POWER & LOW VOLTAGE PLAN
1/4" = 1'-0"



2 LVL 2 FLOOR PLAN
1/4" = 1'-0"

EQUIPMENT POWER & LOW VOLTAGE SCHEDULE

GENERAL NOTES

ALL DEVICES ARE TO BE INSTALLED PER STATE AND LOCAL CODES.

EQUIPMENT INFO				ELECTRICAL INFO											LOW VOLTAGE INFO										
					POWER		CONNECTION TYPE																		
QTY	ITEM #	DESCRIPTION	STATUS	EC CONNECTION BY	VOLTS	AMPS	SINGLE OUTLET	DUPLEX OUTLET	QUAD OUTLET	DIRECT WIRE	DEDICATED POWER	JBOX	ELECTRICAL REMARKS	LV CONNECTION BY	2" EMPTY CONDUIT	3/4" EMPTY CONDUIT	1" EMPTY CONDUIT	18/3 WIRE	18/4 WIRE	JBOX LV	CAT5e OR BETTER	MFG CABLE	MONITOR CABLE	LV REMARKS
5	1	DENTAL CHAIR	NW	EC	120v	7.0			•					EC	•									
1	1A	DENTAL CHAIR	NW	EC	120v	7.0			•					EC	•									
6	13	DENTAL CEILING LIGHT (LED)	NW	EC	120v	3				•		•	EC TO PROVIDE ELECTRICAL WHIP FROM ELECTRICAL BOX TO LIGHT FIXTURE.	EC		•		•		•				JBOX TO BE MOUNTED ABOVE FINISHED CEILING WITHIN 2' OF FIXTURE
5	19	TREATMENT CONSOLE	ER	EC	120v	20.0			•	•			EC TO LEAVE MIN 3' FLEXIBLE CONDUIT	EC	•						•			RUN LOW VOLTAGE WIRES AND OR CABLES TO LOCATIONS INDICATED ON PLANS
1	19A	REAR CABINET	NW	EC	120v	20.0			•	•			EC TO LEAVE MIN 3' FLEXIBLE CONDUIT	EC	•	•					•			
2	20	SIDE CABINET	NW	EC	120v	20.0			•	•				EC	•									RUN LOW VOTLTAGE WIRES AND OR CABLES TO LOCATIONS INDICATED ON PLANS
2	21	CENTRAL CABINET	ER	EC	120v	20.0			•	•			EC TO LEAVE MIN 3' FLEXIBLE CONDUIT	EC	•									
1	22	STERILIZATION CABINET	NW	EC	120v	20.0		•		•			EC TO LEAVE MIN 3' FLEXIBLE CONDUIT	EC							•			RUN LOW VOLTAGE WIRES AND OR CABLES TO LOCATIONS INDICATED ON PLANS
1	36	PAN	ER	EC	220/120	20.0	•	•			•			EC		•		•		•	•			
1	41	MODEL TRIMMER	NW	EC	120	10.0		•																
1	52	ULTRASONIC CLEANER	NW	EC	120v	T10.0		•			•		DEDICATED DUPLEX REQD	EC										
1	53	HYDRIM UNDERCOUNTER	NW	EC	208-240v	15.0	•				•			EC							•			
2	54	AUTOCLAVE	NW	EC	120v	15.0		•			•			EC										
1	54A	STATIM	NW	EC	120v	11.0		•			•			EC										
1	60	COMPRESSOR	NW	EC	208V	20.0	•			•	•	•	BREAKER RATING 40.0 AMPS / IF SERVICE IS ABOVE OR BELOW VOLTAGE INDICATED, INSTALL A BUCK/BOOST TRANSFORMER AS REQUIRED.	EC		•		•	•	•				
1	61	DRY VACUUM SYSTEM	NW	EC	220v	20.0				•	•		DEDICATED POWER, DISCONNECT REQUIRED IF UNIT IS NOT LOCATED IN SAME ROOM AS ELECTRICAL PANEL	EC		•			•	•				
1	63	AMALGAM SEPARATOR	NW	EC	120V			•					Necessary when using a 12VDC power supply to power the optional Acadia Alert Monitor Module.											

