DANE COUNTY DEPT. OF PUBLIC WORKS, HIGHWAY & TRANSPORTATION

1919 Alliant Energy Center Way
Madison, Wisconsin 53713
Office: 608/266-4018 ◊ Fax: 608/267-1533
Public Works Engineering Division

ADDENDUM

MARCH 9, 2021

ATTENTION ALL REQUEST FOR BID (RFB) HOLDERS

RFB NO. 320038 - ADDENDUM NO. 02

DANE COUNTY SHERIFF'S SE PRECINCT REMODEL AND ADDITION

BIDS DUE: TUESDAY, MARCH 16, 2021, 2:00 PM.
DUE DATE AND TIME ARE NOT CHANGED BY THIS ADDENDUM.

This Addendum is issued to modify, explain or clarify the original Request for Bid (RFB) and is hereby made a part of the RFB. Please attach this Addendum to the RFB.

PLEASE MAKE THE FOLLOWING ADDITION

1. Pre-Bid Site Tour Attendance
The attendee sign in sheet for the Pre-Bid Site Tour conducted on February 18, 2021 is included for reference, labeled Addendum 02 EXHIBIT A.

PLEASE NOTE RESPONSES TO THE FOLLOWING BIDDER-SUBMITTED QUESTIONS

Q1: We are bidding a locker job for the Dane County SE Precinct Remodel that Spacesaver is specified for and had a couple questions: How tall and wide do the lockers need to be? What is meant by "future lockers" on drawings?
A1: Section 10 51 13 – Metal Lockers is updated as part of Addendum 02 to indicate locker sizes. Future Lockers is shown as future planning and will not be part of this project.

Q2: We had trouble finding any detailed specs for the exterior lit signage; specifically the LED internally lit building sign ("Dane County Sheriff Southeast Precinct"), and the illuminated building sign (the shield). Do you have any more detailed drawings for those components?
A2: Please refer to specifications Section 10 14 00 – Signage, Article 2.2 Exterior Signage. Additional detail has been added to Drawing Sheet A201.

Q3: Asphalt - Please verify the heavy duty pavement and standard pavement areas on C2.0. The notes and legend shading don't match. It is not clear on the plans. We want to get the correct square footage.
A3: Civil Drawing Sheet Notes were inadvertently turned off in printed set. Drawings have been replaced as part of this Asddednu, 02 with appropriate paving notes.

Q4: The Cameras listed on the camera schedule on the maps are a different series than the cameras specified in the Project Manual. They also do not meet the specifications listed in the Project Manual. Which specifications take priority, the ones listed in the Project Manual or the cameras listed on the camera schedule on the maps?

A4: The Drawing Sheet Schedule is correct. Specifications are corrected as part of this Addednum 02.

PLEASE MAKE THE FOLLOWING CHANGES:

PROJECT MANUAL VOLUME 1:

1. **Section 00 72 13**

   Page 20 – Section 47. Minimum Wages
   Delete paragraphs A through D. Replace with:

   "A. Not used."

2. **Section 08 71 00 – Door Hardware**

   Replace this section in it's entirety with updated hardware specifications and Hardware Sets as indicated.

3. **Section 10 51 13 – Metal Lockers**

   Replace this section in it's entirety with updated Locker Sizes as indicated.

PROJECT MANUAL VOLUME 2:

4. **Section 22 14 29**

   Add this section in it's entirety.

5. **Section 22 11 16**

   Item 2.01.C - Acceptable Manufacturers, Commercial Expansion Tanks
   Add: "5. Watts"

6. **Section 22 31 00**

   Item 2.01.A - Acceptable Manufacturers, Water Softeners
   Add: "3. Water Control Corporation"

7. **Section 23 38 13**

   Item 2.01.A - Acceptable Manufacturers, Kitchen Exhaust Hoods and Exhaust Fans
   Add: "5. Denlar"

8. **Section 23 55 23**

   Item 2.01.A - Acceptable Manufacturers, Gas-Fired, Vented Infared Radiant Heaters
   Add: "3. Advanced Radiant Systems"

9. **Section 23 72 00**

   Item 2.01.A - Acceptable Manufacturers, Electric Cabinet Unit Heaters

Add: “4. York”

10. Section 23 81 27

Item 2.01.A - Acceptable Manufacturers, Electric Cabinet Unit Heaters
Add: “5. Samsung”

11. Section 23 82 39

Item 2.01.A - Acceptable Manufacturers, Electric Cabinet Unit Heaters
Add: “6. Markel”

12. Section 28 60 00.2.C.1

Refer to construction drawings Sheet TY500 – Security Details and Schedules: Vide Surveillance Schdule.

a. Follow the schedules direction regarding Avigilon IP Camera models in lieu of this secation items a, b, and c.

13. Section 32 92 00 – Trees Shrubs and Other Plantings

Replace this section in it’s entirety with updated planting information as indicated.

CONSTRUCTION DRAWINGS VOLUME 1:

14. Sheet C2.0

Modify current Sheet C2.0 Site Pan as indicated and issued with this Addendum.

15. Sheet C3.0

Modify current Sheet C3.0 Grading and Erosion Control Plan as indicated and issued with this Addendum.

16. Sheet C3.1

Modify current Sheet C3.1 Detailed Grading Plan as indicated and issued with this Addendum.

17. Sheet C4.0

Modify current Sheet C4.0 Utility Plan as indicated and issued with this Addendum.

18. Sheet L2.0

Modify current Sheet L2.0 Landscape Details and Ntoes as indicated and issued with this Addendum.

19. Sheet AD101

Modify current Sheet AD101 Demolition Plans as indicated and issued with this Addendum.

20. Sheet AD701

Modify current Sheet AD701 Demolition Reflected Ceiling Plans as indicated and issued with this Addendum.

21. Sheet A101

Modify current Sheet A101 Overall Floor Plans as indicated and issued with this Addendum.

22. Sheet A112

Modify current Sheet A112 Enlarged Floor Plans as indicated and issued with this Addendum.

23. Sheet A141

Modify current Sheet A141 Vertical Circulation Plans, Sections, and Details as indicated and issued with this Addendum.

24. Sheet A142

Modify current Sheet A142 Vertical Circulation Plans, Sections, and Details as indicated and issued with this Addendum.

25. Sheet A143

Modify current Sheet A143 Vertical Circulation Plans, Sections, and Details as indicated and issued with this Addendum.

26. Sheet A201

Modify current Sheet A201 Exterior Elevations as indicated and issued with this Addendum.

27. Sheet A301

Modify current Sheet A301 Building Sections as indicated and issued with this Addendum.

28. Sheet A302

Modify current Sheet A302 Building Sections as indicated and issued with this Addendum.

29. Sheet A314

Modify current Sheet A314 Wall Sections as indicated and issued with this Addendum.

30. Sheet A601

Modify current Sheet A601 Interior Eelvations as indicated and issued with this Addendum.

31. Sheet A701

Modify current Sheet A701 Reflected Ceiling Plans as indicated and issued with this Addendum.

32. Sheet A712

Modify current Sheet A712 Enlarged Reflected Ceiling Plasn as indicated and issued with this Addendum.

33. Sheet A801

Modify current Sheet A801 Finish Floor Plans as indicated and issued with this Addendum.

34. Sheet A811

Modify current Sheet A811 Door, Window, and Finish Information as indicated and issued with this Addendum.

35. Sheet S001

Modify current Sheet S001 Structural General Notes as indicated and issued with this Addendum.

a. Update Structural Sheet Index.

36. Sheet S101

Modify current Sheet S101 Foundation Plan as indicated and issued with this Addendum.
a. Add sump pit.
b. Add footing steps at sump pit.
c. Add detail 4.

37. Sheet S201

Modify current Sheet S201 1st Floor and Mezzanine Framing Plan as indicated and issued with this Addendum.
a. Revise top of sheathing elevation at Storage Room.

38. Sheet S302

Modify current Sheet S302 Foundation Details as indicated and issued with this Addendum.
a. Detail 5/S302- Revise top of sheathing elevation at Storage Room.

39. Sheet S303

Modify current Sheet S302 Foundation Details as indicated and issued with this Addendum.
a. Add detail 4

CONSTRUCTION DRAWINGS VOLUME 2:

40. Sheet P100

Modify current Sheet P100 as shown on Drawing 1 as follows and issued with this Addendum:
d. Modify to reduce the amount of sanitary waste piping upstream of the grease interceptor per request of the plumbing plan reviewer.
e. Add storm piping and sump pump to serve site trench drain shown on Civil plans.

41. Sheet P101

Modify current Sheet P101 as shown on Drawing 1 as follows and issued with this Addendum:
a. Modify to reduce the amount of sanitary waste piping upstream of the grease interceptor per request of the plumbing plan reviewer.
b. Add storm piping and sump pump to serve trench drain shown on Civil plans and discharge above grade.

42. Sheet P400

Modify current Sheet P400 as follows and issued with this Addendum:
a. Modify Detail 1 isometric to reduce the amount of sanitary waste piping upstream of the grease interceptor per request of the plumbing plan reviewer.
b. Add note to the bottom fo the Water Piping Sizing Chart: “When using CPVC for water distribution piping, check the manufacturers recommendations and installation instructions for expansion loops. Contractor is required to comply with those requirements and insall accordingly.”

43. Sheet P500

Modify current Sheet P500 as shown to add Detail P-250, issued with this Addendum.

44. Sheet P510

Modify current Sheet P510 as follows and issued with this Addendum:

a. Add the following to the Accessories / Notes to Plumbing Fixture SB-1: "Provide with ASSE 1020 or CSA B64.1.2 compliant vacuum breaker on the supply connections."
b. Add downspout nozzle DSN-1.
c. Add Sump Pump Schedule.

45. Sheet H500

Modify current Sheet H500 as follows and issued with this Addendum:

a. Add Sump Pump Controls Schematic.

46. Sheet E201

Modify current Sheet E201 as shown on Drawing 1 as follows: add receptical and GFI receptical to serve EWC, add equipment connection for SP-1, issued with this Addendum.
Modify current Sheet E201 as shown on Drawing 2 as follows: add special receptacle to Work Room 120 for electric range, modify floorboxes in Deputy Open Office 108, modify location of Panel A, issued with this Addendum.

47. Sheet E510

Modify current Sheet E510 as shown on Panel A Schedule as follows: modify Panel A to be 72 space panel, add 40A two pole circuit for electric range, issued with this Addendum.
Modify current Sheet E510 as shown on Panel P1 Schedule as follows: add 20A circuit for EWC, issued with this Addendum.
Modify current Sheet E510 as shown on Panel B Schedule as follows: add 20A/3P circuit for SP-1, issued with this Addendum.

48. Sheet E520

Modify current Sheet E520 as shown on activation box schedule as follows: modify AB-2 to include telecommunications ports and conduits, issued with this Addendum.

49. Sheet E532

Modify current Sheet E532: add detail E551-01 bollard mounting detail, issued with this Addendum.

50. Sheet T101

Modify current Sheet T101 as shown on Drawing 2 as follows: add telecommunication openings to activation boxes in Deputy Open Office 108, issued with this Addendum.

PLEASE NOTE THE FOLLOWING APPROVED PRODUCTS:

Pursuent to requirements of Section 01 00 00-8 – General Requirements, Section 1.31 Product Options, the following products are approved as "equal":

1. Section 10 11 50 – Glass Markerboards:

PART 2 PRODUCTS: Fulbright Glass Boards, ¼" Tempered, Low Iron Safety Glass, fulbrightglassboards.com.

If any additional information about this Addendum is needed, please contact Steve Richards at 608/513-8367, richards.steve@countyofdane.com.

Sincerely,

Steve Richards

Project Manager

Enclosures:

Section 08 71 00
Section 10 51 13
Section 22 14 29
Section 32 92 00

Sheet C2.0
Sheet C3.0
Sheet C3.1
Sheet C4.0

Sheet L2.0

Sheet AD101
Sheet AD701

Sheet A101
Sheet A112
Sheet A141
Sheet A142
Sheet A143
Sheet A201
Sheet A301
Sheet A302
Sheet A314
Sheet A601
Sheet A701
Sheet A712
Sheet A801
Sheet A811

Sheet S001
Sheet S101
Sheet S201
Sheet S302
Sheet S303

Sheet P100
Sheet P101
Sheet P400
Sheet P500
Sheet P510

Sheet H500

Sheet E201
Sheet E510
Sheet E520
Sheet E532

Sheet T101

DANE COUNTY

Department of Public Works, Highway & Transportation

PRE-BID SITE TOUR

SE PRECINCT REMODEL AND ADDITION

125 Veterans Rd, Stoughton, WI

Name	Company	Phone No.
Sam Briggs	Pieper Power	630-4914
Sean Chambers	Alliance Demo	847-783-6585
Dieter Burolt	SGTS, Inc.	608-212-4754
Ed Engler	Bachman Const	608-222-8869
Rick Bauer	Bauer Const.	920-650-3152
Tim Korden	Timk@asgelectricwi.com ASG Electric	279-5247
Jared Ramthun	Design Engineers	608-424-8815
Allison Rowe	Design Engineers	608-424-8815.
Brett Parpart	Universal Power Systems	608-226-8600
Carolyn Tretina	Universal Power Systems	608.226.8600
James Sawyer	Main Fire Protection	608-347-5235
Gary Tree	Advanced Bldg Corp	608 209 2352
Mike Schwartz	Dave Jones	608-235-3225
Seth Luedtke	Staff	414-588-7907
Jamie Baake	Midwest Electric	262-352-6759
Adam Rowland	Monona Plumbing + Fire	212-3328
Peter Vander	DJI	608-279-1596.

DANE COUNTY

Department of Public Works,
Highway & Transportation

PRE-BID SITE TOUR

SE PRECINCT REMODEL AND ADDITION

125 Veterans Rd, Stoughton, WI

Name	Company	Phone No.
Nick Schuch	Vogel bros. BLDG Co	608-444-0893
Dave Bultman	Butters Fetting	608-438-9222
Jeff Tom Peter		
Dan Civic	C&G Schmidt	608 960 4117
Gavin Jasmer	Tri-North	608-204-7239
STEVE NADOLSKI	SURE FIRE	920-296-6496
JERRY BUSH	US VET	608-807-4761
Ron Fencl	Fencl Fire Protection	608-445-0542
MICHAEL HERKLER	THE RAVEN GROUP	970-989-3988
BRIAN HOTCHKISS	THE RAVEN GROUP	608-347-8726
MIKE SCHWARTZ	USA FIRE PROTECTION	920-378-0941
Aaron Burlingame	DMC	715-315-0006
STEVE HANSEN	DANIELS	608-444-4532
Matt Hamilton	HJ Pertzborn	608-256-3900
DAN CROW	KSW CONSTRUCTION	608 333 1607
Kayla Hansen	khansen@bachmanconstruction.net	608-222-8869
Chris Soeller	Chris@TSmasonry.net	608-513-9016

Randy Spang 1901 Inc Rspang@1901Inc.com

Jerry Kisgen ASG Electric jerryk@asgelectricwi.com

Jerry Gitlewski CBRE Jerry.Gitlewski@CBRE.com

SECTION 08 71 00

DOOR HARDWARE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Door Hardware.

B. Door Hardware Sets.

1.2 RELATED REQUIREMENTS

A. Section 08 11 13 – Hollow Metal Doors and Frames.

B. Section 08 14 16 – Flush Wood Doors.

C. Section 08 43 13 – Aluminum Framed Storefronts.

1.3 CODES AND REFERENCE STANDARDS

A. ANSI A117.1 - Accessible and Usable Buildings and Facilities.

B. ICC/IBC - International Building Code.

C. NFPA 70 - National Electrical Code.

D. NFPA 80 - Fire Doors and Windows.

E. NFPA 101 - Life Safety Code.

F. NFPA 105 - Installation of Smoke Door Assemblies.

G. State Building Codes, Local Amendments.

H ANSI/BHMA Certified Product Standards - A156 Series.

I. UL10C – Positive Pressure Fire Tests of Door Assemblies.

J. ANSI/UL 294 – Access Control System Units.

K. ULC-S319 - Electronic Access Control Systems.

L. ULC-60839-11-1, Alarm and Electronic Security Systems - Part 11-1: Electronic Access Control Systems - System and Components Requirements.

M. UL 305 – Panic Hardware.

N. ULC-S132, Emergency Exit and Emergency Fire Exit Hardware.

O. ULC-S533 – Egress Door Securing and Releasing Devices.

P. ANSI/UL 437- Key Locks.

Q. ULC-S328, - Burglary Resistant Key Locks.

1.4 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.
h. Warranty information for each product.

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. Shop Drawings: Details of electrified access control hardware indicating the following:
1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
b. Complete (risers, point-to-point) access control system block wiring diagrams.
c. Wiring instructions for each electronic component scheduled herein.
2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

E. Informational Submittals:
1. 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.

F. 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 Procedures.

1.5 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
   1. Function of building, purpose of each area and degree of security required.
   2. Plans for existing and future key system expansion.
   3. Requirements for key control storage and software.
   4. Installation of permanent keys, cylinder cores and software.
   5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
   1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
   2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
   3. Review sequence of operation narratives for each unique access controlled opening.
   4. Review and finalize construction schedule and verify availability of materials.
   5. Review the required inspecting, testing, commissioning, and demonstration procedures

I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.6 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. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

D.

E. 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.

F. 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".

1.7 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

C. 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.

D. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   4. Electrical component defects and failures within the systems operation.

E. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

F. Special Warranty Periods:
   1. Ten years for mortise locks and latches.
   2. Seven years for heavy duty cylindrical (bored) locks and latches.
   3. Five years for exit hardware.
   4. Twenty five years for manual overhead door closer bodies.
   5. Five years for motorized electric latch retraction exit devices.
   6. Two years for electromechanical door hardware.

1.8 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. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

A. Hinges: ANSI/BHMA A156.1 certified 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.
      b. Sizes from 3’1” to 4’0”: 5” standard or heavy weight as specified.
   3. 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.
   4. Hinge Options: Comply with the following:

a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:
   a. Bommer Industries (BO).
   b. Hager Companies (HA).
   c. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

2.3 POWER TRANSFER DEVICES

A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. 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. Hager Companies (HA) - ETW-QC (# wires) Option.
      b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - QC (# wires) Option.

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 length required 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 Products; ASSA ABLOY Architectural Door Accessories (MK) - Electrical Connecting Kit: QC-R001.
      b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - Connector Hand Tool: QC-R003.
   2. Manufacturers:
      a. Hager Companies (HA) - Quick Connect.
      b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) – QC-C Series.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
   1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
   2. Furnish dust proof strikes for bottom bolts.
   3. Surface bolts to be minimum 8” in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
   4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
   5. Manufacturers:
      a. Door Controls International (DC).
      b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
      c. Trimco (TC).

B. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls 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. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
   5. Manufacturers:
      a. Hiawatha, Inc. (HI).
      b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
      c. Trimco (TC).

2.5 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Cylinders: Original manufacturer cylinders complying with the following:
   1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
   2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
   4. 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.
   5. Keyway: Match Facility Standard.

C. Interchangeable Cores: Provide small format interchangeable cores as specified, core insert, removable by use of a special key; usable with other manufacturers' cylinders.

D. 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. Existing System: Field verify and key cylinders to match Owner's existing system.

E. Key Quantity: Provide the following minimum number of keys:
   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   3. Construction Keys (where required): Ten (10).

F. Construction Keying: Provide construction master keyed cylinders.

G. 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.

2.6 KEY CONTROL

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 required for the project.
   1. Manufacturers:
      a. Lund Equipment (LU).
      b. MMF Industries (MM).
      c. Telkee (TK).

2.7 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
   1. Where specified, provide status indicators with highly reflective color and wording for “locked/unlocked” or “vacant/occupied” with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1” x 0.6” with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.
   2. Manufacturers:
      a. dormakaba Best (BE) – 45H Series.
      b. No Substitution.

B. Cylindrical Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed.
   1. Furnish with solid cast levers, standard 2 3/4” backset, and 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt.
   2. Locks are to be non-handed and fully field reversible.

3. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.2 requirements to 2 million cycles.
4. Manufacturers:
   a. dormakaba Best (BE) – 9K Series.
   b. No Substitution.

2.8 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.

2.9 ELECTRIC STRIKES

A. Standard Electric Strikes: Electric strikes tested 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) - 1006 Series.

B. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes tested to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Construction 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.

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.

2.10 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
   1. 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.
   2. 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.
   3. 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.
   4. 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.

5. Electromechanical Options: Subject to same compliance standards and requirements as mechanical exit devices, electrified devices to be of type and design as specified in hardware sets. Include any specific controllers when conventional power supplies are not sufficient to provide the proper inrush current.
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 locksets.
    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 dust proof strikes where thermal pins are required to project 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 (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
    1. Manufacturers:
        a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
        b. Detex (DE) – Advantex.
        c. Sargent Manufacturing (SA) - 80 Series.

2.11 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. Closers 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. Manufacturers:
    a. Corbin Russwin Hardware (RU) – DC6000 Series.
    b. Norton Door Controls (NO) – 7500 Series.
    c. Sargent Manufacturing (SA) – 351 Series.

2.12 ELECTROHYDRAULIC DOOR OPERATORS

A. Provide low energy operators of size recommended by manufacturer of door size, weight, and movement; for condition of exposure; and for compliance with UL 325. Coordinate operator mechanisms with door operation, hinges, and activation devices. For fire rated doors, provide operators that comply with NFPA 80 for fire rated door components and are listed and labeled by a qualified testing agency.