PATTERSON DENTAL

1031 MENDOTA HEIGHTS ROAD
MENDOTA HEIGHTS, MN

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PROJECT #: 766-3100800	ISSUE DATE: 04/02/2026	

REVISIONS			
REV #	SCOPE	DRAWN BY	DATE
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SHEET NO.
DE110

NOT FOR CONSTRUCTION

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Autodesk Docs://766-Nickel City Dentistry-3100800/766 Nickel City Dentistry-3100800.rvt

PLUMBING SYMBOLS

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QTY.	SYM.	DESCRIPTION
4		1/2" OD. TO 3/8" OD.SHUT OFF AIR CONNECTION WALL, HEIGHT 3" A.F.F. TO CENTER IF TAG NOT PRESENT
2		DIRECT DRAIN WALL
1		FRESH AIR IN MANIFOLD WALL
7		GENERIC PLUMBING ITEMS
2		SHUT OFF VALVE COLD WATER WALL
2		SHUT OFF VALVE HOT WATER WALL
1		Toilet - Wall Mounted
1		VACUUM PIPE CONNECTION WALL

EQUIPMENT EXHAUST SCHEDULE

GENERAL NOTES::

ALL ITEMS IDENTIFED AS "FT" WILL BE INSTALLED AT A FUTURE DATE. ALL UTILITIES NEED TO BE CAP AND CONCEALED FOR FUTURE USE..

ALL ITEMS WILL BE INSTALLED PER STATE AND LOCAL CODES..

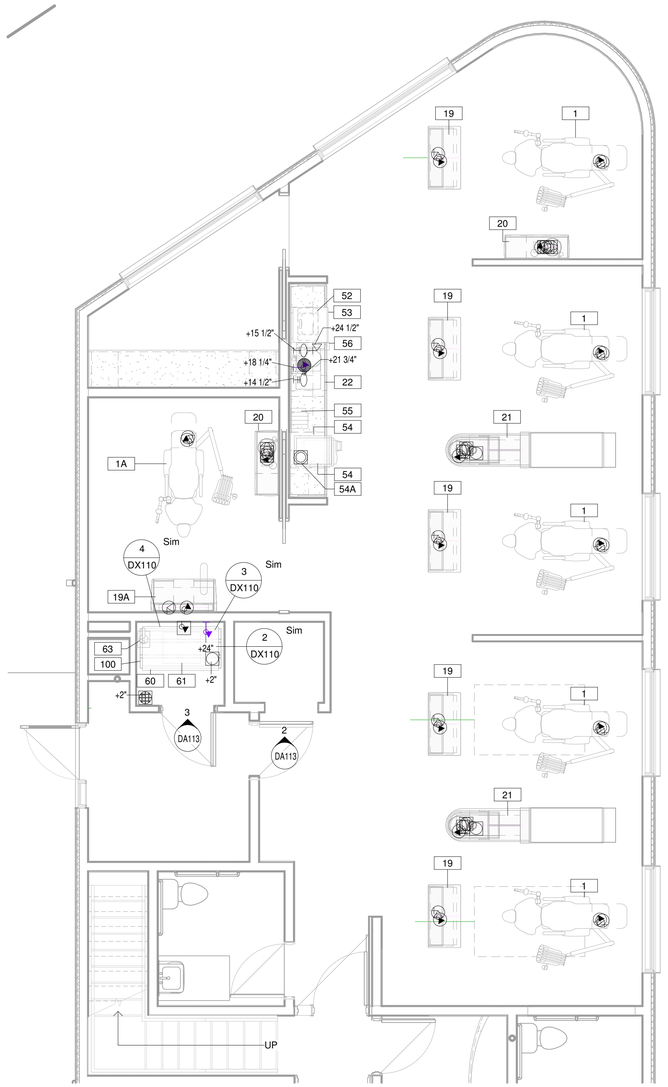
EQUIPMENT INFO				
QTY	ITEM #	DESCRIPTION	STATUS	VENT EXHAUST REMARKS
1	60	COMPRESSOR	NW	FRESH AIR INTAKE PER MFR SPECS
1	61	DRY VACUUM SYSTEM	NW	METAL EXAUST PIPE REQUIRED IF UNIT DOES NOT HAVE A HEAT EXCHANGER

EQUIPMENT PLUMBING-DENTAL COMPRESSED AIR-VAC SCHEDULE

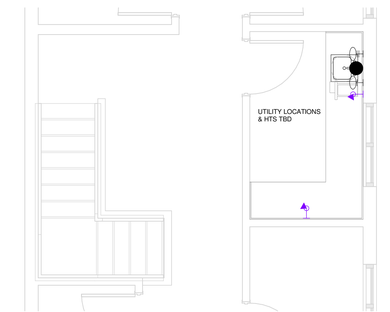
GENERAL NOTES:

ALL ITEMS TO BE INSTALLED PER STATE AND LOCAL CODES..

PLUMBING				PLUMBING INFO													VAC INFO						DENTAL COMPRESSED AIR		
				SUPPLY								SANITARY					RISERS	MAIN & BRANCHES							
QTY	ITEM #	DESCRIPTION	STATUS	PLUMBING CONNECTION BY	1/4" COLD WATER FLEX TUBING	1/2" COLD WATER COPPER	1/2" HOT WATER COPPER	3/4" COLD WATER COPPER	3/4" HOT WATER COPPER	1" COLD WATER COPPER	3/4" COPPER TYPE M	1-1/2" PVC WASTE SCHEDULE 40	DRAIN DIRECT	DRAIN INDIRECT	DRAIN STAND PIPE	PLUMBING REMARKS	1/2" PVC SCHEDULE 40	5/8" PVC SCHEDULE 40	3/4" PVC SCHEDULE 40	1-1/2" PVC SCHEDULE 40	2" PVC SCHEDULE 40	3" PVC SCHEDULE 40	VAC REMARKS	1/2" COPPER TYPE L OR K	5/8" COPPER TYPE M	COMPRESSED AIR REMARKS
5	1	DENTAL CHAIR	NW	PC														•						•		
1	1A	DENTAL CHAIR	NW	PC														•						•		
5	19	TREATMENT CONSOLE	ER	PC														•						•		
1	19A	REAR CABINET	NW	PC														•						•		
2	20	SIDE CABINET	NW	PC		•	•					•	•											•		
2	21	CENTRAL CABINET	ER	PC		•	•					•	•											•		
1	22	STERILIZATION CABINET	NW	PC		•	•					•	•					•						•		
1	40	PLASTER TRAP	NW	PC												INSTALL FOR LAB SINK AND MODEL TRIMMER, BRACE TRAP TO SUPPORT WEIGHT OF FULL TRAP AN TO SIMPLIFY THE REMOVAL OF CANISTER FOR CLEANING.										
1	41	MODEL TRIMMER	NW		•								•			CONNECT WATER LINE TO SINK COLD WATER SUPPLY, CONNECT DRAIN TO SINK DRAIN										
1	52	ULTRASONIC CLEANER	NW	PC	•										•	1/2" FLEX TUBE DRAIN										
1	53	HYDRIM UNDERCOUNTER	NW	PC				•	•						•	RO FEED WITH G SHUT OFF VALVE, RECOMMENDED WATER TEMP 140°										
1	55	ASSISTINA	NW	PC																				•		
1	56	WATER TREATMENT	NW	PC	•			•							•											
1	57	VISTACOOL	NW	PC									•													
1	60	COMPRESSOR	NW	PC											•	REQUIRES AIR INTAKE, 2" PVC PIPE AND FLEXIBLE HOSE WITH 70 IN. OF CLEAR TUBING FOR CONNECTION TO THE AIR INTAKE OF EACH COMPRESSOR.									•	IF PIPE VOLUME IS TO GREAT MORE THAN 235 IN³ OR MORE THAN 100 FT. OF 1/2 DIAMETER PIPE, A PRESSURE REGULATOR SHOULD BE INSTALLED BETWEEN MAIN TANK AND THE DISTRIBUTION PIPING AND SET TO 80 PSI.
1	61	DRY VACUUM SYSTEM	NW	PC		•						•		•		REQUIRES FLOOR SINK OR STAND PIPE PER LOCAL CODES PROVIDED BY OTHERS										
1	63	AMALGAM SEPARATOR	NW	PC																						



1 LVL 1 PLUMBING PLAN
1/4" = 1'-0"



2 LVL 2 FLOOR PLAN
1/4" = 1'-0"

PATTERSON DENTAL
1031 MENDOTA HEIGHTS ROAD
MENDOTA HEIGHTS, MN

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OWNER:
NICKEL CITY DENTISTRY