1. Standard: Certified ANSI/BHMA A156.19.
2. Performance Requirements:
    a. Opening Force if Power Fails: not more than 15 lbf required to release a latch if provided, not more than 30 lbf required to manually set door in motion, and not more than 15 lbf required to fully open door.
    b. Entrapment Protection: not more than 15 lbf required to prevent stopped door from closing or opening.
3. Configuration: surface mounted or in-ground as required. Door operators to control single swinging and pair of swinging doors.
4. Operation: power opening and spring closing operation capable of meeting ANSI A117.1 accessibility guideline. Provide time delay for door to remain open before initiating closing cycle as required by ANSI/BHMA A156.19. When not in automatic mode, door operator to function as manual door closer with fully adjustable opening and closing forces, with or without electrical power.
5. Features: operator units to have full feature adjustments for door opening and closing force and speed, backcheck, motor assist acceleration from 0 to 30 seconds, time delay, vestibule interface delay, obstruction recycle, and hold open time from 0 up to 30 seconds.
6. Provide outputs and relays on board the operator to allow for coordination of exit device latch retraction, electric strikes, magnetic locks, card readers, safety and motion sensors, and specified auxiliary contacts.
7. Brackets and Reinforcements: manufacturer's standard, fabricated from aluminum with nonferrous shims for aligning system components.
8. Manufacturers:
    a. LCN Closer (LC) – 4640 Series.
    b. Norton Door Controls (NO) – 6000 Series.

2.12 ARCHITECTURAL TRIM

B. Door Protective Trim
9. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
10. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
11. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
12. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
    a. Stainless Steel: 300 grade, 050-inch thick.
13. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
14. Manufacturers:
    a. Hiawatha, Inc. (HI).
    b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
    c. Trimco (TC).

2.13 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified 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. Hiawatha, Inc. (HI).
    b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
    c. Trimco (TC).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb

bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.

1. Manufacturers:
    a. Rixson Door Controls (RF).
    b. Sargent Manufacturing (SA).

2.14 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, or 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.

C. 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 NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:
    1. National Guard Products (NG).
    2. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
    3. Reese Enterprises, Inc. (RE).

2.15 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. Securitron (SU) - DPS Series.

B. Intelligent Switching Power Supplies: Provide power supplies with single, dual or multi-voltage configurations at 12 and/or 24VDC. Power Supply shall have battery backup function with an integrated battery charging circuit. The power supply shall have a standard, integrated Fire Alarm Interface (FAI). The power supply shall provide capability for secondary voltage, power distribution, direct lock control and network monitoring through add on modules. The power supply shall be expandable up to 16 individually protected outputs. Output modules shall provide individually protected, continuous outputs and/or individually protected, relay controlled outputs. Network modules shall provide remote monitoring functions such as status reporting, fault reporting and information logging.
    2. Manufacturers:
        a. Securitron (SU) - AQL Series.

2.16 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.

2.17 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. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

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; closing devices; and seals.

B. 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. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
   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.

C. 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.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. 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” and “Cash Allowances”. 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 separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.
   2. Submit documentation of incomplete items in the following formats:

a. PDF electronic file.
b. Electronic formatted file integrated with the Openings Studio™ door opening management software platform.

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 SETS

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. Manufacturer’s Abbreviations:
   1. MK - McKinney
   2. RO - Rockwood
   3. SA - SARGENT
   4. BE - dormakaba Best
   5. HS - HES
   6. RF - Rixson
   7. NO - Norton
   8. PE - Pemko
   9. HD - HID
   10. SU - Securitron
   11. OT - Other

HARDWARE SETS

Set: 1.0

3	Hinge (heavy weight)	T4A3386 (NRP)	US32D	MK
1	Rim Exit (storeroom lvr)	LC 43 8804 ETL	US32D	SA
1	Cylinder	Rim / Mortise (as req'd)	626	BE

1	Electric Strike	9600-LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Surf Overhead Stop	9-X36 (5458)	630	RF
1	Closer - Top Jamb	J7500	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Threshold - 6" T-Break	253x3AFG		PE
1	Gasketing	2891AS (head)		PE
2	Gasketing	290AS (jambs)		PE
1	Rain Guard	346C (frame width)		PE
1	Sweep x Drip	3452CNB x dr width		PE
1	E-Lynx Harness (Jamb)	QC-C1500P		MK
1	Card Reader	By Security Contractor	BLK	HD
1	Door Position Switch	DPS-M / W-GY (as req'd)		SU

Notes:
Install gasketing at head before installing closer(s).
Install gasketing at jambs before installing rim device strike.

Door normally closed and locked.
Valid card read unlocks electric strike for entry.
Key override available.
Free egress at all times.

Set: 2.0

3	Hinge (heavy weight)	T4A3386 (NRP)	US32D	MK
1	Rim Exit (storeroom)	LC 43 8804 Less Pull	US32D	SA
1	Cylinder	Rim / Mortise (as req'd)	626	BE
1	Electric Strike	9600-LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Offset Pull	RM201	US32D	RO
1	Surf Overhead Stop	9-X36 (5458)	630	RF
1	Closer - Top Jamb	J7500	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Threshold - 6" T-Break	253x3AFG		PE
1	Gasketing	2891AS (head)		PE
2	Gasketing	290AS (jambs)		PE
1	Rain Guard	346C (frame width)		PE
1	Sweep x Drip	3452CNB x dr width		PE
1	E-Lynx Harness (Jamb)	QC-C1500P		MK
1	Card Reader	By Security Contractor	BLK	HD
1	Door Position Switch	DPS-M / W-GY (as req'd)		SU

Notes:
Install gasketing at head before installing closer(s).
Install gasketing at jambs before installing rim device strike.

Door normally closed and locked.
Valid card read unlocks electric strike for entry.
Key override available.
Free egress at all times.

Set: 3.0

3	Hinge (heavy weight)	T4A3786 (NRP)	US26D	MK
1	Rim Exit (storeroom)	LC 43 8804 Less Pull	US32D	SA
1	Cylinder	Rim / Mortise (as req'd)	626	BE
1	Electric Strike	9600-LBM	630	HS

1	SMART Pac Bridge Rectifier	2005M3		HS
1	Offset Pull	RM201	US32D	RO
1	Surf Overhead Stop	9-X36 (5458)	630	RF
1	Closer - Top Jamb	J7500	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	E-Lynx Harness (Jamb)	QC-C1500P		MK
1	Door Position Switch	DPS-M / W-GY (as req'd)		SU

Notes:
Install electric strike now, for possible use in the future.
Exit device can be dogged, so door acts as push/pull, until Owner decides whether to secure door with card reader.

Door normally closed and locked.
Valid card read unlocks electric strike for entry.
Key override available.
Free egress at all times.

Set: 4.0

3	Hinge (heavy weight)	T4A3386 (NRP)	US32D	MK
1	Rim Exit (passage, ELR)	12 43 56 8815 ETL	US32D	SA
1	Automatic Opener	6061	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Wall Stop	402 / 405 (as req'd)	US26D	RO
1	Threshold - 1/4" Saddle	271A		PE
1	Perimeter Gasketing	S88BL (head & jambs)		PE
1	Sweep	315CN		PE
1	E-Lynx Harness (Jamb)	QC-C1500P		MK
1	E-Lynx Harness (Door)	QC-C*** (length / type as req'd)		MK
1	Electric Power Transfer	EL-CEPT		SU
2	Actuator Button	534		NO
1	Power Distribution Board	AQL4-R8E1		SU

Notes:
Door normally closed, latch held retracted electrically.
Either actuator button opens door automatically.
Exit device tied to fire alarm system. Exit device latches on fire alarm or loss of power to the device.
Free access from either direction at all times.

Set: 5.0

3	Hinge	TA2314 (NRP)	US32D	MK
1	Rim Exit (passage)	12 43 8815 ETL	US32D	SA
1	Closer	PR7500 / Reg 7500 (as req'd)	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Wall Stop	402 / 405 (as req'd)	US26D	RO
1	Perimeter Gasketing	S88BL (head & jambs)		PE

Set: 6.0

3	Hinge (heavy weight)	T4A3786 (NRP)	US26D	MK
1	Storeroom Lock	9K37D 15C	626	BE
1	Electric Strike	1006CS	630	HS
1	Closer	PR7500 / Reg 7500 (as req'd)	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Wall Stop	402 / 405 (as req'd)	US26D	RO
1	E-Lynx Harness (Jamb)	QC-C1500P		MK

1	Card Reader	By Security Contractor	BLK	HD

Notes:
Door normally closed and locked.
Valid card read unlocks electric strike for entry.
Key override available.
Free egress at all times.

Set: 7.0

2	Hinge (heavy weight)	T4A3786 (NRP)	US26D	MK
1	Hinge x ETW (heavy weight)	T4A3786-QC_	US26D	MK
1	Rim Exit (elec lvr, fail safe, rated)	12 43 8875 ETL	US32D	SA
1	Cylinder	Rim / Mortise (as req'd)	626	BE
1	Closer	PR7500 / Reg 7500 (as req'd)	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Wall Stop	402 / 405 (as req'd)	US26D	RO
1	Perimeter Gasketing	S88BL (head & jambs)		PE
1	E-Lynx Harness (Jamb)	QC-C1500P		MK
1	E-Lynx Harness (Door)	QC-C*** (length / type as req'd)		MK
1	Card Reader	By Security Contractor	BLK	HD
1	Power Distribution Board	AQL4-R8E1		SU

Notes:
Door normally closed and locked by power.
Valid card read unlocks outside lever for entry. Key override available.
Exit device tied to fire alarm, unlocks on fire alarm or loss of power to the door, but remains latched.
Free egress at all times.

Set: 8.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Storeroom Lock	9K37D 15C	626	BE
1	Wall Stop	402 / 405 (as req'd)	US26D	RO

Set: 9.0

6	Hinge	TA2714 (NRP)	US26D	MK
1	Manual Flush Bolt	555/557 (as req'd)	US26D	RO
1	Storeroom Lock	9K37D 15C	626	BE
2	Surf Overhead Hold Open	10-326	630	RF

Set: 10.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Storeroom Lock	9K37D 15C	626	BE
1	Closer	PR7500 / Reg 7500 (as req'd)	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Wall Stop	402 / 405 (as req'd)	US26D	RO

Set: 11.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Storeroom Lock	9K37D 15C	626	BE
1	Surf Overhead Stop	10-X36 (5258)	630	RF

Set: 12.0

1	Storeroom Lock	9K37D 15C	626	BE

Notes:
Re-use balance of existing hardware.
Field verify compatibility of new hardware with existing door and frame.

Set: 13.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Classroom Lock	9K37R 15C	626	BE
1	Wall Stop	402 / 405 (as req'd)	US26D	RO

Set: 14.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Entrance Lock	9K37AB 15C	626	BE
1	Closer	PR7500 / Reg 7500 (as req'd)	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	Wall Stop	402 / 405 (as req'd)	US26D	RO

Set: 15.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Entrance Lock	9K37AB 15C	626	BE
1	Surf Overhead Stop	10-X36 (5258)	630	RF

Set: 16.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Entrance Lock	9K37AB 15C	626	BE
1	Wall Stop	402 / 405 (as req'd)	US26D	RO

Set: 17.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Entrance Lock	9K37AB 15C	626	BE
1	Wall Stop	402 / 405 (as req'd)	US26D	RO
1	Sound Seals	S773BL (head & jambs)		PE
1	Door Bottom	STC411APK36		PE

Set: 18.0

3	Hinge	TA2314 (NRP)	US32D	MK
1	Privacy Mortise Lock (OCC/VAC)	45H0LT 15H VIN VIT	626	BE
1	Closer x Stop/HO	CLP7500T	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO

Notes:
Lever to be at same height as cylindrical locks.

Set: 19.0

3	Hinge	TA2714 (NRP)	US26D	MK
1	Passage Latch	9K30N 15C	626	BE
1	Closer x Stop/HO	CLP7500T	689	NO
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO

Set: 20.0

3	Hinge	TA2714 (NRP)	US26D	MK	
1	Passage Latch	9K30N 15C	626	BE	
1	Wall Stop	402 / 405 (as req'd)	US26D	RO	

Set: 21.0

3	Hinge	TA2714 (NRP)	US26D	MK	
1	Push Bar x Offset Pull	RM251	US32D	RO	
1	Closer	PR7500 / Reg 7500 (as req'd)	689	NO	
1	Wall Stop	402 / 405 (as req'd)	US26D	RO	

Set: 22.0

3	Hinge	TA2314 (NRP)	US32D	MK	
1	Pull Plate	126x70C	US32D	RO	
1	Push Plate	70E	US32D	RO	
1	Closer	PR7500 / Reg 7500 (as req'd)	689	NO	
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO	
1	Mop Plate	K1050 4" 4BE CSK	US32D	RO	
1	Door Stop & Keeper	477	US26D	RO	

Set: 23.0

3	Hinge	TA2714 (NRP)	US26D	MK	
1	Pull Plate	126x70C	US32D	RO	
1	Push Plate	70E	US32D	RO	
1	Automatic Opener	6061	689	NO	
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO	
1	Wall Stop	402 / 405 (as req'd)	US26D	RO	
2	Actuator Button	534		NO	⚡

Notes:
Either actuator button opens door automatically.

Set: 24.0

1	All Hardware	By Door Manufacturer		OT	

END OF SECTION

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SECTION 10 51 13

METAL LOCKERS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Personal storage lockers with built-in bench drawers and interior accessories.

B. Secured weapons storage locker unit.

1.2 RELATED REQUIREMENTS

A. Section 06 10 00 - Rough Carpentry: Wood base construction.

B. Section 06 10 00 - Rough Carpentry: Wood blocking and nailers.

C. Section 06 20 00 - Finish Carpentry: Bench tops for locker bench support brackets.

D. Section 26

1.3 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.

1.4 SUBMITTALS

A. See Section 01 00 00 - General Requirements, for submittal procedures.

B. Product Data: Submit manufacturer's product literature and installation instructions for each type of welded metal locker required. Include data substantiating that products to be furnished comply with requirements of the contract documents.

C. Shop Drawings:
   1. Show fabrication, assembly, and installation details, including descriptions of procedures and diagrams.
   2. Show complete locker installation layout, including quantities, locations and types of accessory units required. Include notations and descriptions of all installation items and components.
   3. Show installation details at non-standard conditions, if any.
   4. Provide layout, dimensions, and identification of each unit, corresponding to sequence of installation procedures.
   5. Provide installation schedule and procedures to ensure proper installation.

D. Samples: Provide minimum [3] inches or [76] millimeters square example of each color and texture on actual substrate for each component to remain exposed after installation.

E. Maintenance Data: Provide written documentation of the manufacturer’s statement, claiming the maintenance free nature of the product.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Follow manufacturer’s instructions and recommendations for delivery, storage and handling requirements.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify quantities of welded metal locker units before fabrication. Indicate verified measurements on shop drawings. Coordinate fabrication and delivery to ensure no delay in progress of the work.

B. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating welded metal lockers units without field measurements. Coordinate construction to ensure actual dimensions correspond to established dimensions.

C. Pre-installation Conference: Schedule and conduct conference on project site between installer and contractor to review methods and procedures for installing welded Metal Lockers.

PART 2 PRODUCTS

2.1 METAL LOCKERS

A. Basis of Design: FreeStyleTM Personal Storage Lockers manufactured by Spacesaver Corporation; www.spacesaver.com/products/locker-storage/freestyle-personal-storage-locker/.
   1. Type: Personal storage lockers with built-in bench drawers with intermediate base shelf with interlocking mechanism for securing drawer when locker door is closed
   2. All lockers to be equipped with modular electrical system as required.
   3. Size: Tiered locker size, including built-in bench-drawer shall be standard sizes as follows:
      a. Height: 84”.
      b. Width: 24”.
      c. Depth at Bench Drawer: 36”.
      d. Depth at Locker: 24” deep.

C. Materials and Features:
   1. Provide materials and quality of workmanship, which meets or exceeds established industry standards for products specified. Use furniture grade sheet metal, solid hardwood benches and fasteners for component fabrication.
   2. Lockers to be flat-top, to fit under wood-framed and drywalled bulkhead above as constructed by General Contractor.
   3. Fabricated Metal Components and Assemblies: All components to be painted with an electro-statically applied Powder Coat paint that can meet or exceed test requirements set out by ASTM standard D3451-06 Standard Guide for Testing Coating Powders and Powder Coatings.
   4. Where ends or sides are exposed, provide flush panel closures.
   5. Color: elected by Architect from manufacturer's standard colors.

D. Electrical:
   1. UL listed manufactured electrical wiring system with plug-in-play component design.
   2. Receptacles – standard 20 amp duplex receptacles and 20 amp GFCI duplex receptacles

E. Built-in Bench Drawer:
   1. Provide manufacturer's standard built-in bench drawer with nominal 36 inch depth.
   2. Provide interlock system for securing drawer when main locker doors are closed and provide access only when main locker door/s is opened.
   3. Minimum bench drawer 26.5 inch drawer extension.
   4. Provide a flush mounted pull handle.
   5. Drawer Slides: Provide 200 lbs maximum load capacity and pass 50,000 cycle performance testing.

F. Bench Seat:
   1. Laminated kiln dried maple bench seat, 13.0 inch deep; 1.25 inches thick.
   2. Front (leading edge) of bench seat to have 0.625 inch radius bull nose.
   3. Finish shall be sanded smooth and have two (2) coats of catalyzed varnish applied.

G. Locker Doors:
   1. Doors to be welded from two (2) pieces of minimum 18-gauge cold rolled steel box formed and welded together using modern GMAW techniques. Single-piece door with inner and outer door panels shall have a combined steel thickness of no less than 0.096 inches thick. Welded door design with inner panel optimizes structural integrity of locker door system over and above any single frame door design.
   2. Exterior door panel shall be constructed with formed flanges and return flanges to add stiffness.
   3. Inner door panel shall be constructed with formed flanges for added stiffness, and 70% of external door panel height.
   4. Provide standard louvered air vents for natural ventilation.
   5. Provide louvered air vents in drawer front when built-in bench drawer for natural ventilation.
   6. All doors shall have neoprene silencers on each door for noise reduction.
   7. Hinge: 16-gauge full length hinge spot welded to door frame at 6 inch intervals.
   8. Locking Mechanism: Provide hasp for padlock by Owner.
   9. Locker Tag Numbers: Provide locker numbers on each locker per customer requirement.

H. Interior Accessories:

1. All interior components to be constructed of minimum 18-gauge steel and secured utilizing blind rivets, threaded fasteners, or bending specially designed tab.
2. Provide per each locker:
    a. Two (2) full-width heavy-duty shelves.
    b. One (1) hanger-bar assembly kit.
    c. One (1) Inside body armor drying rack.

2.2 SECURED WEAPONS STORAGE CABINETS

A. Basis of Design: Free standing Secured Weapons Storage Cabinet, model number UWRC4284 as manufactured by Spacesaver Corporation; www.spacesaver.com/products/weapons-storage/floor-mounted-gun-lockers/

B. Type: Secured weapons storage cabinet to be installed floor mounted with anti-tipping wall attachment.

C. Description: Cabinet shall be a one-piece assembly with outside nominal dimensions of 42 inches wide by 84 inches high by 16.25” deep.
1. Cabinet Construction: 18-gauge double-walled upright posts welded to 18-gauge flat plate steel sidewalls and back walls with diamond mesh perforations.
2. Top and bottom covers shall be made of 16-gauge steel welded to the upright posts.
3. Cabinet doors shall be heavy-duty 18-gauge, folding and fully retractable in the open position. The cabinet doors shall also include a diamond mesh perforation for visibility as well as rotating locking bars for security.
4. Locking bars shall lock at a single common point.
5. Base:: 16-gauge steel with standard universal stock cups.
6. Finish: shall be factory applied electrostatic powder coat paint, selected by Architect from manufacturer's standard colors..

D. Weapons Rack Support: Provide manufacturer’s standard support rails, back panel kit with individual stock and barrel supports

PART 3 EXECUTION

3.1 INSTALLATION

A. Install following manufacturer’s written instructions for installation of each type of locker and accessory item specified.

B. Remove any components that are chipped, scratched, or otherwise damaged and which do not match adjoining work. Replace with new matching units, installed as specified and in manner to eliminate evidence of replacement.

C. Verify accessory unit alignment and plumb after installation. Correct if required, following manufacturer’s instructions.

D. Adjust all accessories to provide smoothly operating, visually acceptable installation.

E. Schedule and conduct user demonstration maintenance training with Owner's maintenance personnel. Training session should include lecture and demonstration of all maintenance and repair procedures that end-user personnel would normally perform.

3.2 CLEANING

A. Clean locker interiors and exterior surfaces.

END OF SECTION

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SECTION 22 14 29
SUMP PUMPS

PART 1 - GENERAL

1.1 RELATED WORK

A. The requirements of Division 00 – Procurement, Contracting and Warranty Requirements, Division 01 - General Requirements and Section 22 00 10 - Plumbing General Provisions are applicable to work required of this section.

1.2 DESCRIPTION OF WORK

A. Extent of plumbing equipment work is indicated on drawings and provisions of this section, including schedules and equipment lists associated with either drawings or this section.

B. Types of plumbing equipment required for project include the following:

1. Sump Pumps

1.3 QUALITY ASSURANCE

A. UL and NEMA Compliance: Provide electric motors and electrical components required as part of plumbing equipment, which have been listed and labeled by Underwriters Laboratories and comply with NEMA standards.

B. NEC Compliance: Comply with National Electrical Code (ANSI/NFPA 70) as applicable to installation and electrical connections of ancillary electrical components of plumbing equipment.