LOCATION:
1603 HERTEL AVE
BUFFALO, NY

DRAWN BY	EQUIPMENT REP:	EQUIPMENT REP #:
LMK	ROBERT LANGER	716-316-9687
PROJECT #: 766-3100800	ISSUE DATE: 04/02/2026	

REVISIONS

REV #	SCOPE	DRAWN BY	DATE
1	FINAL REQS	JH	8/31/2026

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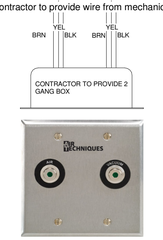
NOTE:

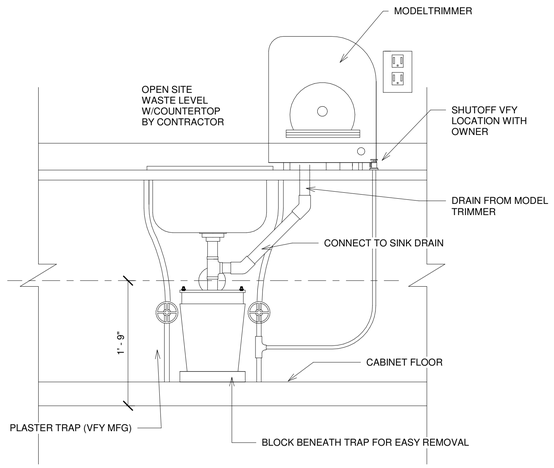
All wires to be class B low voltage. For "runs" under 150', wire to be 18 gage. For "runs" over 150', wires should be 16 gage.

Caution! Local codes may dictate changes to the above specifications.

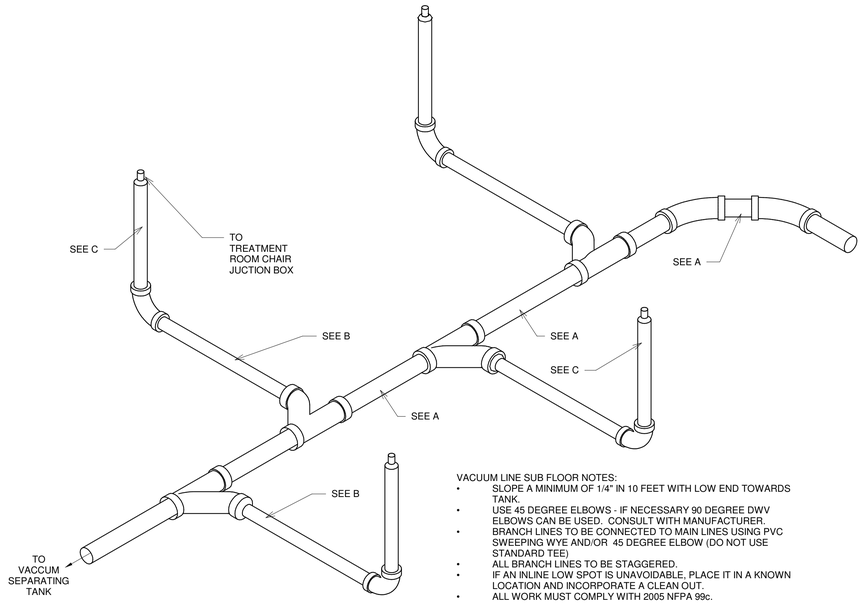
Contractor to provide wire from mechanical room to remote control panel.



6 REMOTE CONTROL PANEL
3" = 1'-0"



5 MODEL TRIMMER W/PATTERSON PLASTER TRAP
1" = 1'-0"



VACUUM LINE SUB FLOOR NOTES:

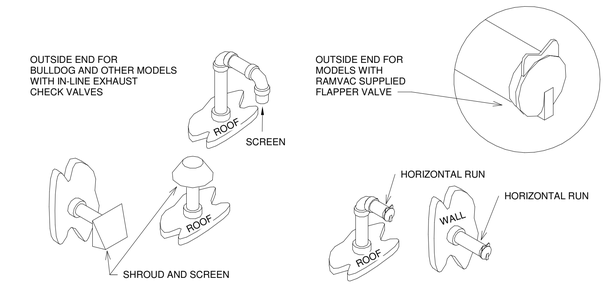
- SLOPE A MINIMUM OF 1/4" IN 10 FEET WITH LOW END TOWARDS TANK.
- USE 45 DEGREE ELBOWS - IF NECESSARY 90 DEGREE DWV ELBOWS CAN BE USED. CONSULT WITH MANUFACTURER.
- BRANCH LINES TO BE CONNECTED TO MAIN LINES USING PVC SWEEPING WYE AND/OR 45 DEGREE ELBOW (DO NOT USE STANDARD TEE)
- ALL BRANCH LINES TO BE STAGGERED.
- IF AN INLINE LOW SPOT IS UNAVOIDABLE, PLACE IT IN A KNOWN LOCATION AND INCORPORATE A CLEAN OUT.
- ALL WORK MUST COMPLY WITH 2005 NFPA 99c.