1.4 SUBMITTALS

A. Product Data: Submit manufacturer's plumbing equipment specifications, installation and start-up instructions, and capacity and ratings, with selection points clearly marked.

B. Shop Drawings: Submit assembly type shop drawings indicating dimensions, weights, required clearances, and methods of assembly of all components.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Vertical Shaft Sump Pumps

1. Weil Pump Co.
2. Myers Pumps, Inc.
3. Zoeller
4. Stancor Pumps
5. Aurora/Hydromatic Pumps, Inc.

B. Downspout Nozzles

1. Jay R. Smith
2. Josam
3. Wade
4. Zurn
5. Watts

2.2 SUMP PUMPS

A. Vertical Shaft Sump Pumps

1. General: Provide vertical shaft sump pumps as indicated, of size and capacity as scheduled.
2. Pump: Cast-iron shell, cast iron impeller, stainless steel shaft, factory sealed grease lubricated ball bearings, ceramic mechanical seal, and stainless steel strainer.
3. Motor: Vertical solid shaft with electrical characteristics as scheduled.
4. Controls: Provide as scheduled.

2.3 PIPE:

	Material	Service
A.	Polyvinyl Chloride Pipe (PVC) Schedule 40 DWV, ASTM D1785 and ASTM D2665.	Sump pump inlet and discharge lines.

2.4 FITTINGS:

A. PVC DWV pipe fittings: ASTM D2665 DWV Schedule 40 socket type. Provide fittings produced and recommended for the service indicated by manufacturer of piping.

2.5 JOINTS

A. PVC DWV pipe: Solvent cement in accordance with ASTM D2564.

PART 3 - EXECUTION

3.1 INSTALLATION OF SUMP PUMPS

A. Sump Pumps

1. General: Install submersible sump pumps as indicated, in accordance with manufacturer's installation instructions, and in compliance with applicable code.
2. Pump: Set pump in sump. Connect discharge piping with check valve and union.
3. Electrical: Plug pump cord into electrical receptacle. Refer to Division 26 for power wiring; not work of this section.

3.2 INSTALLATION OF BASIC MATERIALS AND PRODUCTS

A. General: Install basic materials and products as per manufacturers' recommendations, Uniform and International Plumbing Codes, local code requirements and as required to meet system pressure and performance requirements.

B. Valves

1. Refer to Section 22 05 23 - General Duty Valves for Plumbing Piping.
2. Locate valves for easy access and operation. Do not locate valves with stems below horizontal.
3. Shutoff Valves: Install where indicated.
4. Check Valves: Install on discharge side of each pump, and elsewhere as indicated.

C. Piping Specialties: Refer to Section 22 05 00 - Common Work Results for Plumbing.

D. Supports, Anchors and Seals: Refer to Section 22 05 29 – Hangers and Supports for Plumbing Piping and Equipment.

3.3 SUMP PUMP PIPING

A. Install pipe as indicated on drawings, as called for in other sections, and as specified herein.

B. Arrange and install piping approximately as indicated; straight, plumb, and as direct as possible; form right angles on parallel lines with building walls. Keep pipes close to walls and avoid interference with other trades. Locate groups of pipes parallel to each other; space at a distance to permit applying full insulation and to permit access for servicing valves. Most piping to be run in concealed locations unless indicated exposed, or in equipment rooms. Locate piping to avoid ductwork.

C. Install horizontal piping as high as possible without sags or humps so that proper grades can be maintained for drainage.

D. Check all piping for interference with other trades; avoid placing water pipes over electrical equipment.

E. Pipes built into masonry or concrete construction shall be wrapped with tar paper or burlap to prevent bonding to the concrete.

F. No pipe shall be located in an outside wall or other location where freezing is likely to occur.

G. No pipe shall be in contact with, or attached to, a structural member in a manner that causes the transmission of noise to the structure. Block ends of runs to prevent movement due to water hammer.

H. Install storm water piping pitched to drain at minimum slope of 1/4" per foot (2%) for piping 3" and smaller and 1/8" per foot (1%) for piping 4" and larger.

3.4 TESTING

A. General: New sump pump discharge piping shall be tested and proved tight under a static pressure of 1.5x pump discharge head. The pressure shall be maintained for (4) four hours.

END OF SECTION 22 14 29

SECTION 32 92 00

TREES, SHRUBS, AND OTHER PLANTINGS

PART 1 GENERAL

1.1 SCOPE

A. These specifications, along with contract drawings and lists of plant materials, apply to those items necessary for and incidental to the preparation, execution, completion and maintenance of the landscape planting activities (excluding lawn areas) specified in the contract. The scope includes the planting of trees, shrubs, perennials, and grasses, and the maintenance activities of fertilizing, pruning and watering.

1.2 RELATED WORK

A. Applicable provisions of Division 1 govern work under this Section.

B. Section 02 20 00 – General Sitework Requirements

C. Section 31 10 00 – Site Clearing

D. Section 31 13 16 – Tree Protection

E. Section 31 20 00 – Earthmoving

F. Section 31 25 00 – Erosion Control

G. Section 32 91 19 – Topsoil-Select Fill Materials and Application

H. Section 32 92 19 – Seeding and Sodding

1.3 REFERENCE STANDARDS

A. *American Standards for Nursery Stock, ANSI Z60.1*, current edition. American Association of Nurserymen, Inc.

B. *Standardized Plant Names, Second Edition* (1942). American Joint Committee on Horticulture Nomenclature, Horace McFarland Company, Harrisburg, PA.

C. *American National Standard for Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance-Standard Practices, ANSI A300*, current edition.

D. Where reference is made to the “Geotechnical Report”, it shall be construed to mean the geotechnical report in Section 02 32 00.

1.4 QUALITY ASSURANCE

A. All plant material shall conform to the *American Standards for Nursery Stock*, unless noted otherwise herein.

B. All plant material shall be true to the species and variety/hybrid/cultivar specified, and nursery-grown in accordance with good horticultural practices, and under climatic conditions similar to those of the site location. Specimens’ nursery-dug to be replanted shall have been freshly dug and properly prepared for planting.

C. Trees and Shrubs:

1. Shall be trained in development and appearance as to be superior in form, compactness and symmetry. Trees with multiple leaders, unless specified otherwise, and shrubs with damaged or cut mainstem(s), will be rejected.
2. With a damaged, cut or crooked leader, abrasion of bark, sunscald, frost crack, disfiguring knots, insects (including eggs and larvae) or insect damage, cankers/cankerous lesions or fungal mats, mold, prematurely-opened buds, or cuts of limbs over 3/4 inches (1.9 cm) in diameter that are not completely callused will be rejected.
3. Shall have healthy, well-developed root systems, and be free from physical damage or other hindrances to healthy growth.
4. Balled and burlapped plants shall be dug with solid balls of a diameter not less than that recommended by the *American Standards for Nursery Stock*, and of sufficient depth to include both fibrous and feeding roots. Balls shall be securely wrapped with burlap, and tightly bound with rope or twine. No plant shall be bound with rope or wire in such manner as to damage bark or break branches. The root flare should be within the top 2 inches (5.1 cm) of the soil ball. Balled and burlapped plants will not be accepted if the ball is dry, cracked, or broken before or during planting.

5. Containerized plants are to be well-established within the container, with a root system sufficiently developed to retain its shape and hold together when removed from the container. Soil within the container should be held together by the roots, in form and whole. Plants shall not be pot-bound, nor have kinked, circling, or bent roots.

D. Herbaceous perennials and grasses shall only be supplied from nurseries certified by state plant inspectors.

1.5 MEASUREMENT

A. Plants shall conform to the measurements specified within the contract documents. Specified height and spread dimensions will refer to the main body of the plant, and not from branch tip to branch tip. Plants meeting a specified measurement, but judged to lack the balance between height and spread characteristic of the species will be rejected.

B. Plants shall be measured when branches are in their normal position.

C. No plant shall be less than the minimum size specified, and no less than 50% of the plants shall be as large as the maximum size specified.

D. Caliper measurements shall be taken 54 inches (1.4 m) above ground level

E. Containerized shrubs shall be measured by height and width for conformity with the plant list

F. Herbaceous perennials and grasses shall be measured by pot size, not by top growth

G. All other measurements, such as number of canes, ball sizes, and quality designations, shall conform to *American Standards for Nursery Stock.*

1.6 SUBSTITUTIONS

A. The substitution of plant materials is not permitted unless authorized, in writing, by the Owner's Representative. If written proof is submitted by the Contractor that a plant of specified species, variety or size is unavailable, consideration will be given towards the nearest available size or variety, or towards an alternate species selection, with a corresponding adjustment of the contract price.

1.7 DELIVERY, STORAGE, AND HANDLING

A. The Contractor is to arrange for the acceptance and unloading of plants at the project site.

B. All plants are to be labeled by plant name and size. Labels shall be attached securely to all plants, bundles, and containers of plant materials when delivered. Labels shall be durable and legible, with information given in weather-resistant ink or embossed process lettering. The Owner should verify all plant labels, upon approval the plant labels shall be removed by the Contractor.

C. All plant materials, shipments and deliveries shall comply with current state and federal laws and regulations governing the inspection, shipping, selling and handling of plant stock. If required by law or regulation, a certificate of inspection, or a copy thereof, for injurious insects, plant diseases, and other plant pests shall accompany each shipment or delivery of plant material. The certificate shall bear the name(s) and address(es) of the source of the plant stock.

D. During transport, no plant shall be bound with rope or wire in a manner that damages trunks or breaks branches. Plants shall also not be dragged, lifted or pulled by the trunk, branches or foliage in a damaging way. No plant shall be thrown off of a truck or loader to the ground.

E. Prior to installation, all plants must be protected from sun and drying winds.

F. Containerized or balled and burlapped plants not being installed immediately must be kept in a shaded area, well-covered with wood chips, soil, or other approved material, and kept well-watered. Install all plants within three (3) days of delivery.

G. Fertilizer shall be delivered to the site in original, sealed containers, and stored in a waterproof space. Containers shall bear the manufacturer's name, analysis, trademark and guarantee as per standards of the Wisconsin Department of Agriculture.

H. Contractor shall protect all plants, lawns, and grass from damage at all times. Damaged plants, lawns or grass areas shall be replaced or treated as required to conform to specifications herein for fresh stock. Damage incurred as a result of replacement or installation operations shall be repaired by Contractor at no cost to Owner.

1.8 PLANTING SCHEDULE

A. Plants shall be installed as appropriate for that specific plant species to ensure healthy vigorous growth.

B. All plants shall be guaranteed to be in healthy and flourishing condition for one full year after installation and acceptance by the Owner.

C. Plants not thriving shall be replaced at no cost to the Owner. The contractor may suggest substitutions for replacement plants.

D. Replacement plants shall be guaranteed for one year after installation.

E. At any time during the guarantee period, the Contractor shall remove or replace, without cost to the Owner and within a specified planting period, all plants not in a healthy and flourish conditions as determined by the Owner.

1.9 MAINTENANCE

A. The Contractor shall maintain plantings and lawn for at least a period of 60 days, or until final acceptance from the Owner. The Contactor is responsible for adequately watering plants and lawn during this 60 day period.

B. Fertilizing: Any and all chemical applications are to be performed in accordance with current federal, state and local laws, through EPA-registered materials and application techniques, and performed under the supervision of a licensed certified applicator. Apply fertilizer to planted areas at the specified rate, and as per manufacturer's recommendations.

C. Watering: All plant materials installed under the contract shall be watered within the first 24 hours of initial planting and not less than twice weekly until final acceptance by the Owner. Water used shall be of sufficient quality for irrigation and free of materials harmful to plant growth.

D. Pesticide: Any use of pesticides during the contracted maintenance period, as determined by the Owner, shall utilize the minimum amount of approved pesticide needed to control pests on plant materials installed under the contract. Pesticide applications are to be performed in accordance with current federal, state and local laws, through EPA-registered materials and application techniques, and performed under the supervision of a licensed certified applicator. Apply at the specified rate, and as per manufacturer's recommendations.

PART 2 PRODUCTS

2.1 MATERIALS

A. Plant Materials: A complete list of plant materials, including a schedule of quantities, sizes, and other requirements, shall be included in the contract documents. If discrepancies occur between the printed plant list, and the contract drawings, the printed list will take precedent.

B. Topsoil: Naturally fertile, agricultural soil, capable of sustaining vigorous growth, of uniform composition throughout, without admixtures of subsoil, free of clay, stones larger than 1 inch (2.5 cm) in diameter, roots, trash and debris of any kind, supplied by Contractor at his/her expense, and subject to approval by the Owner's Construction Representative.

C. Planting Mixture: Material used in tamping around balls and roots during the planting operation shall be prepared on site by mixing two (2) parts topsoil, one (1) part sand and one (1) part compost. All mixing shall be done by mechanical means subject to the approval of the Owner's Construction Representative.

D. Fertilizer: Granular, non-burning product composed of not less than 50% organic slow-acting, guaranteed analysis professional fertilizer. Commercial fertilizer shall conform to Wisconsin State Statutes, Section 94.64, and meet the standards of the Wisconsin Department of Agriculture as to registration and labeling. Fertilizer shall be specified in the contract documents as to composition, but is subject to revision to suit project site conditions.

E. Shredded Hardwood Bark Mulch: Shredded hardwood bark mulch, free of material detrimental to healthy plant growth. Mulch shall be finely shredded, weed free, dye-free mulch

F. Stone Mulch: All planting areas labeled on plan shall receive Midwest Decorative Stone 1½-inch "American Heritage" stone mulch (or approved equal) spread to a minimum and consistent depth of 3 inches. Stone mulch areas shall receive woven weed barrier fabric.

PART 3 EXECUTION

3.1 INSPECTION

A. Topsoil: Refer to Topsoil-Select Fill Materials and Application Section specifications.

B. Verify that prepared soil base is ready to receive the work of this Section.

C. Beginning of installation means acceptance of existing site conditions.

3.2 PREPARATION OF SUBSOIL

A. Prepare subsoil to eliminate uneven areas and low spots. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.

B. Remove foreign materials, weeds, and undesirable plants and their roots. Remove any contaminated subsoil. Plants can be removed through application of glyphosphate. Follow manufacturer's instructions for proper use.

C. Scarify subsoil to a depth of 3 inches where topsoil is to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.

3.3 PLACING TOPSOIL

A. Refer to Topsoil-Select Fill Materials and Application Section specifications.

B. Spread any needed amendments per soil test and till soil to a depth of 3 to 4 inches. Ideal seed bed will be a combination of soil particles ranging from approximately a quarter inch to a full inch in size.

C. Topsoil compaction should be below 250 psi, if topsoil compactions are greater soil should be ripped, disced, or otherwise loosened to a depth of at least 12 inches.

3.4 PREPARATION

A. Stake all planting areas and notify Diggers Hotline (1-800-242-8511 statewide) to verify location of all underground utilities prior to excavation.

B. Excavate planting areas as shown in included specifications.

C. Adequately barricade with proper warning devices any planting pit left open when planting work is not in progress, and that poses a hazard to vehicles and/or pedestrians.

D. Maintain site housekeeping to provide for a safe and orderly project site. Collect and dispose of debris as they accumulate.

E. The planting pit for containerized and balled and burlapped plants shall be at least 2.5 to 3 times the diameter of the soil ball, or to a dimension otherwise specified.

F. The planting pit for a single shrub shall be 12 inches (30.5 cm) wider than the root ball.

G. Loosen the soil beyond the edge of the planting pit. The soil at the base of the planting pit is to remain undisturbed, the depth of which shall correspond to the distance from the bottom of the soil ball to the root flare, or slightly less.

H. Fence and/or box in all trees and plant material which are to remain at the drip line before work is started. Do not permit heavy equipment or stockpiles within branch spread. Remove interfering branches without injury to trunks, cover scars with tree paint.

I. For a shrub mass planting, the entire bed area is to be tilled to a depth of 4 to 6 inches (10.2 to 15.2 cm). Excavate individual shrub pits to the proper depth.

3.5 PLANTING OF TREES AND SHRUBS

A. Remove plant containers by cutting or carefully inverting the container. For plants grown in plastic containers slash the edges of the root ball from top to bottom with vertical 1-inch (2.5 cm) cuts using a sharp blade.

B. Root balled plants shall have rope, string, wire baskets, burlap and other wrapping material removed from the top half of the ball after the plant has been set in the hole. Remaining wrappings, other than those made from plastic or synthetic material, may be left around the bottom half of the ball.

C. Shrubs grown using root containment material shall have the containment bag removed prior to setting.

D. Set trees and shrubs straight and upright, and in the center of the planting hole and on the unexcavated base of the planting pit, with the most desirable face towards the most prominent view.

E. Root-balled shrubs are to be carried and set in the hole by the root ball.

F. Backfilling: Backfill pits with excavated soil. No soil in frozen or muddy condition shall be used for backfilling.

G. When pit is approximately two-thirds backfilled, tamp down and water to eliminate air pockets. After initial watering, add remainder of the soil to the top of pit, water without puddling, and firmly tamp without overcompacting. Form a 2- to 3-inch (5.1 to 7.6 cm) high saucer around the outer rim of the pit prior to mulching.

H. Shredded Hardwood Bark Mulch Planting Ring

1. Deciduous and evergreen trees planted in seeded or sodded lawn areas shall be installed with a minimum 4' diameter shredded hardwood bark mulch tree ring spread to a consistent depth of 4-inches. A pre-emergent granular herbicide weed-preventer shall be mixed with mulch along with a topically applied to completed installation of tree ring.
2. All shrubs planted in prairie seed mix areas shall be installed with a minimum 2' diameter shredded hardwood bark mulch tree ring spread to a consistent depth of 4-inches. A pre-emergent granular herbicide weed-preventer shall be mixed with mulch along with a topically applied to completed installation of tree ring.
3. Tree and shrub rings shall be installed with a 5" depth vertical shovel cut edge in the diameter specified.

I. All parking islands shall receive a minimum of 24 inches of topsoil.

3.6 PLANTING OF PERENNIALS, FORBS, AND GRASSES

A. Preparation: Loosen soil of the planting bed to a depth of 4 to 6 inches (10.2 to 15.2 cm) by mechanical or hand tilling while soil is dry. For bulbs, the depth of loosened soil will be determined by the type of bulb planted, and specified in the contract or landscape plan.

B. After soil is loosened, till organic material into the soil across the planting bed to a uniform depth of 2 inches (5.1 cm) for peat moss or 1 inch (2.5 cm) for compost.

C. Fertilizer, at amounts determined by the soil test, shall be topdressed to the soil.

D. Apply approved mulch uniformly across the entire planting bed to the depth specified.

E. Planting: Space as described in the landscape plan.

F. Unless otherwise specified, install plants no closer than 12 inches (30.5 cm) to the trunks of trees or shrubs within planting bed, and to within 6 inches (15.2 cm) of the edge of the bed.

G. Prior to planting, biodegradable plant containers shall be split and non-biodegradable containers removed. The root systems of all such plants shall be split or crumbled by hand.

~~H. All parking islands that contain perennials (not including bioinfiltration area) shall have a minimum of 18 inches of topsoil. These areas shall also have 3 inches of mushroom compost spread uniformly over the parking island and tilled into the top 6 inches of the soil.~~

3.7 FINISHING

A. Finish-grade planting areas to required elevations after plants have fully settled.

B. No soil is to cover the top of the root ball. All plants shall be completely mulched over the root system to a depth as specified immediately after planting. Pull back mulch no less than 3 inches (7.6 cm) and no more than 6 inches (15.2 cm) from the trunk.

C. Thoroughly water plants immediately after planting and before mulching, primarily within and filling the saucer.

D. Prune any dead or broken branches. Prune in accordance with NAA Guidelines conforming to the American Standard for Tree Care Operations. Prune shrubs in accordance with standard horticultural practices. On cuts of 3/4 inches in diameter and bruises or scars on bark, trace the inured cambium layer back to living tissues and remove. Smooth and shape wounds so as not to retain water and coat the treated area within approved antiseptic tree paint.

E. Remove all twine and rope after planting, along with any labels attached around trunks or branches.

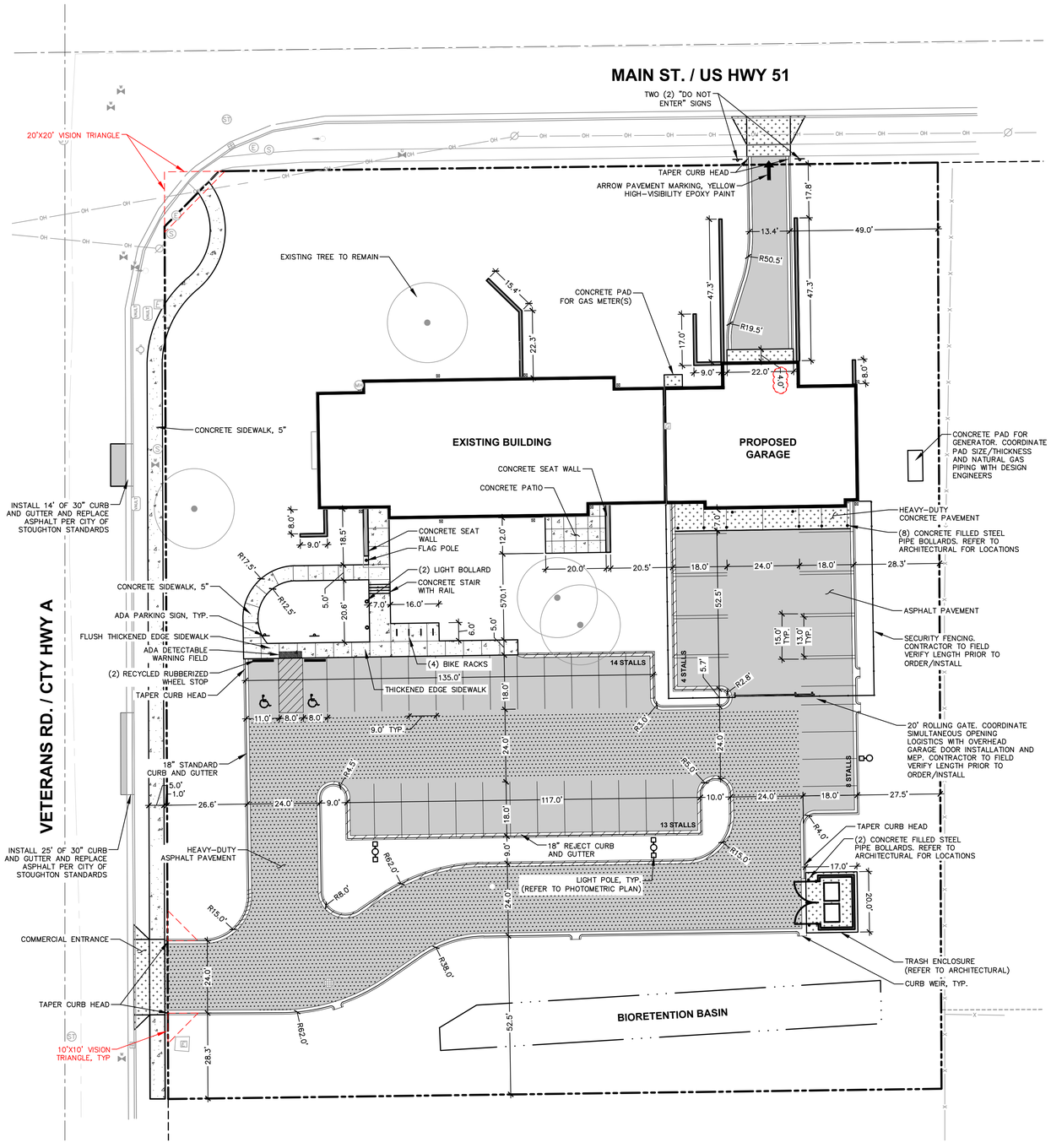
3.8 CLEANING

A. Dispose of excess soil. Remove all cuttings and waste materials.

B. Soil, branches, binding and wrapping material, rejected plants, or other debris resulting from plant installation shall be promptly cleaned up and removed. New landscape construction in and around the planting areas are to be especially well-cleaned.

C. Under no condition shall the accumulation of soil, branches or other debris be allowed upon a public property in such a manner as to result in a public hazard. Likewise, under no circumstances shall any debris or incidental materials be allowed upon adjacent private property.

END OF SECTION



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- BUILDING OUTLINE
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- STORMWATER MANAGEMENT AREA
- SEGMENTED BLOCK RETAINING WALL
- FENCE
- ADA PARKING SIGN
- CONCRETE BOLLARD
- LIGHT POLE (REFER TO PHOTOMETRIC PLAN)
- LIGHT BOLLARD

SITE INFORMATION BLOCK

SITE ADDRESS	125 VETERANS RD.
PROPERTY ACREAGE	1.80 ACRES
NUMBER OF BUILDING STORIES	1
BUILDING SQUARE FOOTAGE (W/ PROPOSED GARAGE)	7,839 SF
NUMBER OF PARKING STALLS	
REQUIRED PARKING (ORDINANCE SECTION 78-206(3)(e)	
ONE SPACE PER EMPLOYEE ON LARGEST WORK SHIFT	18
ONE SPACE PER COMPANY VEHICLE STORED ON SITE	10
ONE SPACE PER 500 GSF OFFICE AREA 5,050 SF/500	10
TOTAL REQUIRED	38
PROPOSED PARKING	
STANDARD	29
ACCESSIBLE	2
EXTERIOR (SECURED) SQUAD VEHICLES	8
INTERIOR SQUAD VEHICLES	4
TOTAL PROVIDED	43
NUMBER OF BICYCLE STALLS:	4
EXISTING VS. PROPOSED SITE COVERAGE	
EXISTING IMPERVIOUS SURFACE AREA	16,229 SF
EXISTING PERVIOUS SURFACE AREA	62,181 SF
EXISTING IMPERVIOUS SURFACE AREA RATIO	0.21
PROPOSED IMPERVIOUS SURFACE AREA	30,744 SF
PROPOSED PERVIOUS SURFACE AREA	47,666 SF
PROPOSED IMPERVIOUS SURFACE AREA RATIO	0.39
NEW IMPERVIOUS AREA	14,515 SF
REDEVELOPMENT AREA (EXISTING ROOF 5,047 SF)	11,182 SF

GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY BY WILLIAMSON SURVEYING & ASSOCIATES, LLC DATED AUGUST 11, 2020 FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE ROW AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN AND MUNICIPAL REQUIREMENTS.
3. EXISTING GRADE SPOT ELEVATIONS SHOWN FOR INFORMATIONAL PURPOSES. DURING CONSTRUCTION MATCH EXISTING GRADES AT CONSTRUCTION LIMITS.
4. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
6. THE RIGHT-OF-WAY IS THE SOLE JURISDICTION OF THE CITY OF STOUGHTON AND IS SUBJECT TO CHANGE AT ANY TIME PER THE RECOMMENDATION/PLAN OF TRAFFIC ENGINEERING AND CITY ENGINEERING DEPARTMENTS. COORDINATE INSTALLATION WITH CITY OF STOUGHTON OFFICIALS.

PAVING NOTES

1. GENERAL

1.1. ALL PAVING SHALL CONFORM TO STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY & STRUCTURE CONSTRUCTION, LATEST EDITION, APPLICABLE CITY OF STOUGHTON ORDINANCES AND THE GEOTECHNICAL REPORT PREPARED BY CGC, INC.

1.2. ALL PAVING DIMENSIONS ARE TO FACE OF CURB UNLESS SPECIFIED OTHERWISE.

1.3. SURFACE PREPARATION – NOTIFY ENGINEER/OWNER OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.

1.4. ANY REQUIRED REPLACEMENT OF PUBLIC CURB AND GUTTER SHALL MATCH EXISTING AND MEET MUNICIPALITY REQUIREMENTS.

2. ASPHALT PAVING SPECIFICATIONS

2.1. CODES AND STANDARDS – THE PLACING, CONSTRUCTION AND COMPOSITION OF THE ASPHALTIC BASE COURSE AND ASPHALTIC CONCRETE SURFACE COURSE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460 AND 465 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. HEREAFTER, THIS PUBLICATION WILL BE REFERRED TO AS STATE HIGHWAY SPECIFICATIONS.

2.2. WEATHER LIMITATIONS – APPLY TACK COATS WHEN AMBIENT TEMPERATURE IS ABOVE 50° F (10° C) AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35° F (1° C) FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. DO NOT APPLY WHEN BASE IS WET OR CONTAINS EXCESS OF MOISTURE. CONSTRUCT ASPHALTIC CONCRETE SURFACE COURSE WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40° F (4° C) AND WHEN BASE IS DRY AND WHEN WEATHER IS NOT RAINY. BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30° F (−1° C).

2.3. GRADE CONTROL – ESTABLISH AND MAINTAIN REQUIRED LINES AND ELEVATIONS FOR EACH COURSE DURING CONSTRUCTION.

2.4. CRUSHED AGGREGATE BASE COURSE – THE TOP LAYER OF BASE COURSE SHALL CONFORM TO SECTIONS 301 AND 305, STATE HIGHWAY SPECIFICATIONS.

2.5. BINDER COURSE AGGREGATE – THE AGGREGATE FOR THE BINDER COURSE SHALL CONFORM TO SECTIONS 460 AND 315, STATE HIGHWAY SPECIFICATIONS.

2.6. SURFACE COURSE AGGREGATE – THE AGGREGATE FOR THE SURFACE COURSE SHALL CONFORM TO SECTIONS 460 AND 465, STATE HIGHWAY SPECIFICATIONS.

2.7. ASPHALTIC MATERIALS – THE ASPHALTIC MATERIALS SHALL CONFORM TO SECTION 455 AND 460, STATE HIGHWAY SPECIFICATIONS.

3. CONCRETE PAVING SPECIFICATIONS

3.1. CONCRETE PAVING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 415 AND 416 OF THE STATE HIGHWAY SPECIFICATIONS.

3.2. CONCRETE PAVEMENT SHALL BE REINFORCED WITH NOVOMESH 950 (OR EQUAL) FIBER REINFORCEMENT AT A RATE OF 5 LBS/CUBIC YARD.

3.3. CURING COMPOUNDS SHALL CONFORM TO SECTION 415 OF THE STATE HIGHWAY SPECIFICATIONS.

3.4. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AND CONSTRUCTION JOINTS OF ONE-QUARTER CONCRETE THICKNESS AT AN EQUAL RATIO OF LENGTH TO WIDTH WHEREVER POSSIBLE WITH A MAXIMUM LENGTH BETWEEN JOINTS OF 8' ON CENTER.

3.5. CONTRACTOR SHALL PROVIDE EXPANSION JOINTS IN SIDEWALKS AT A MAXIMUM 24' ON CENTER.

3.6. EXTERIOR CONCRETE SURFACES SHALL BE BROOM FINISHED.

3.7. ALL CONCRETE SURFACES TO BE SEALED WITH TYPE TK-26UV CONCRETE SEALANT.

4. PAVEMENT MARKING SPECIFICATIONS

4.1. USE 4" WIDE, HIGH VISIBILITY WHITE EPOXY PAINT FOR STALL LINES.

4.2. MARK AND STRIPE ADA PARKING SPACES APPROPRIATELY.

4.3. TRUNCATED DOME WARNING DETECTION FIELD SHALL BE PLACED AS SPECIFIED ON THE SITE PLAN.

north

SCALE IN FEET
20' 0 20'

DIGGERS HOTLINE
Toll Free (800) 242-8511

OPN ARCHITECTS
301 N BROOM STREET #100
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608-819-0260 PHONE
www.opnarchitects.com
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Owner

Department of Public Works and Transportation
www.publicworks.countyofdane.com/

Project

DANE COUNTY SHERIFF'S SE PRECINCT REMODEL

125 Veterans Road
Stoughton, WI 53589

JSD Professional Services, Inc.
Engineers • Surveyors • Planners

CREATE THE VISION | TELL THE STORY

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MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
P. 608.848.5060

Sheet Issue Date

CONSTRUCTION DRAWINGS	FEBRUARY 2, 2021

Revisions

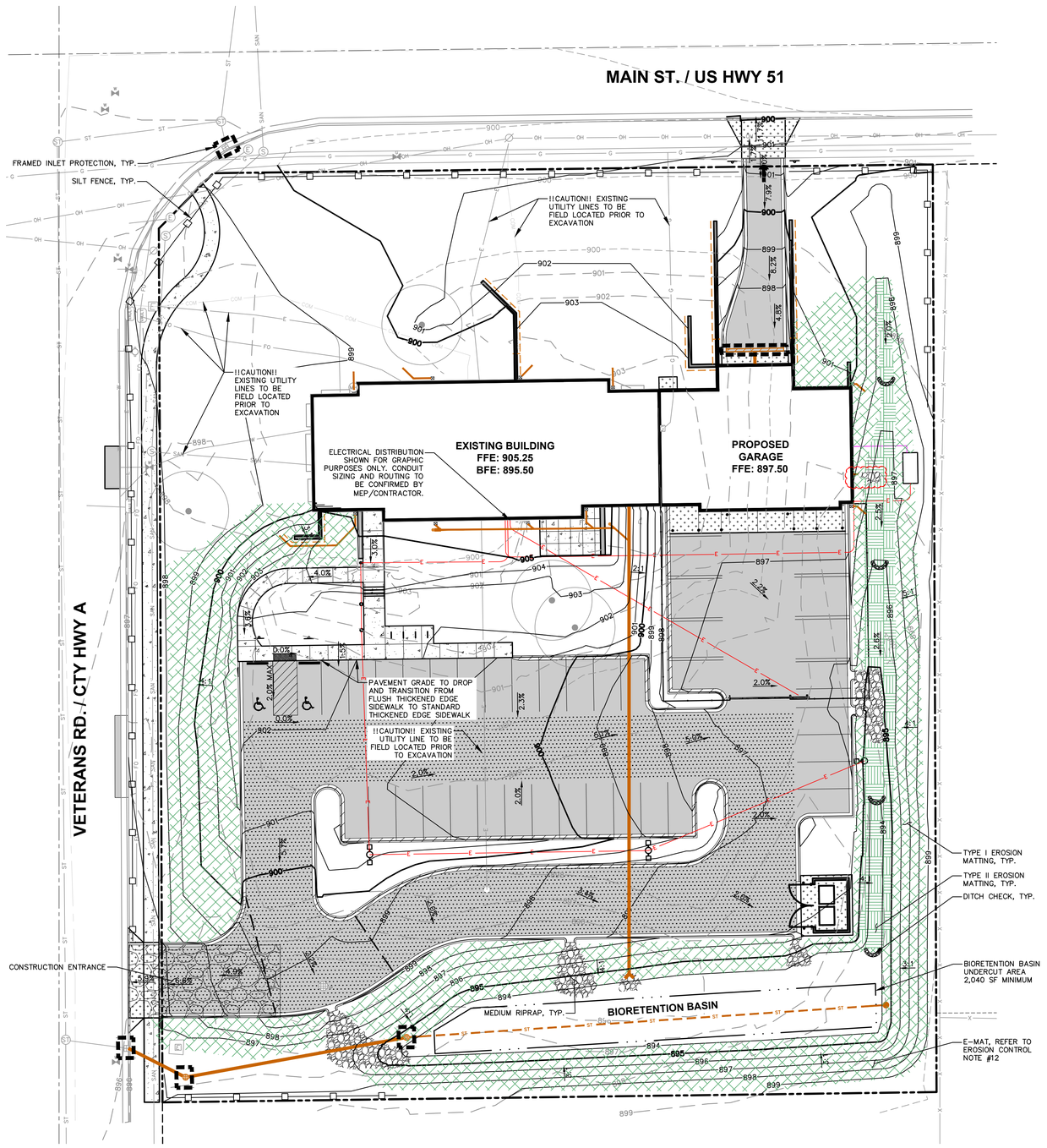
2	ADDENDUM 02	MARCH 9, 2021

Drawing

SITE PLAN

OPN Project No. **20628000**

C2.0



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- HEAVY DUTY CONCRETE PAVEMENT
- RETAINING WALL
- FENCE
- ADA PARKING SIGN
- CONCRETE BOLLARD
- 959 PROPOSED 1 FOOT CONTOUR
- 960 PROPOSED 5 FOOT CONTOUR
- 959 EXISTING 1 FOOT CONTOUR
- 960 EXISTING 5 FOOT CONTOUR
- DRAINAGE DIRECTION
- GRADE BREAK
- BIORETENTION BASIN
- SILT FENCE
- RIP-RAP
- STORM SEWER
- ST STORM SEWER UNDERDRAIN
- E UNDERGROUND ELECTRIC
- G UNDERGROUND GAS
- CONSTRUCTION ENTRANCE
- TYPE 1 EROSION MATTING (REFER TO EC NOTES)
- TYPE 2 EROSION MATTING (REFER TO EC NOTES)
- DITCH CHECK
- FRAMED INLET PROTECTION

CONSTRUCTION SEQUENCING

1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCE.
2. STRIP AND STOCKPILE TOPSOIL, INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. ROUGH GRADE BIORETENTION BASIN AND INSTALL BASIN OUTLET.
4. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS WITHIN DRAINAGE DITCHES AS NEEDED.
5. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
6. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
7. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROL MEASURES AS INDICATED ON PLANS.
8. RESTORE BIORETENTION BASIN (FINAL GRADE RETENTION BASIN PER PLAN REQUIREMENTS)
9. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED AND/OR 70% VEGETATIVE COVER IS ESTABLISHED.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM NO. 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

EROSION CONTROL NOTES

1. CONTRACTOR IS RESPONSIBLE TO NOTIFY ENGINEER OF RECORD AND OFFICIALS OF ANY CHANGES TO THE EROSION CONTROL AND STORMWATER MANAGEMENT PLANS. ENGINEER OF RECORD AND APPROPRIATE CITY OF STOUGHTON OFFICIALS MUST APPROVE ANY CHANGES PRIOR TO DEVIATION FROM THE APPROVED PLANS.
2. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) TECHNICAL STANDARDS (REFERRED TO AS BMP'S) AND CITY OF STOUGHTON ORDINANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THESE STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL EROSION CONTROL MEASURES WHICH MAY BE NECESSARY TO MEET UNFORESEEN FIELD CONDITIONS.
3. INSTALL PERIMETER EROSION CONTROL MEASURES (SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING INLET PROTECTION) PRIOR TO ANY SITE WORK, INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE COVER, AS SHOWN ON PLAN. MODIFICATIONS TO THE APPROVED EROSION CONTROL DESIGN IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS IS ALLOWED IF MODIFICATIONS CONFORM TO BMP'S. ALL DESIGN MODIFICATIONS MUST BE APPROVED BY THE CITY OF STOUGHTON PRIOR TO DEVIATION OF THE APPROVED PLAN.
4. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED BY STATE INSPECTORS, LOCAL INSPECTORS, COUNTY INSPECTORS AND/OR ENGINEER OF RECORD SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.
5. INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE ROUTINE (ONCE PER WEEK MINIMUM) TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY.
6. ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE INSPECTED WITHIN 24 HOURS OF ALL RAIN EVENTS EXCEEDING 0.5 INCHES. ANY DAMAGED EROSION CONTROL MEASURES SHALL BE REPAIRED OR REPLACED IMMEDIATELY UPON INSPECTION.
7. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL LOCATIONS OF VEHICLE INGRESS/EGRESS POINTS. ADDITIONAL LOCATIONS OTHER THAN AS SHOWN ON THE PLANS MUST BE PRIOR APPROVED BY THE MUNICIPALITY. CONSTRUCTION ENTRANCES SHALL BE 50' LONG AND NO LESS THAN 12" THICK BY USE OF 3" CLEAR STONE. CONSTRUCTION ENTRANCES SHALL BE MAINTAINED BY THE CONTRACTOR IN A CONDITION WHICH WILL PREVENT THE TRACKING OF MUD OR DRY SEDIMENT ONTO ADJACENT PUBLIC STREETS AFTER EACH WORKING DAY OR MORE FREQUENTLY AS REQUIRED.
8. PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEPT AND/OR SCRAPED TO REMOVE ACCUMULATED SOIL, DIRT AND/OR DUST AFTER THE END OF EACH WORK DAY AND AS REQUESTED BY THE CITY OF STOUGHTON.
9. INLET PROTECTION SHALL BE IMMEDIATELY FITTED AT THE INLET OF ALL INSTALLED STORM SEWER AND SILT FENCE SHALL BE IMMEDIATELY FITTED AT ALL INSTALLED CULVERT INLETS TO PREVENT SEDIMENT DEPOSITION WITHIN STORM SEWER SYSTEMS.
10. DITCH CHECKS AND APPLICABLE EROSION NETTING/MATTING SHALL BE INSTALLED IMMEDIATELY AFTER COMPLETION OF GRADING EFFORTS WITHIN DITCHES/SWALES TO PREVENT SOIL TRANSPORTATION.
11. EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.):
    A. PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
    B. BACKFILL, COMPACT, AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
    C. DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH THE DEWATERING TECHNICAL STANDARD NO. 1061 PRIOR TO RELEASE INTO THE STORM SEWER, RECEIVING STREAM, OR DRAINAGE DITCH.
12. ALL SLOPES 4:1 OR GREATER SHALL BE STABILIZED WITH CLASS I, TYPE B EROSION MATTING OR APPLICATION OF A WISCONSIN DEPARTMENT OF TRANSPORTATION (WisDOT) APPROVED POLYMER SOIL STABILIZATION TREATMENT OR A COMBINATION THEREOF, AS REQUIRED WITHIN 7 DAYS OF REACHING FINAL GRADE AND/OR AS SOON AS CONDITIONS ALLOW. DRAINAGE SWALES SHALL BE STABILIZED WITH CLASS II, TYPE B EROSION MATTING. EROSION MATTING AND/OR NETTING USED ONSITE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND WDNR TECHNICAL STANDARDS 1052 AND 1053.
13. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO CONTROL DUST ARISING FROM CONSTRUCTION OPERATIONS. REFER TO WDNR TECHNICAL STANDARD 1068.
14. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL ALL LAND DISTURBING CONSTRUCTION ACTIVITY AT THE SITE HAS BEEN COMPLETED AND THAT A UNIFORM PERENNIAL VEGETATIVE COVER HAS BEEN ESTABLISHED WITH A DENSITY OF AT LEAST 70% FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES OR THAT EMPLOY EQUIVALENT PERMANENT STABILIZATION MEASURES.
15. CONTRACTOR/OWNER SHALL FILE A NOTICE OF TERMINATION UPON COMPLETION OF THE PROJECT IN ACCORDANCE WITH WDNR REQUIREMENTS AND/OR PROPERTY SALE IN ACCORDANCE WITH WDNR REQUIREMENTS.
16. STABILIZATION PRACTICES:
    - 16.1. *STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. NO MORE THAN SEVEN (7) DAYS SHALL PASS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS CEASED UNLESS:
    - 16.2. *THE INITIATION STABILIZATION MEASURES BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS CEASED IS PRECLUDED BY SNOW COVER. IN THAT EVENT, STABILIZATION SHALL BE INITIATED AS SOON AS PRACTICABLE.
    - 16.3. *CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN FOURTEEN (14) DAYS FROM WHEN ACTIVITY CEASED, (I.E. THE TOTAL TIME PERIOD THAT THE CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN FOURTEEN (14) DAYS, IN THAT EVENT, STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED.
    - 16.4. *STABILIZATION MEASURES SHALL BE DETERMINED BASED ON SITE CONDITIONS AT THE TIME OF CONSTRUCTION ACTIVITY HAS CEASED, INCLUDING BUT NOT LIMITED TO WEATHER CONDITIONS AND LENGTH OF TIME MEASURE MUST BE EFFECTIVE. THE FOLLOWING ARE ACCEPTABLE STABILIZATION MEASURES:
    - * PERMANENT SEEDING; IN ACCORDANCE WITH APPROVED CONSTRUCTION SPECIFICATION
    - * TEMPORARY SEEDING; MAY CONSIST OF OATS (131LBS/ACRE) FOR SUMMER SEEDING AND/OR WINTER WHEAT OR CEREAL RYE (131LB/ACRE) FOR FALL SEEDING
    - * HYDRO-MULCHING WITH A TACKIFIER
    - * GEOTEXTILE EROSION MATTING
    - * SODDING