AIR TECHNIQUES MOJAVE

IF A PIPING DIAGRAM IS PROVIDED BY THE MANUFACTURER, IT SUPERCEDES THIS CHART. IF NOT, USE THIS CHART IN CONFERENCE WITH PATTERSON DENTAL REP.

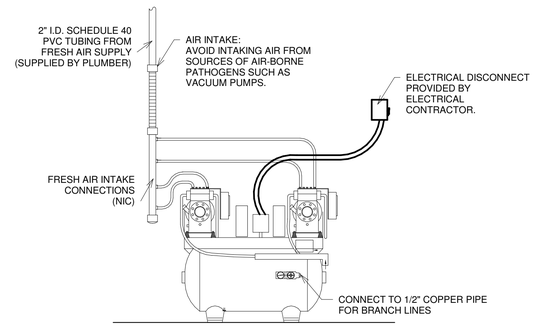
		V3	V5	2V3	2V5	2V7
A	MAIN LINE DIAMETER MINIMUM-MAXIMUM	2" PVC SCH. 40	2" PVC SCH. 40	TWO 2" PVC SCH. 40 OR ONE 3"	TWO 2" PVC SCH. 40 OR ONE 3"	TWO 2" PVC SCH. 40 OR ONE 3"
B	BRANCH LINE DIAMETER MINIMUM-MAXIMUM	SIZE REQUIREMENT OF BRANCH PIPING DIFFERS BY NUMBER OF OPERATORIES BEING SERVED UP TO (2) OPERATORIES - 1-1/4" PVC SCH. 40 (3-6) OPERATORIES - 1-1/2" PVC SCH. 40 MORE THAN (6) OPERATORIES - 2" PVC SCH. 40				
C	RISER LINE DIAMETER	1/2" PVC SCH. 40	1/2" PVC SCH. 40	1/2" PVC SCH. 40	1/2" PVC SCH. 40	1/2" PVC SCH. 40

1 VACUUM LINE - SUB FLOOR (AIR TECHNIQUES MOJAVE)
1 1/2" = 1'-0"

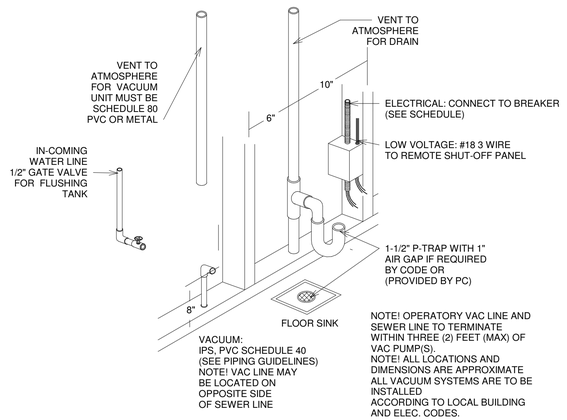


- PROTECT OUTSIDE END OF EXHAUST FROM ENTRY OF WATER, DEBRIS, AND CREATURES.
- POINT AWAY FROM PREVAILING WINDS, CLEAR OF SNOW OR OTHER OBSTRUCTIONS.
- CLEAR ROOF TOPS OR OUTSIDE WALLS BY A MINIMUM OF 6 INCHES.
- LOCATE IN AN INCONSPICUOUS SITE AWAY FROM DOORS, WINDOWS OR VENTILATION INTAKES.
- ALL WORK MUST COMPLY WITH 1996 NFPA 99C.

4 EXHAUST PIPING - OUTSIDE END
1 1/2" = 1'-0"



3 AIR COMPRESSOR
1 1/2" = 1'-0"



2 VAC DRY
1 1/2" = 1'-0"

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