GRADING AND SEEDING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL GRADES, MAKE SURE ALL AREAS DRAIN PROPERLY AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR COMPUTATIONS OF ALL GRADING QUANTITIES. WHILE JSD PROFESSIONAL SERVICES, INC. ATTEMPTS TO PROVIDE A COST EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARDS OF CARE. THEREFORE, NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.
3. PARKING LOT AND DRIVEWAY ELEVATIONS ARE PAVEMENT GRADES, NOT TOP OF CURB GRADES, UNLESS OTHERWISE NOTED.
4. ANY WORK WITHIN RIGHT-OF-WAY SHALL BE PROPERLY PERMITTED AND COORDINATED WITH THE APPROPRIATE OFFICIALS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. ALL GRADING WITHIN RIGHT-OF-WAY IS SUBJECT TO APPROVAL BY SAID OFFICIALS.
5. CONTRACTOR SHALL PROVIDE NOTICE TO THE MUNICIPALITY IN ADVANCE OF ANY SOIL DISTURBING ACTIVITIES, IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
6. ALL DISTURBED AREAS SHALL BE SODDED AND/OR SEEDED AND MULCHED IMMEDIATELY FOLLOWING GRADING ACTIVITIES. SOD/SEED MIX TO BE IN ACCORDANCE WITH LANDSCAPE PLAN.
7. CONTRACTOR SHALL CHISEL-PLOW OR DEEP TILL WITH DOUBLE TINES ALL STORMWATER MANAGEMENT FACILITIES JUST PRIOR TO SODDING AND/OR SEEDING AND MULCHING TO PROMOTE INFILTRATION.
8. CONTRACTOR SHALL WATER ALL NEWLY SODDED/SEEDED AREAS DURING THE SUMMER MONTHS WHENEVER THERE IS A 7 DAY LAPSE WITH NO SIGNIFICANT RAINFALL.
9. CONTRACTOR TO DEEP TILL ALL COMPACTED PERVIOUS SURFACES PRIOR TO SODDING AND/OR SEEDING AND MULCHING.
10. ALL SLOPES 20% OR GREATER SHALL BE TEMPORARY SEEDED, MULCHED, OR OTHER MEANS OF COVER PLACED ON THEM WITHIN 2 WEEKS OF DISTURBANCE.
11. ALL EXPOSED SOIL AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 30 DAYS AND REQUIRE VEGETATIVE COVER FOR LESS THAN 1 YEAR, REQUIRE TEMPORARY SEEDING FOR EROSION CONTROL. SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1059 AND CITY OF STOUGHTON ORDINANCE.

north

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Project

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Sheet Issue Date

CONSTRUCTION DRAWINGS	FEBRUARY 2, 2021

Revisions

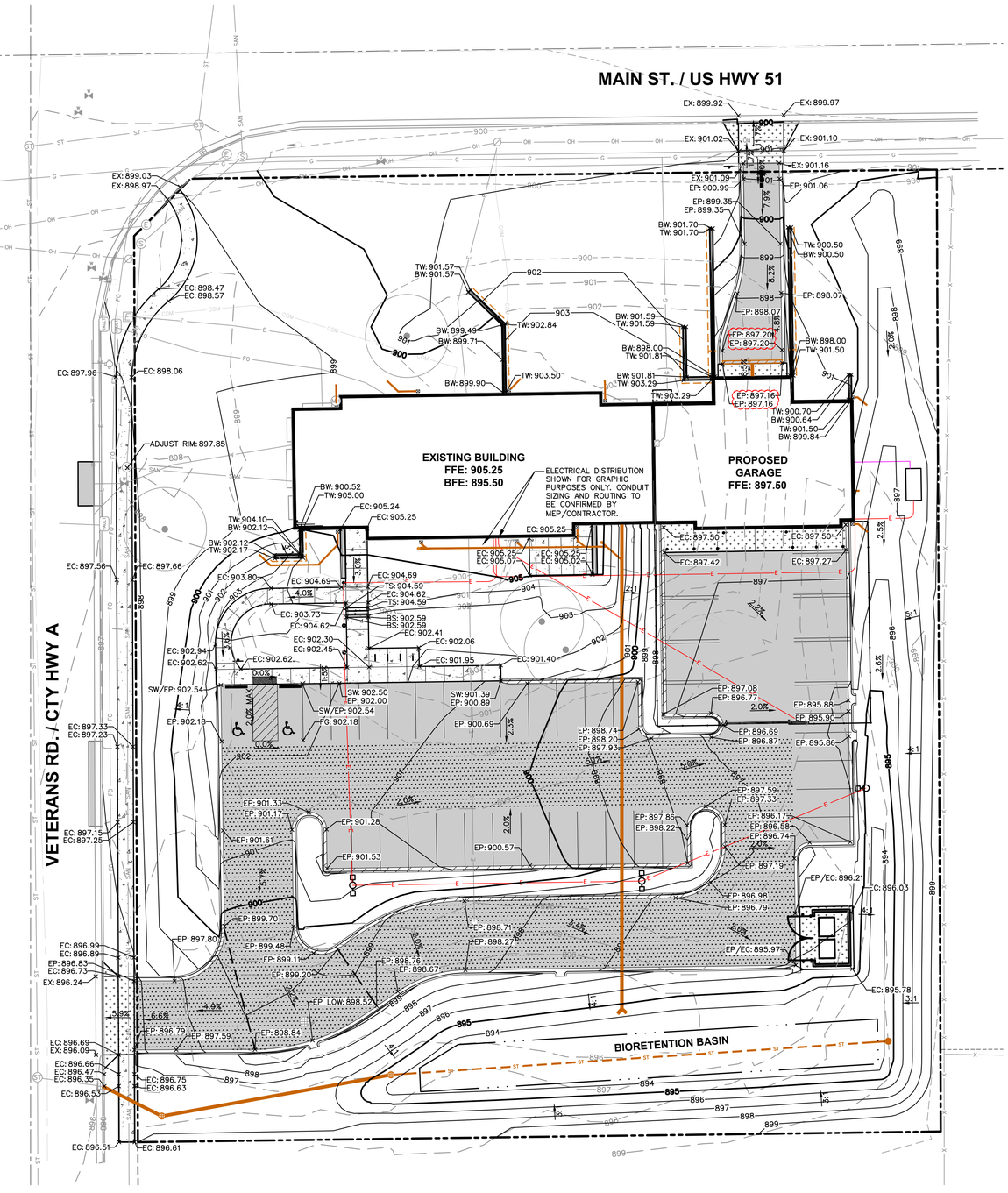
2 ADDENDUM 02	MARCH 9, 2021

Drawing

GRADING & EROSION CONTROL PLAN

OPN Project No. 20628000

C3.0



LEGEND

- PROPERTY LINE
- RIGHT–OF–WAY
- BUILDING OUTLINE
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- RETAINING WALL
- FENCE
- ADA PARKING SIGN
- CONCRETE BOLLARD
- 959 PROPOSED 1 FOOT CONTOUR
- 960 PROPOSED 5 FOOT CONTOUR
- 959 EXISTING 1 FOOT CONTOUR
- 960 EXISTING 5 FOOT CONTOUR
- DRAINAGE DIRECTION
- GRADE BREAK
- BIORETENTION BASIN
- SILT FENCE
- RIP–RAP
- STORM SEWER
- ST STORM SEWER UNDERDRAIN
- E UNDERGROUND ELECTRIC
- G UNDERGROUND GAS
- FG: 896.43 SPOT ELEVATION

EP – EDGE OF PAVEMENT
FG – FINISH GRADE
EC – EDGE OF CONCRETE
EX – MATCH EXISTING GRADE
HP – HIGH POINT
SW – SIDEWALK
TW – TOP OF WALL
BW – BOTTOM OF WALL
TS – TOP STEP
BS – BOTTOM OF STEP

CONSTRUCTION SEQUENCING

1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCE.
2. STRIP AND STOCKPILE TOPSOIL, INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. ROUGH GRADE BIORETENTION BASIN AND INSTALL BASIN OUTLET.
4. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS WITHIN DRAINAGE DITCHES AS NEEDED.
5. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
6. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
7. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROL MEASURES AS INDICATED ON PLANS.
8. RESTORE BIORETENTION BASIN (FINAL GRADE RETENTION BASIN PER PLAN REQUIREMENTS)
9. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED OR 70% VEGETATIVE COVER IS ESTABLISHED.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM NO. 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

GRADING AND SEEDING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL GRADES, MAKE SURE ALL AREAS DRAIN PROPERLY AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR COMPUTATIONS OF ALL GRADING QUANTITIES. WHILE JSD PROFESSIONAL SERVICES, INC. ATTEMPTS TO PROVIDE A COST EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARDS OF CARE. THEREFORE, NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.
3. PARKING LOT AND DRIVEWAY ELEVATIONS ARE PAVEMENT GRADES, NOT TOP OF CURB GRADES, UNLESS OTHERWISE NOTED.
4. ANY WORK WITHIN RIGHT–OF–WAY SHALL BE PROPERLY PERMITTED AND COORDINATED WITH THE APPROPRIATE OFFICIALS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. ALL GRADING WITHIN RIGHT–OF–WAY IS SUBJECT TO APPROVAL BY SAID OFFICIALS.
5. CONTRACTOR SHALL PROVIDE NOTICE TO THE MUNICIPALITY IN ADVANCE OF ANY SOIL DISTURBING ACTIVITIES, IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
6. ALL DISTURBED AREAS SHALL BE SODDED AND/OR SEEDED AND MULCHED IMMEDIATELY FOLLOWING GRADING ACTIVITIES. SOD/SEED MIX TO BE IN ACCORDANCE WITH LANDSCAPE PLAN.
7. CONTRACTOR SHALL CHISEL–PLOW OR DEEP TILL WITH DOUBLE TINES ALL STORMWATER MANAGEMENT FACILITIES JUST PRIOR TO SODDING AND/OR SEEDING AND MULCHING TO PROMOTE INFILTRATION.
8. CONTRACTOR SHALL WATER ALL NEWLY SODDED/SEEDED AREAS DURING THE SUMMER MONTHS WHENEVER THERE IS A 7 DAY LAPSE WITH NO SIGNIFICANT RAINFALL.
9. CONTRACTOR TO DEEP TILL ALL COMPACTED PERVIOUS SURFACES PRIOR TO SODDING AND/OR SEEDING AND MULCHING.
10. ALL SLOPES 20% OR GREATER SHALL BE TEMPORARY SEEDED, MULCHED, OR OTHER MEANS OF COVER PLACED ON THEM WITHIN 2 WEEKS OF DISTURBANCE.
11. ALL EXPOSED SOIL AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 30 DAYS AND REQUIRE VEGETATIVE COVER FOR LESS THAN 1 YEAR, REQUIRE TEMPORARY SEEDING FOR EROSION CONTROL. SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1059 AND CITY OF STOUGHTON ORDINANCE.

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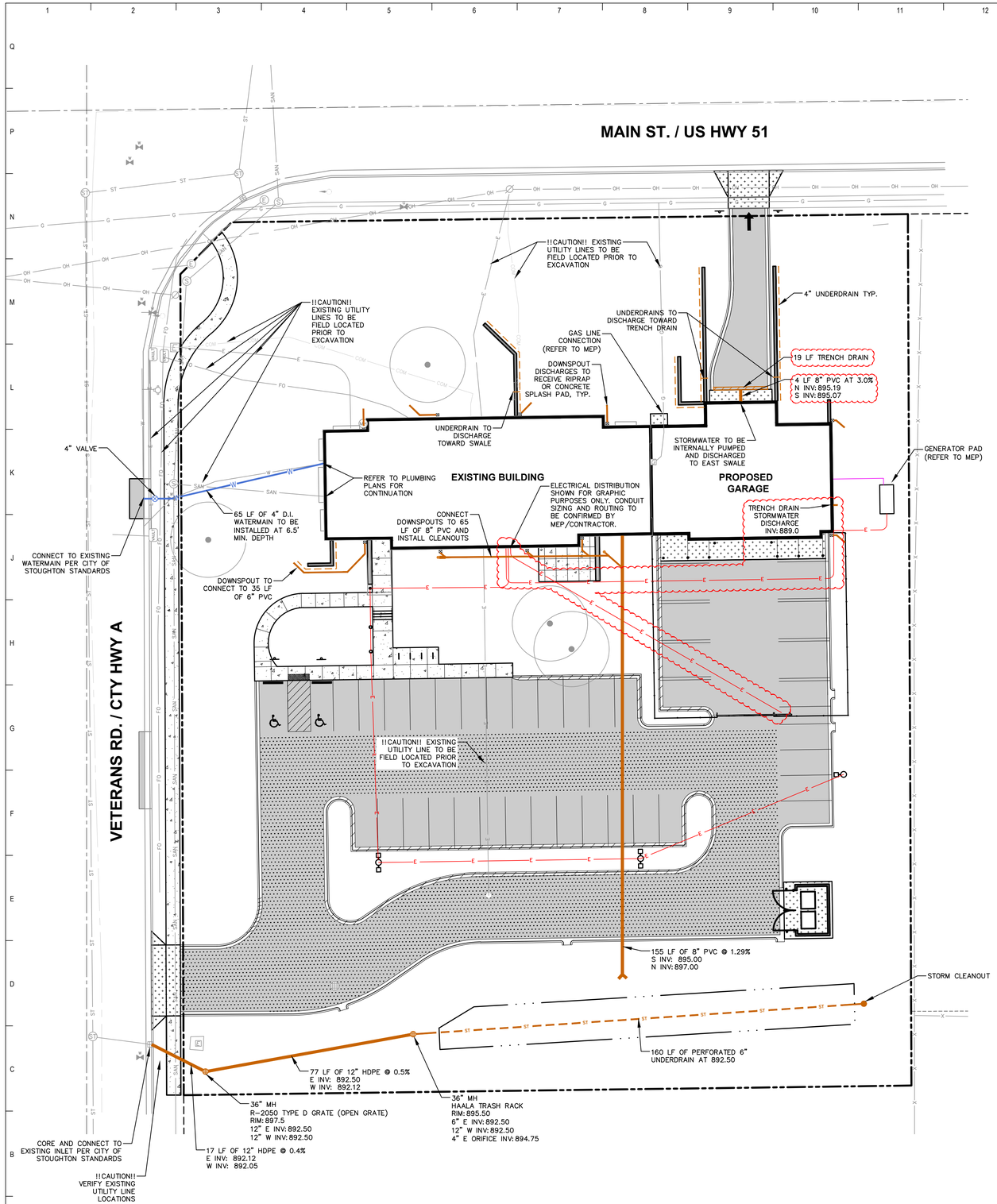
Drawing
DETAILED GRADING PLAN

OPN Project No. 20628000

C3.1



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- STORM SEWER UNDERDRAIN
- WATER SERVICE
- WATER VALVE
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS

UTILITY NOTES

1. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR:
   - EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   - VERIFYING ALL ELEVATIONS, LOCATIONS AND SIZES OF SANITARY, WATER AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS. NOTIFY ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   - NOTIFYING ALL UTILITIES PRIOR TO INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
   - COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
3. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN – AND ALL STATE AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE LOCAL AND STATE AUTHORITIES.
4. SPECIFICATIONS SHALL COMPLY WITH THE CITY OF STOUGHTON SPECIAL PROVISIONS.
5. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
7. CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVER NIGHT AS REQUIRED IN CONSTRUCTION SITES WHERE THE POTENTIAL FOR PEDESTRIAN INJURY EXISTS.
8. CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
9. THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
10. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED. IF REQUIRED, ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
12. STORM SEWER SPECIFICATIONS –

    PIPE – REINFORCED CONCRETE PIPE (RCP) SHALL MEET THE REQUIREMENTS OF ASTM CLASS III (MINIMUM) C-76 WITH RUBBER GASKET JOINTS CONFORMING TO ASTM C-443. HIGH DENSITY DUAL-WALL POLYETHYLENE CORRUGATED PIPE SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATER TIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M-294 TYPE "S".

    INLETS – INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FILE. NO. 28 OF THE "STANDARD SPECIFICATIONS", OR APPROVED EQUAL WITH A 1'-8" X 2'-6" MAXIMUM OPENING. CURB FRAME & GRATE SHALL BE NEENAH R-3067 WITH TYPE R GRATE, OR EQUAL.

    BACKFILL AND BEDDING – STORM SEWER SHALL BE CONSTRUCTED WITH GRAVEL BACKFILL AND CLASS "B" BEDDING IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".

    FIELD TILE CONNECTION – ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE(S) FOR STORM SEWER. TILE LINES CROSSED BY THE TRENCH SHALL BE REPLACED WITH THE SAME MATERIAL AS THE STORM SEWER.

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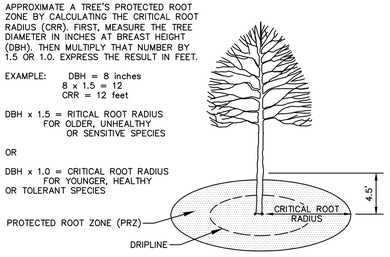
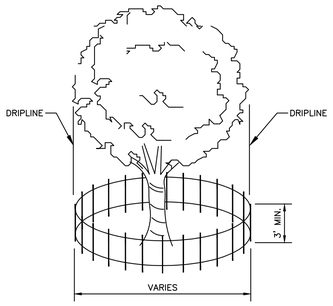
Drawing
UTILITY PLAN

OPN Project No. 20628000

C4.0





NOTE:
1. CONTRACTOR SHALL INSTALL TREE PROTECTION FENCING IN THE AREA SURROUNDING THE TREE WITHIN THE CRITICAL ROOT RADIUS

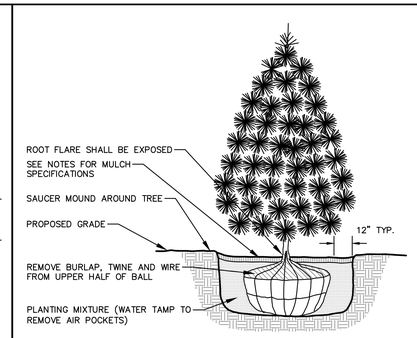
2. NO EXCAVATION IS PERMITTED WITHIN THE CRITICAL ROOT RADIUS

3. IF EXCAVATION WITHIN THE CRITICAL ROOT RADIUS OF ANY TREE IS NECESSARY, CONTRACTOR SHALL CONTACT CITY FORESTER PRIOR TO EXCAVATION TO ASSESS THE IMPACT TO THE TREE AND ROOT SYSTEM.

TREE PROTECTION DETAIL

N.T.S.

REV. 01-04-2019

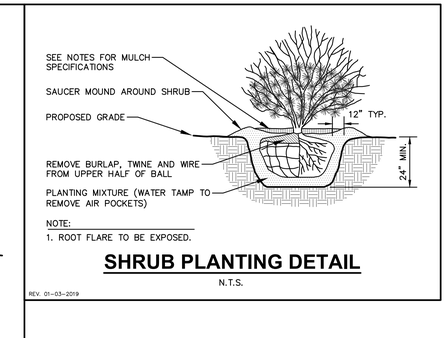


NOTE:
1. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE. ROOT BALL TO BE SET ON UNDISTURBED SOIL UNLESS COMPACTED AGGREGATE STONE REMAINS FROM SITE EXCAVATOR. REMOVE REMAINING AGGREGATE STONE UNTIL SOIL LAYER IS REACHED

EVERGREEN TREE PLANTING DETAIL

N.T.S.

REV. 01-03-2019

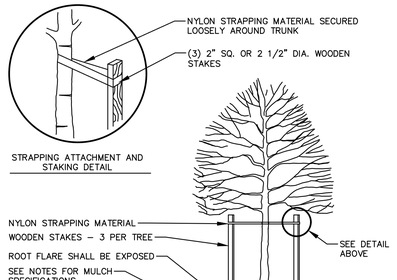


NOTE:
1. ROOT FLARE TO BE EXPOSED.

SHRUB PLANTING DETAIL

N.T.S.

REV. 01-03-2019



NOTE:
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2. REMOVE NYLON STRAPPING WITHIN 9–18 MONTHS FOLLOWING INSTALLATION

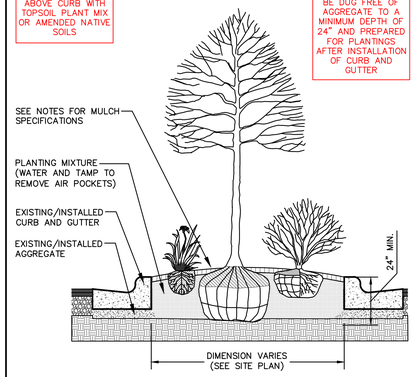
DECIDUOUS TREE PLANTING DETAIL

N.T.S.

REV. 01-04-2019

MOUND TOPSOIL 12" ABOVE CURB WITH TOPSOIL PLANT MIX OR AMENDED NATIVE SOILS

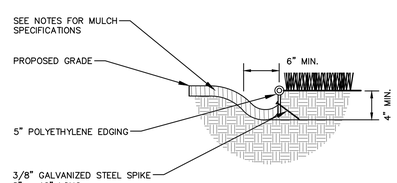
PARKING ISLAND TO BE DUG FREE OF AGGREGATE TO A MINIMUM DEPTH OF 24" AND PREPARED FOR PLANTINGS AFTER INSTALLATION OF CURB AND GUTTER



PARKING ISLAND LANDSCAPE DETAIL

N.T.S.

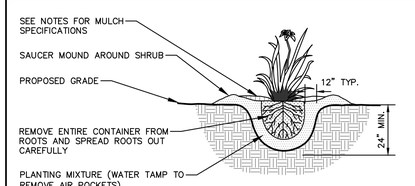
REV. 01-03-2019



POLYETHYLENE LANDSCAPE EDGING DETAIL

N.T.S.

REV. 01-03-2019



NOTE:
1. ROOT FLARE TO BE EXPOSED

PERENNIAL/ORNAMENTAL GRASS PLANTING DETAIL

N.T.S.

REV. 01-03-2019

CONTRACTOR AND OWNER RESPONSIBILITY NOTES

1. **GUARANTEE: THE CONTRACTOR SHALL GUARANTEE ALL PLANTS THROUGH ONE (1) YEAR AFTER ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PLANTS SHALL BE ALIVE AND IN HEALTHY AND FLOURISHING CONDITION AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL REPLACE (AT NO COST TO OWNER) ANY PLANTS THAT ARE DEAD OR NOT IN A VIGOROUS THRIVING CONDITION. REPLACEMENT PLANTS SHALL BE OF THE SAME KIND AND SIZE AS ORIGINALLY SPECIFIED UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE. RESTORE BEDS AS NECESSARY FOLLOWING PLANT REPLACEMENT, INCLUDING BUT NOT LIMITED TO BEDDING, EDGING, MULCH, ETC. REPLACE PLANTS DAMAGED AT TIME OF PLANTING. REPAIR AREAS DISTURBED IN ANY WAY DURING PLANT REPLACEMENT AT NO COST TO OWNER. CONTRACTOR SHALL PROVIDE A ONE (1)–YEAR STRAIGHTENING GUARANTEE FOR ALL TREES.**

2. **CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER'S REPRESENTATIVE PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.**

3. **MAINTENANCE: (CONTRACTOR) FOR ALL PLANTINGS, SEEDED AND/OR SODDED LAWN AREAS: THE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS AND LAWN AREAS FOR A MINIMUM TIME PERIOD OF 60 DAYS, UNTIL FINAL ACCEPTANCE BY OWNER'S REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY WATERING PLANTS AND LAWN/TURFGRASS DURING THIS 60 DAY ESTABLISHMENT PERIOD. CONTRACTOR IS RESPONSIBLE FOR THE ESTABLISHMENT OF HEALTHY VIGOROUS PLANT MATERIALS AND LAWN/TURFGRASS GROWTH. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY PRUNING OF PLANT MATERIALS, AND SHAPING AND/OR REPLACEMENT OR SUPPLEMENT OF DEFICIENT SHREDDED HARDWOOD BARK MULCH DURING THIS PERIOD. LONG TERM PLANT MATERIALS AND LAWN/TURFGRASS MAINTENANCE AND ANY PROGRAM FOR SUCH IS THE RESPONSIBILITY OF THE OWNER. ALL PLANTINGS AND LAWN/TURFGRASS AREAS SHALL BE MAINTAINED IN A MANICURED CONDITION UNTIL THE TIME WHEN THE OWNER'S ACCEPTANCE IS GIVEN.**

4. **MAINTENANCE: (OWNER) THE OWNER IS RESPONSIBLE FOR THE CONTINUED MAINTENANCE, REPAIR AND REPLACEMENT OF ALL LANDSCAPING MATERIALS AND WEED BARRIER FABRIC AS NECESSARY FOLLOWING THE ONE (1) YEAR CONTRACTOR GUARANTEE PERIOD.**

GENERAL NOTES

1. GENERAL: ALL WORK IN THE R–O–W AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL REQUIREMENTS. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES. LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO UTILITIES. CONTRACTOR MUST CALL 1–800–242–8511 FOR UTILITY LOCATIONS AT LEAST THREE DAYS PRIOR TO DIGGING. HAND DIG AND INSTALL ALL PLANTS THAT ARE NEAR EXISTING UTILITIES. PROTECT PREVIOUSLY INSTALLED WORK OF OTHER TRADES. CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.

2. DELIVERY AND HANDLING: DO NOT DELIVER MORE PLANT MATERIALS THAN CAN BE PLANTED IN ONE DAY, UNLESS ADEQUATE, APPROPRIATE AND SECURE STORAGE IS PROVIDED AND APPROVED BY OWNER'S REPRESENTATIVE. AT ALL TIMES, PROTECT ALL PLANT MATERIALS FROM WIND AND DIRECT SUN. DELIVER PLANTS WITH LEGIBLE IDENTIFICATION LABELS. PROTECT PLANTS DURING DELIVERY AND DO NOT PRUNE PRIOR TO DELIVERY. ALL TREES AND SHRUBS SHALL BE PLANTED ON THE DAY OF DELIVERY; IF THIS IS NOT POSSIBLE, PROTECT THE PLANT MATERIALS NOT PLANTED BY STORING THEM IN A SHADED, SECURE AREA, PROTECTING THE ROOT MASS WITH WET SOIL, MULCH, HAY OR OTHER SUITABLE MEDIUM. CONTRACTOR TO KEEP ALL PLANT MATERIALS ADEQUATELY WATERED TO PREVENT ROOT DESICCATION. DO NOT REMOVE CONTAINER GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING. DO NOT PICK UP CONTAINER OR BALLED PLANTS BY STEM OR ROOTS. ALL PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE CONTAINER OR BALL. PERFORM ACTUAL PLANTING ONLY WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE IN ACCORDANCE WITH LOCALLY ACCEPTED BEST HORTICULTURAL PRACTICES.

3. MATERIALS – PLANTS: ALL PLANTS SHALL CONFORM TO THE LATEST VERSION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST 2 YEARS. PLANTS SHALL BE FRESHLY DUG (DURING THE MOST RECENT FAVORABLE HARVEST SEASON). PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, AND FREE OF DISEASE AND INSECTS (ADULT EGGS, PUPAE OR LARVAE). THEY SHALL HAVE HEALTHY, WELL–DEVELOPED ROOT SYSTEMS AND SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT THRIVING GROWTH OR PREMATURE MORTALITY. PLANTS SHALL BE OF THE HIGHEST QUALITY, POSSESS TYPICAL GROWTH HABITS AND FORM FOR THEIR SPECIES AND BE FREE OF INJURY. PARKWAY TREES AND PARKING LOT TREES SHALL HAVE A MINIMUM BRANCHING HEIGHT OF SIX (6) FEET ABOVE THE GROUND TO ALLOW ADEQUATE VISUAL AND PHYSICAL CLEARANCE.

4. PRUNING: THE CONTRACTOR SHALL PRUNE ALL TREES AND REPAIR ANY INJURIES THAT OCCURRED DURING THE PLANTING PROCESS. DOUBLE LEADERS, DEAD BRANCHES, AND LIMBS DAMAGED OR BROKEN DURING THE PLANTING PROCESS, SHALL BE PRUNED. THIS SHALL BE THE ONLY PRUNING ALLOWED AT PLANTING. PRUNING SHALL CONFORM TO THE LATEST VERSION OF THE AMERICAN STANDARD FOR TREE CARE OPERATIONS, ANSI A300. PRUNE TREES IN ACCORDANCE WITH NAA GUIDELINES. DO NOT TOP TREES. PRUNE SHRUBS ACCORDING TO STANDARD HORTICULTURAL PRACTICES. ON CUTS OVER 3/4" IN DIAMETER AND BRUISES OR SCARS ON BARK, TRACE THE INJURED CAMBIUM LAYER BACK TO LIVING TISSUE AND REMOVE. SMOOTH AND SHAPE WOUNDS SO AS NOT TO RETAIN WATER. TREAT THE AREA WITH AN APPROVED INCONSPICUOUS LATEX BASED ANTISEPTIC TREE PAINT, IF PRUNING OCCURS "IN SEASON". DO NOT PRUNE ANY OAK TREES DURING THE MONTHS FROM APRIL TO OCTOBER.

5. CLEANUP: THE WORK AREA SHALL BE KEPT SAFE AND NEAT AT ALL TIMES. DISPOSED OF EXCESS SOIL. REMOVE ALL CUTTINGS AND WASTE MATERIALS. SOIL AND BRANCHES. BIND AND WRAP THESE MATERIALS, ANY REJECTED PLANTS, AND ANY OTHER DEBRIS RESULTING FROM ALL PLANTING TASKS AND PROMPTLY CLEAN UP AND REMOVE FROM THE PROJECT SITE. UNDER NO CIRCUMSTANCES SHALL THE ACCUMULATION OF SOIL, BRANCHES OR OTHER DEBRIS BE ALLOWED UPON A PUBLIC PROPERTY IN SUCH A MANNER AS TO RESULT IN A PUBLIC SAFETY HAZARD OR DAMAGE. LIKEWISE, UNDER NO CIRCUMSTANCES SHALL ANY DEBRIS OR INCIDENTAL MATERIALS BE ALLOWED UPON ADJACENT PRIVATE PROPERTY.

6. ANY SUBSTITUTIONS IN PLANT TYPE, LOCATION, OR SIZE SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

7. CONTRACTOR TO VERIFY PLANT MATERIAL QUANTITIES AND SQUARE FOOTAGES. QUANTITIES SHOWN ON PLAN TAKE PRECEDENCE OVER THOSE ON SCHEDULE.

LANDSCAPE MATERIAL NOTES

1. MATERIALS – PLANTING MIXTURE: ALL HOLES EXCAVATED FOR TREES, SHRUBS, PERENNIALS AND ORNAMENTAL GRASSES SHALL BE BACKFILLED WITH TWO (2) PARTS TOPSOIL, ONE (1) PART SAND AND ONE (1) PART COMPOST. SOIL MIXTURE SHALL BE WELL BLENDED PRIOR TO INSTALLATION.

2. MATERIALS – TOPSOIL: TOPSOIL TO BE CLEAN, FRIABLE LOAM FROM A LOCAL SOURCE, FREE FROM STONES OR DEBRIS OVER 3/4" IN DIAMETER, AND FREE FROM TOXINS OR OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL HAVE A pH VALUE BETWEEN 6 AND 7. TOPSOIL AND PLANTING SOIL SHALL BE TESTED TO ENSURE CONFORMANCE WITH THESE SPECIFICATIONS AND SHALL BE AMENDED TO MEET THESE SPECIFICATIONS. PROVIDE TEST RESULTS TO OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT. DO NOT PLACE FROZEN OR MUDDY TOPSOIL. APPLY SOIL AMENDMENTS TO ALL LANDSCAPE AREAS PER SOIL TEST.

3. MATERIALS – SHREDDED HARDWOOD BARK MULCH: ALL PLANTING AREAS LABELED ON PLAN SHALL RECEIVE CERTIFIED WEED FREE SHREDDED HARDWOOD BARK MULCH INSTALLED TO A MINIMUM AND CONSISTENT DEPTH OF 4–INCHES. SHREDDED HARDWOOD BARK MULCH SIZE & COLOR TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FERTILIZER SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS. SHREDDED HARDWOOD BARK MULCH AREAS SHALL NOT RECEIVE WOVEN WEED BARRIER FABRIC.

4. MATERIALS – STONE MULCH: ALL PLANTING AREAS LABELED ON PLAN SHALL RECEIVE MIDWEST DECORATIVE STONE 1–1/2" AMERICAN HERITAGE STONE MULCH (OR EQUAL) SPREAD TO A MINIMUM AND CONSISTENT DEPTH OF 3–INCHES. DECORATIVE STONE MULCH TYPE, SIZE & COLOR TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FERTILIZER SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS. STONE MULCH AREAS SHALL RECEIVE WOVEN WEED BARRIER FABRIC. NO PLASTIC/IMPERVIOUS BARRIERS WILL BE PERMITTED. EXAMPLE: BLACK VISQUEEN.

2 5. MATERIALS – TREE & SHRUB RINGS:
5.1. DECIDUOUS AND EVERGREEN TREES PLANTED IN SEEDED OR SODDED LAWN AREAS SHALL BE INSTALLED WITH A MINIMUM 4' DIAMETER SHREDDED HARDWOOD BARK MULCH TREE RING SPREAD TO A CONSISTENT DEPTH OF 4–INCHES. A PRE–EMERGENT GRANULAR HERBICIDE WEED–PREVENTER SHALL BE MIXED WITH MULCH ALONG WITH A TOPICALLY APPLIED TO COMPLETED INSTALLATION OF TREE RING.
5.2. ALL SHRUBS PLANTED IN PRAIRIE SEED MIX AREAS SHALL BE INSTALLED WITH A MINIMUM 2' DIAMETER SHREDDED HARDWOOD BARK MULCH TREE RING SPREAD TO A CONSISTENT DEPTH OF 4–INCHES. A PRE–EMERGENT GRANULAR HERBICIDE WEED–PREVENTER SHALL BE MIXED WITH MULCH ALONG WITH A TOPICALLY APPLIED TO COMPLETED INSTALLATION OF TREE RING.
5.3. TREE AND SHRUB RINGS SHALL BE INSTALLED WITH A 5" DEPTH VERTICAL SHOVEL CUT EDGE IN THE DIAMETER SPECIFIED.

6. MATERIALS – POLYETHYLENE EDGING: EDGING SHALL BE 5" DEEP, POLYETHYLENE EDGING. OWNER'S REPRESENTATIVE SHALL APPROVE PRODUCT SPECIFICATION PROVIDED BY LANDSCAPE CONTRACTOR.

7. MATERIALS – ALUMINUM EDGING: EDGING SHALL BE 1/8" X 4", ALUMINUM EDGING, MILL FINISH. OWNER'S REPRESENTATIVE SHALL APPROVE PRODUCT SPECIFICATION PROVIDED BY LANDSCAPE CONTRACTOR.

8. MATERIALS – TREE PROTECTION: ALL TREES TO BE INSTALLED WITH LDPE TREE GUARDS AS MANUFACTURED BY A.M. LEONARD HORTICULTURAL TOOL & SUPPLY CO., OR APPROVED EQUAL.

SEEDING & POND VEGETATION NOTES

1. MATERIALS – TURFGRASS SEED: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL RECEIVE 6" OF TOPSOIL AND EARTH CARPET'S "MADISON PARKS" GRASS SEED, OR EQUIVALENT AS APPROVED BY THE OWNER'S REPRESENTATIVE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO TURFGRASS SEED, ANNUAL RYE SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 1 1/2 LBS PER 1000 SQUARE FEET. FERTILIZE AND MULCH PER MANUFACTURER'S RECOMMENDATIONS. MULCH SHALL BE CERTIFIED NOXIOUS WEED SEED–FREE

2. MATERIALS – PRAIRIE SEED MIX: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL BE BROADCAST SEEDED WITH "DIVERSE PRAIRIE FOR MEDIUM SOILS" SEED MIX, AS PROVIDED BY PRAIRIE NURSERY, P.O. BOX 306, WESTFIELD, WISCONSIN, 53964, TEL. 608–296–3679 (OR APPROVED EQUIVALENT). INSTALL SEED WITH SUPPLEMENTAL MATERIALS AND AMENDMENTS AS RECOMMENDED BY SEED SUPPLIER AND AT RATES AND OPTIMUM TIMES OF THE YEAR AS RECOMMENDED BY THE SEED SUPPLIER TO ENSURE SUCCESSFUL GERMINATION AND SEED/ROOT ZONE GROWTH DEVELOPMENT. REFER TO PRODUCT SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION.

3. MATERIALS – BIORETENTION BASIN NATIVE VEGETATIVE MAT (NVM): AREAS SPECIFIED ON PLANS SHALL RECEIVE AGRECOL "RAINWATER RENEWAL" NATIVE VEGETATIVE MAT – DEGRADABLE CORE. CONTRACTOR SHALL CONTACT AGRECOL NATIVE NURSERY 16 WEEKS IN ADVANCE OF INSTALLATION FOR PROPER GROWING LEAD TIME. CONTRACTOR SHALL ASSUME AVAILABLE DELIVERY DATE TO BE BETWEEN MID–JUNE THROUGH THE END OF OCTOBER DUE TO THE NMV GROWING SEASON. REFER TO PRODUCT SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION PROCEDURES.

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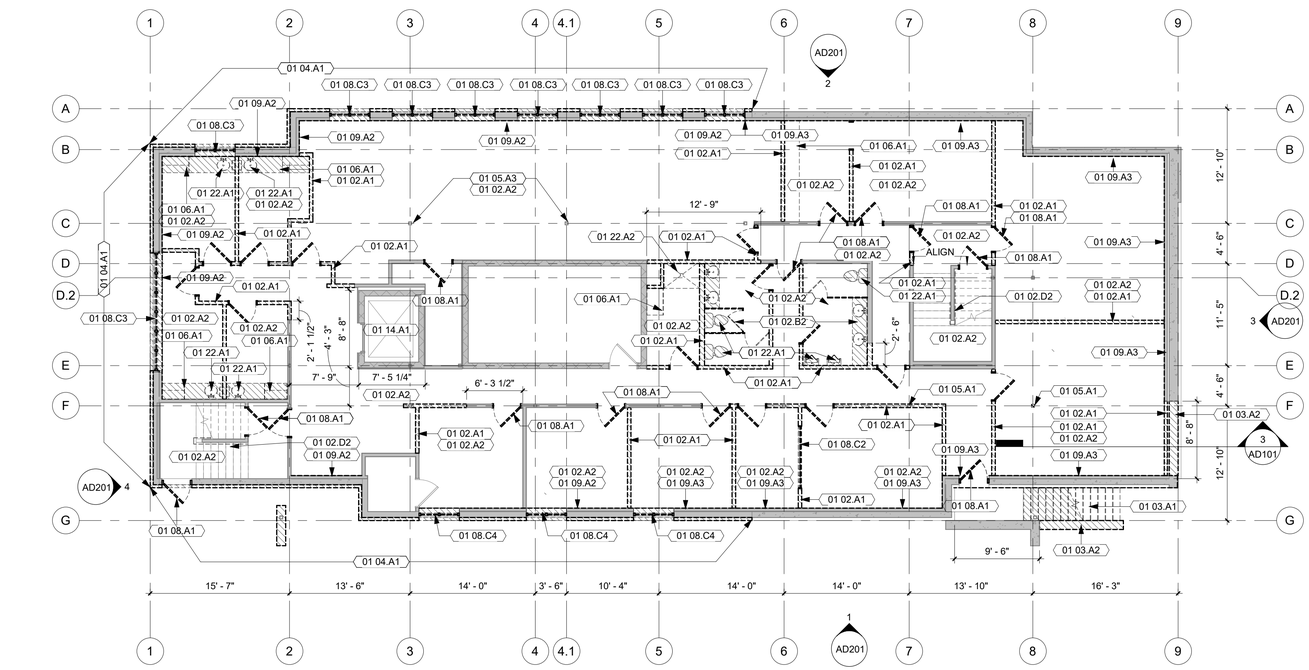
Sheet Issue Date
CONSTRUCTION DRAWINGS — FEBRUARY 2, 2021

Revisions
2 ADDENDUM 02 — MARCH 9, 2021

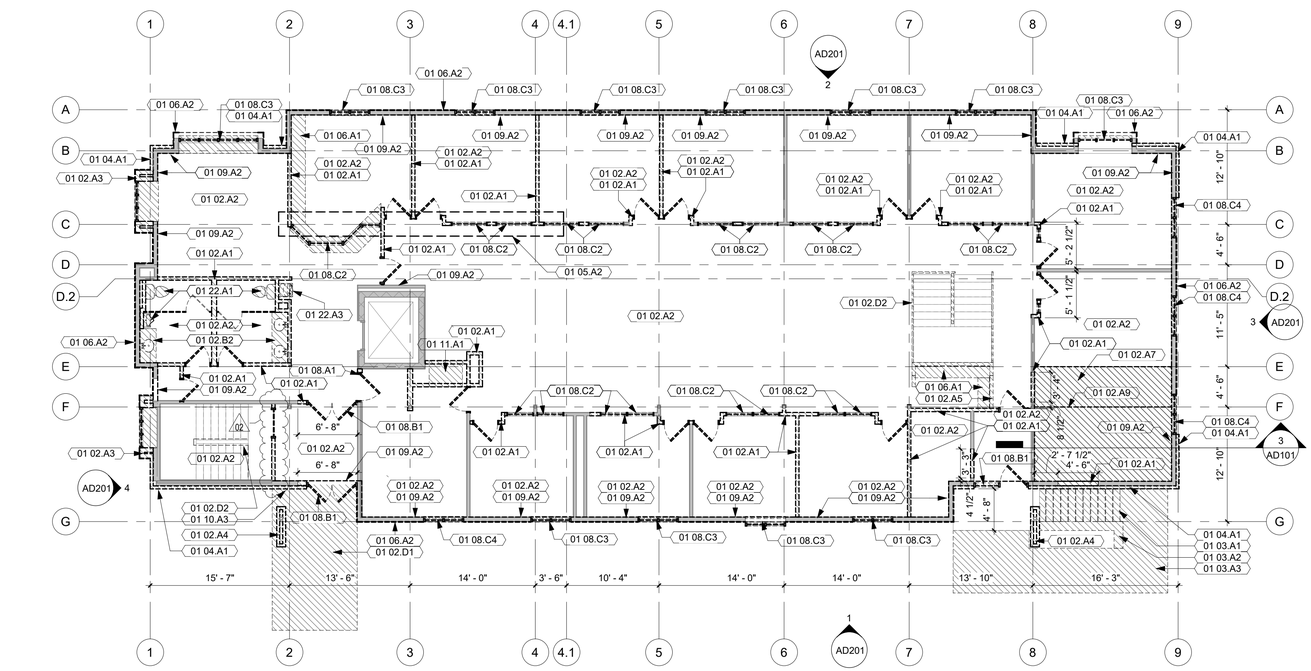
Drawing
LANDSCAPE DETAILS & NOTES

OPN Project No. 20628000

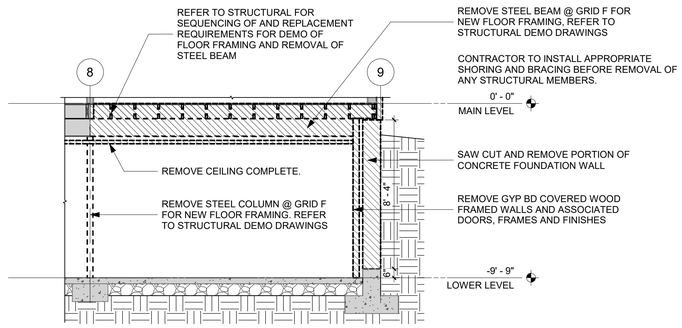
L2.0



1 DEMO PLAN - LOWER LEVEL
1/8" = 1'-0"



2 DEMO PLAN - MAIN LEVEL
1/8" = 1'-0"



3 DEMO WALL SECTION
1/4" = 1'-0" Ref. 1/ AD101

KEYNOTE LEGEND

01 02.A1	REMOVE GYP BD COVERED WOOD FRAMED WALLS AND ASSOCIATED DOORS, FRAMES AND FINISHES
01 02.A2	REMOVE FLOOR FINISH THIS ROOM COMPLETE, PREP TO RECEIVE NEW FINISH. REMOVE ALL GYP BD AND APPLIED WALL FINISHES AT EXISTING WALLS TO REMAIN, PREP FOR NEW FINISHES
01 02.A3	DEMO AND REMOVE EXTERIOR BUMP-OUT AND BAY WINDOW COMPLETE.
01 02.A4	DEMO AND REMOVE EXISTING MASONRY AND FRAMING COMPLETE - MAINTAIN EXISTING STRUCTURAL SUPPORT FOR ROOF
01 02.A5	DEMO AND REMOVE PORTION OF KNEE WALL COMPLETE.
01 02.A7	REFER TO STRUCTURAL FOR SEQUENCING OF AND REPLACEMENT REQUIREMENTS FOR DEMO OF FLOOR FRAMING AND REMOVAL OF STEEL BEAM
01 02.A8	REMOVE STEEL COLUMN @ GRID F FOR NEW FLOOR FRAMING. REFER TO STRUCTURAL DEMO DRAWINGS
01 02.A9	REMOVE STEEL BEAM @ GRID F FOR NEW FLOOR FRAMING, REFER TO STRUCTURAL DEMO DRAWINGS
01 02.B2	REMOVE LAVATORIES, MIRRORS, TOILET PARTITIONS, AND TOILET ACCESSORIES.
01 02.C1	REMOVE CEILING COMPLETE.
01 02.D1	DEMO AND REMOVE EXTERIOR BRIDGE COMPLETE INCLUDING CONCRETE PIER SUPPORT AND GUARDRAILS
01 02.D2	REMOVE WOOD GUARDRAILS AND HANDRAILS COMPLETE.
01 03.A1	REMOVE CONCRETE EXTERIOR STAIR COMPLETE
01 03.A2	SAW CUT AND REMOVE PORTION OF CONCRETE FOUNDATION WALL
01 03.A3	DEMO AND REMOVE PORTION OF EXTERIOR SIDEWALK COMPLETE - REFER TO CIVIL DRAWINGS.
01 04.A1	DEMO AND REMOVE EXTERIOR STONE VENEER AND RIGID INSULATION BOARD COMPLETE (TYP)
01 05.A1	REMOVE COLUMN COMPLETE, REFER TO STRUCTURAL DRAWINGS FOR NEW STRUCTURAL SUPPORT TRANSFER BEAM AND COLUMNS
01 05.A2	DO NOT REMOVE BEARING WALL UNTIL PROPERLY SHORED FOR NEW STRUCTURE TO BE PLACED. REFER TO STRUCTURAL
01 05.A3	REFER TO STRUCTURAL FOR FLOOR, COLUMN AND BEAM RE-WORK.
01 06.A1	DEMO AND REMOVE CASEWORK COMPLETE.
01 06.A2	DEMO AND REMOVE EXTERIOR WOOD SIDING AND RIGID INSULATION BOARD COMPLETE (TYP)
01 08.A1	DEMO AND REMOVE DOOR AND FRAME COMPLETE.
01 08.B1	REMOVE STOREFRONT ENTRY SYSTEM COMPLETE.
01 08.C2	DEMO AND REMOVE INTERIOR WINDOW AND ASSOCIATED TRIM COMPLETE.
01 08.C3	DEMO AND REMOVE WINDOW AND ASSOCIATED INTERIOR TRIM AND SILL COMPLETE. OPENING TO RECEIVE NEW WINDOW.
01 08.C4	DEMO AND REMOVE WINDOW AND ASSOCIATED INTERIOR TRIM AND SILL COMPLETE. OPENING TO BE INFILLED WITH NEW WALL.
01 09.A2	REMOVE GYP BD, BATT INSULATION, AND VAPOR BARRIER COMPLETE FULL HEIGHT OF WALLS. WD FURRING TO REMAIN
01 09.A3	REMOVE EXISTING GWB INSULATION AND WD FURRING TO REMAIN.
01 10.A3	REMOVE EXISTING KNOX BOX AND KEY AND RETAIN FOR RE-INSTALLATION PRIOR TO END OF CONSTRUCTION
01 11.A1	DEMO AND REMOVE WALL SAFE COMPLETE.
01 14.A1	REMOVE FLOOR COVERING AND WALL PANELS COMPLETE IN ELEVATOR CAB AND PREP FOR REPLACEMENT
01 22.A1	DEMO AND REMOVE PLUMBING FIXTURE COMPLETE - REFER TO PLUMBING DRAWINGS
01 22.A2	DEMO AND REMOVE SHOWER UNIT COMPLETE.
01 22.A3	REMOVE WATER COOLER AND SALVAGE FOR REUSE.

GENERAL NOTES

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2. REFER TO SPECIFICATION SECTION 01 74 19 FOR CONSTRUCTION WASTE MANAGEMENT, DISPOSAL AND RECYCLING REQUIREMENTS.
3. EXISTING BUILDING CONDITIONS SHOWN ON THESE DRAWINGS ARE DERIVED FROM DRAWINGS OF THE ORIGINAL BUILDING AND FROM LIMITED FIELD OBSERVATION. EXISTING BUILDING CONDITIONS ARE ASSUMED TO BE A GENERAL REPRESENTATION OF THE ACTUAL CONSTRUCTION OF THE BUILDING. SPECIFIC CONDITIONS MAY VARY.
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6. MODIFICATIONS TO THE EXISTING STRUCTURE SHALL NOT BE MADE WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
7. OPENING IN EXISTING CONSTRUCTION SMALLER THAN 12" IN ANY DIRECTION ARE NOT IDENTIFIED ON THESE DRAWINGS. SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR CREATING OPENINGS SMALLER THAN 12" AS REQUIRED FOR INSTALLATION OF THEIR WORK AND FOR PATCHING AND/OR FILLING RESULTING ANNULAR SPACES.
8. REPAIR AND REPLACE ANY DAMAGE TO EXISTING CONSTRUCTION RESULTING FROM DEMOLITION OR NEW CONSTRUCTION WORK.
9. REFER TO CONSULTANT DRAWINGS FOR ADDITIONAL DEMOLITION OF OTHER DISCIPLINES.
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Key Plan

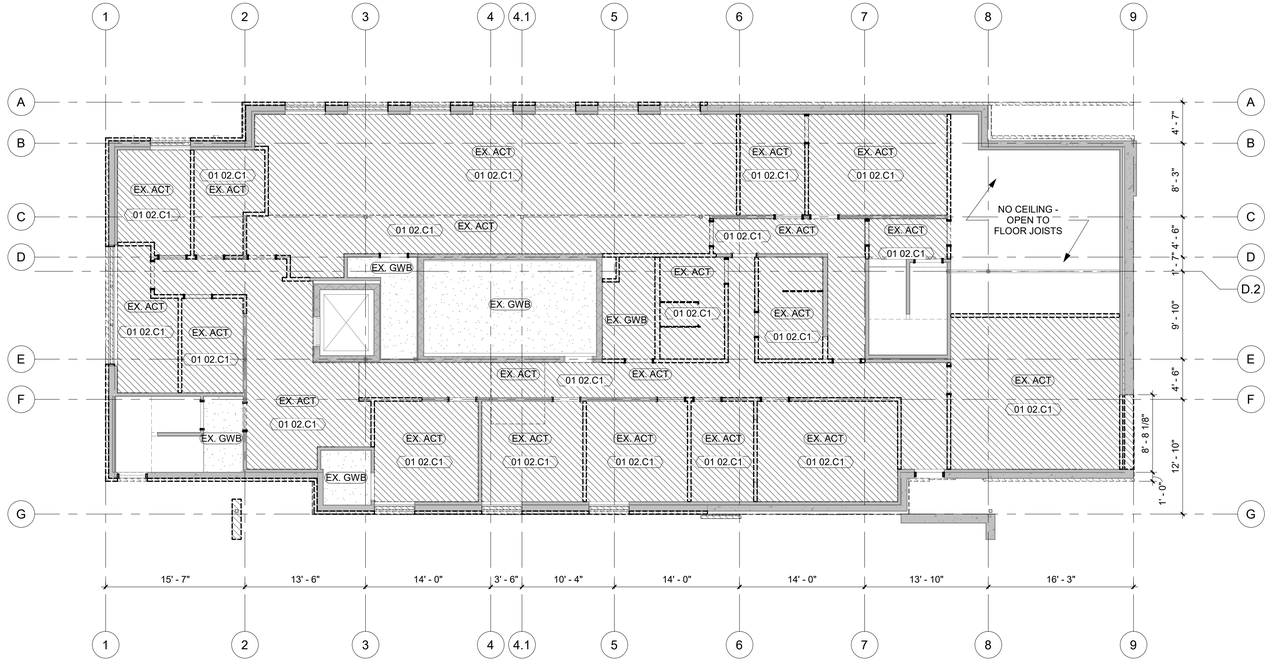
Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
DEMOLITION PLANS

Sheet Number
AD101



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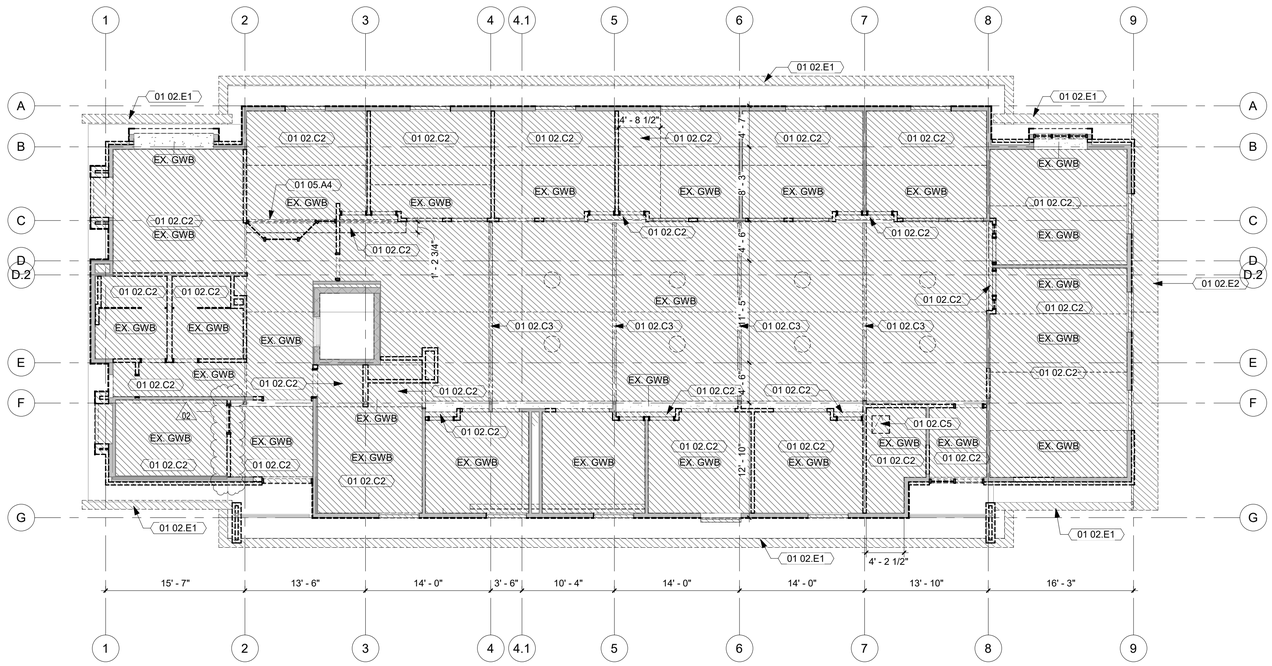
1/8" = 1'-0"



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KEYNOTE LEGEND

01 02.C1	REMOVE CEILING COMPLETE.
01 02.C2	REMOVE GWB CEILING IN AREA SHOWN FOR NEW CEILING, VAPOR BARRIER, AND ATTIC INSULATION AS REQUIRED.
01 02.C3	DEMO AND REMOVE NON-STRUCTURAL DECORATIVE WOOD TRUSS AND TRUSS-MOUNTED LIGHT FIXTURE COMPLETE.
01 02.C5	DEMO EXISTING ATTIC ACCESS HATCH
01 02.E1	REMOVE WOOD SOFFIT AND FASCIA COMPLETE AND CUT BACK ROOF EAVE FROM ±3'-0" TO 2'-0"
01 02.E2	REMOVE ROOF OVERHANG TO FACE OF FRAMING AT ADDITION
01 05.A4	FIELD VERIFY EXISTING BEAM, SHORE ROOF STRUCTURE AND REPLACE PER STRUCTURAL

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Key Plan

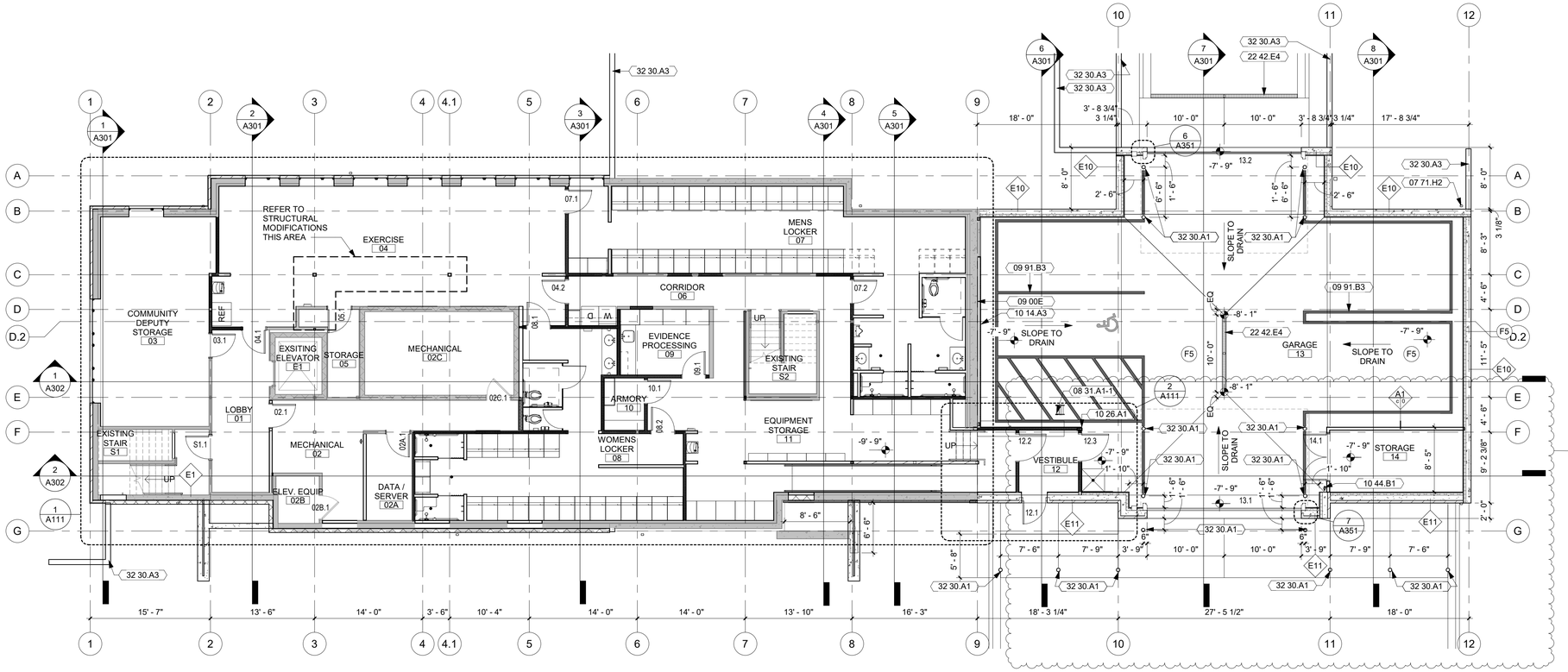
Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

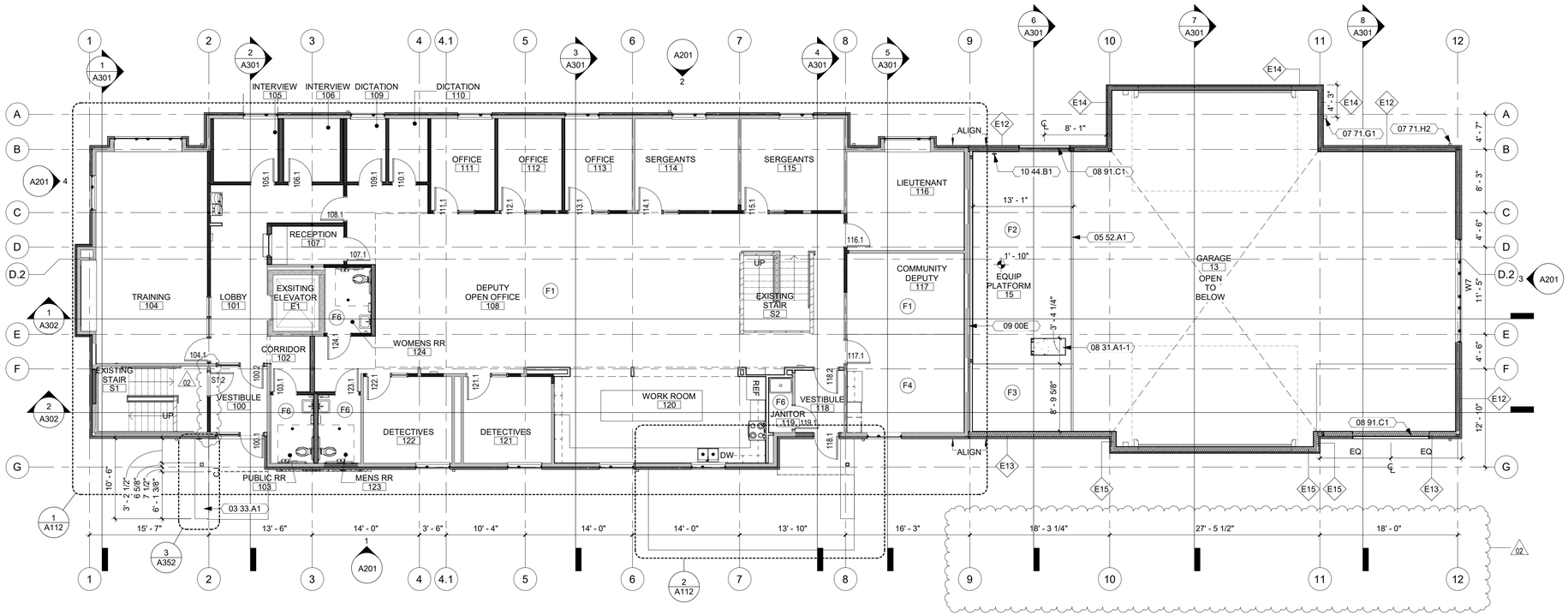
Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
DEMOLITION REFLECTED CEILING PLANS

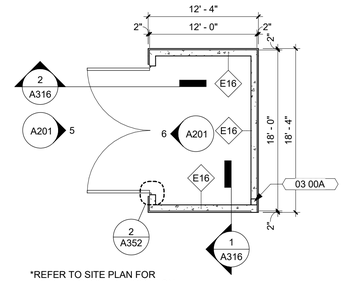
Sheet Number
AD701



1 FLOOR PLAN - LOWER LEVEL
1/8" = 1'-0"



2 FLOOR PLAN - MAIN LEVEL
1/8" = 1'-0"



3 ENLARGED TRASH ENCLOSURE
1/8" = 1'-0"

GENERAL NOTES

1. DIMENSIONS ARE MEASURED FACE-OF-FINISH TO FACE-OF-FINISH OR ROUGH MASONRY OPENING UNLESS NOTED OTHERWISE - TYPICAL FOR ALL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS - TYPICAL FOR ALL DRAWINGS.
3. IN THE EVENT OF A DISCREPANCY BETWEEN ARCHITECTURAL AND CONSULTANT DRAWINGS, NOTIFY ARCHITECT IMMEDIATELY PRIOR TO COMMENCING WORK - TYPICAL FOR ALL DRAWINGS.
4. ALL PENETRATIONS IN FIRE RATED FLOORS AND WALLS MUST BE SEALED WITH APPROPRIATE FIRESTOPPING SYSTEM.
5. PATCH AND REPAIR EXISTING FLOOR SLABS AND WALL SURFACES DAMAGED FROM DEMOLITION.

EXISTING WOOD FRAMED WALLS

EXISTING CMU WALLS

NEW WOOD FRAMED WALLS - NO BATT

NEW WOOD FRAMED WALLS - ACOUSTIC

NEW CONCRETE WALLS

KEYNOTE LEGEND

03 00A	4"H X 8"W DRAINWAY OPENING AT BASE OF WALL
03 33.A1	POURED CONCRETE BENCH WITH WOOD TOP, INTEGRATED LIGHTING.
05 52.A1	CONTINUOUS STEEL GUARDRAIL
07 71.G1	ROOF SCUPPER & DOWNSPOUT. MATCH MP-3.
07 71.H2	PREFINISHED METAL DOWNSPOUT TO MATCH MP-3
08 31.A1-1	PULL-DOWN ALUMINUM ACCESS LADDER. COORDINATE EXACT LOCATION IN FIELD W/ ARCHITECT. REFER TO SPECS FOR TYPE AND LOCATION
08 91.C1	FIXED LOUVER - COORDINATE W/ MECHANICAL. MATCH FINISH OF MP-2
09 00E	1-HR RATED WALL ASSEMBLY - REFER TO WALL SECTIONS AND DETAILS
09 91.B3	PARKING LINE STRIPING
10 14.A3	ACCESSIBLE PARKING SIGN
10 26.A1	STAINLESS STEEL CORNER GUARD
10 44.B1	PORTABLE FIRE EXTINGUISHER
22 42.E4	TRENCH DRAIN - SLOPE PAVING TO DRAIN.
32 30.A1	CONCRETE FILLED STEEL PIPE BOLLARD
32 30.A3	BLOCK RETAINING WALL - REFER TO CIVIL

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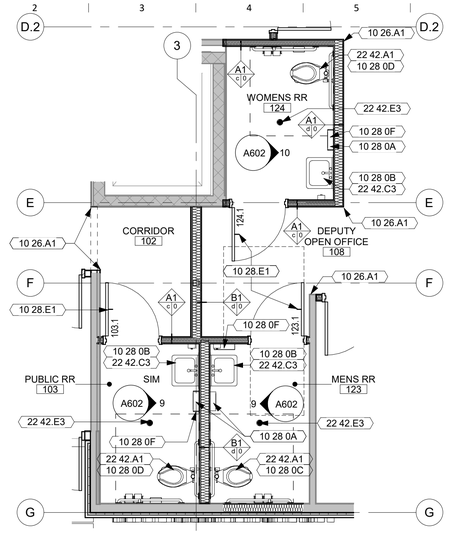
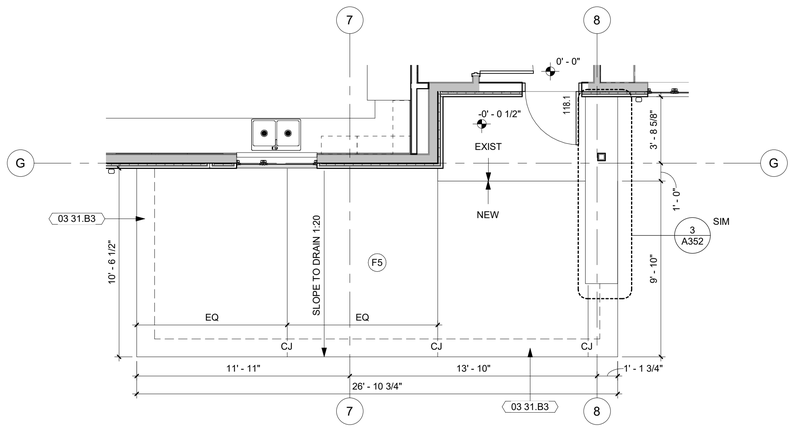
Sheet Name
OVERALL FLOOR PLANS

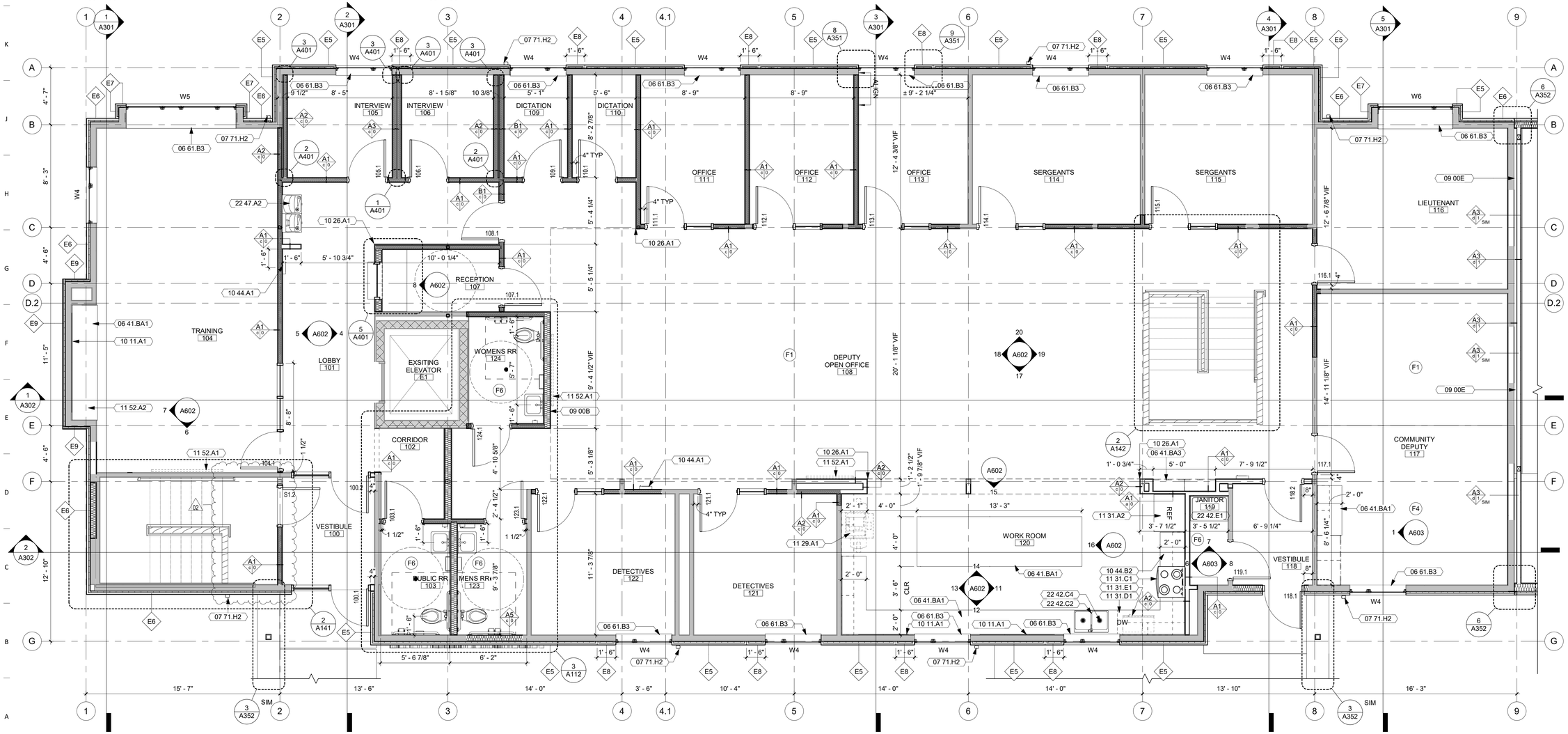
Sheet Number
A101



3 ENLARGED RESTROOM PLAN
1/4" = 1'-0" Ref. 1/ A112



2 ENLARGED PATIO PLAN - MAIN LEVEL
1/4" = 1'-0" Ref. 2/ A101



1 PARTIAL ENLARGED FLOOR PLAN - MAIN LEVEL
1/4" = 1'-0" Ref. 2/ A101

KEYNOTE LEGEND

03 31.B3	THICKENED SLAB EDGE, REFER TO STRUCTURAL DRAWINGS
06 41.BA1	PLAM CASEWORK WITH QUARTZ TOP, REFER TO ELEVATIONS.
06 41.BA3	PLAM CASEWORK, REFER TO ELEVATIONS.
06 61.B3	1/2" SOLID SURFACE WINDOW SILL, SLD-2. SHIM AS NECESSARY
07 71.H2	PREFINISHED METAL DOWNSPOUT TO MATCH MP-3
09 00B	EXTEND WOOD FRAMING AND GYP. BD. TO UNDERSIDE OF VAULTED GYP. BD. CEILING ABOVE, TYP.
09 00E	1-HR RATED WALL ASSEMBLY - REFER TO WALL SECTIONS AND DETAILS
10 11.A1	FRAMELESS GLASS MARKER BOARD, REFER TO ELEVATIONS. PROVIDE IN-WALL BLOCKING BEHIND.
10 26.A1	STAINLESS STEEL CORNER GUARD
10 28 0A	PAPER TOWEL DISPENSER OFCI
10 28 0B	ACCESSORIES AT SINK: AUTOMATIC SOAP DISPENSER OFCI, MIRROR CFCI.
10 28 0C	ACCESSORIES AT TOILET: SET OF (3) ADA GRAB BARS CFCI, TOILET TISSUE DISPENSER OFCI.
10 28 0D	ACCESSORIES AT TOILET: SET OF (3) ADA GRAB BARS CFCI, TOILET TISSUE DISPENSER OFCI, SANITARY NAPKIN DISPOSAL CFCI.
10 28 0F	SEMI-RECESSED TRASH RECEPTACLE CFCI
10 28.E1	ROBE HOOK
10 44.A1	SEMI-RECESSED FIRE EXTINGUISHER CABINET.
10 44.B2	PORTABLE FIRE EXTINGUISHER IN CABINET
11 29.A1	COPIER OFOI - PROVIDE POWER AND DATA
11 31.A2	REFRIGERATOR / FREEZER, OFCI
11 31.C1	OVEN AND RANGE, OFCI
11 31.D1	DISHWASHER, OFCI
11 31.E1	MICROWAVE, OFOI - PROVIDE POWER
11 52.A1	WALL-MOUNTED MONITOR OFCI. PROVIDE IN-WALL BLOCKING, POWER AND DATA.
11 52.A2	AV RACK LOCATED IN LOWER CABINET, PROVIDE POWER AND DATA AS NECESSARY.
22 42.A1	FLOOR-MOUNTED TOILET
22 42.C2	UNDERMOUNT DUAL COMPARTMENT SINK
22 42.C3	WALL-MOUNTED LAVATORY.
22 42.C4	GARBAGE DISPOSAL CFCI
22 42.E1	MOP SINK - PROVIDE FRP PANEL 48" EA. SIDE AT ADJACENT WALLS
22 42.E3	FLOOR DRAIN - SLOPE FLOOR TO DRAIN. REFER TO PLUMBING DRAWINGS
22 47.A2	DUAL HI-LOW ELECTRIC WATER COOLER WITH BOTTLE FILLER

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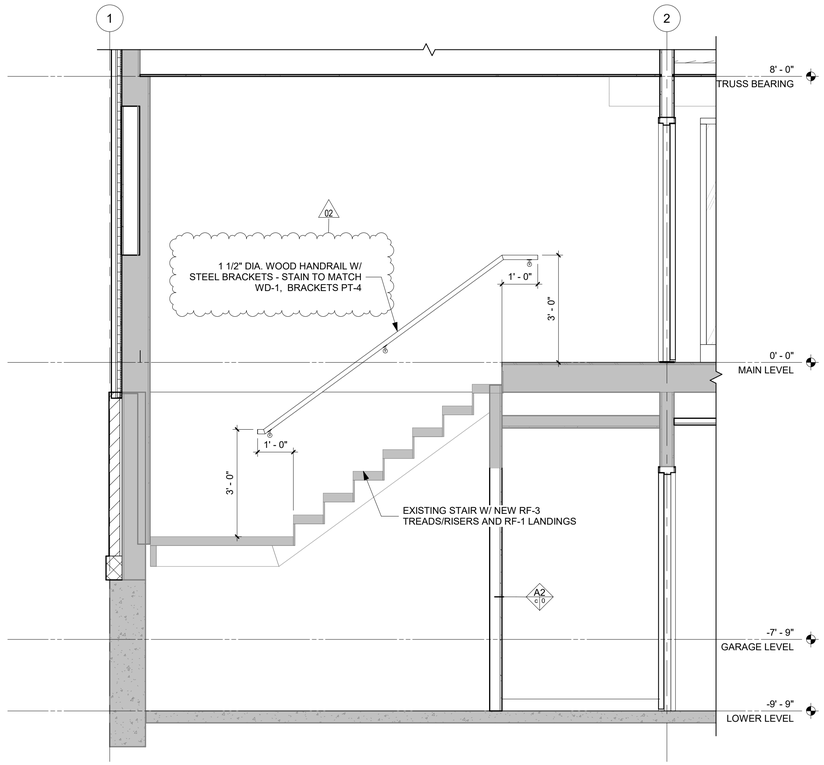
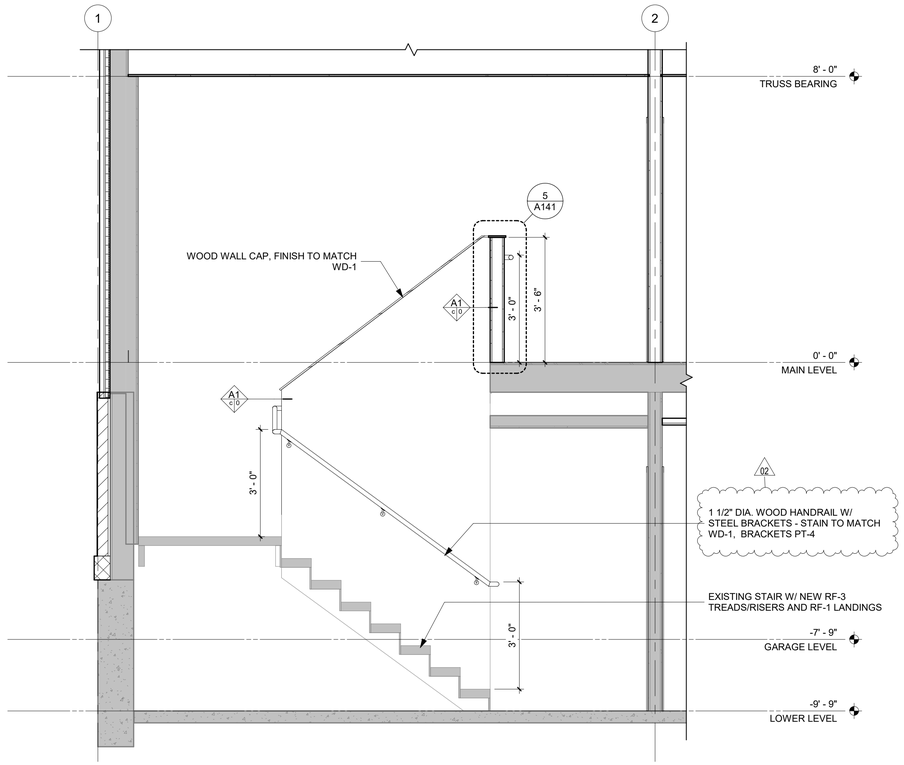
Sheet Name
ENLARGED FLOOR PLANS

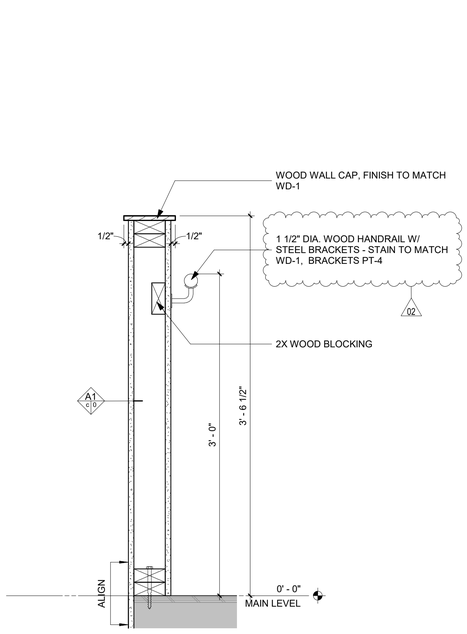
Sheet Number
A112



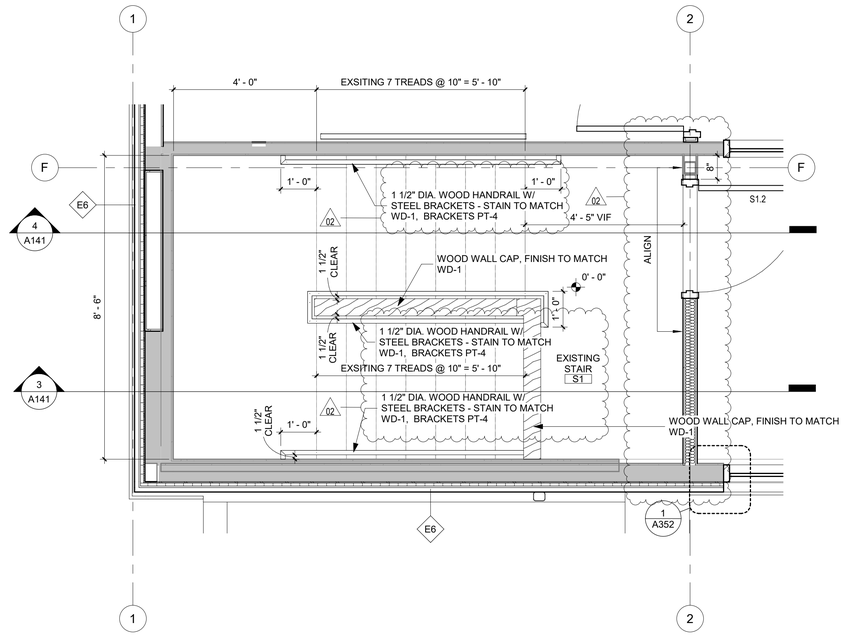
4 EXISTING STAIR S1 - SECTION
1/2" = 1'-0" Ref. 1/ A141



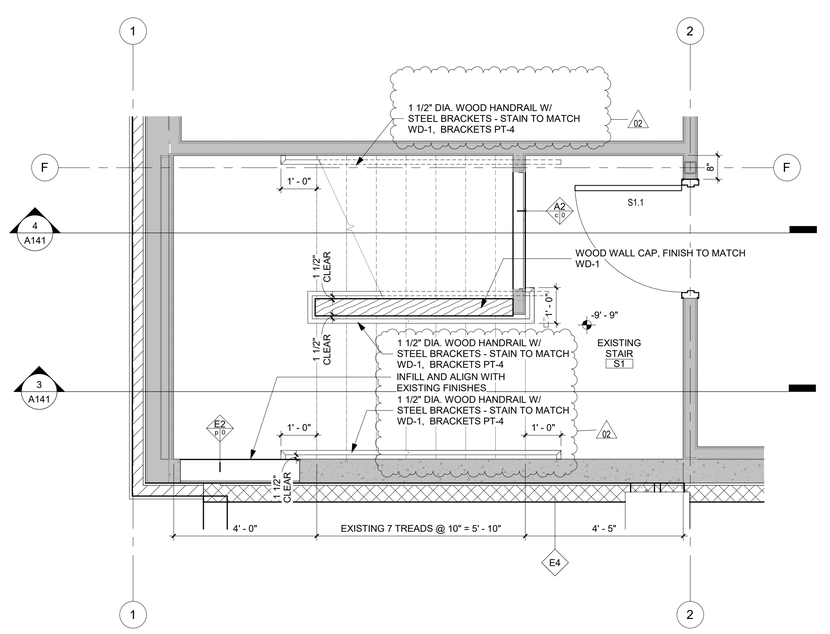
3 EXISTING STAIR S1 - SECTION
1/2" = 1'-0" Ref. 1/ A141



5 STAIR GUARDRAIL SECTION
1 1/2" = 1'-0" Ref. 3/ A141



2 ENLARGED STAIR S1 PLAN - MAIN LEVEL
1/2" = 1'-0" Ref. 1/ A112



1 ENLARGED STAIR S1 PLAN - LOWER LEVEL
1/2" = 1'-0" Ref. 1/ A111

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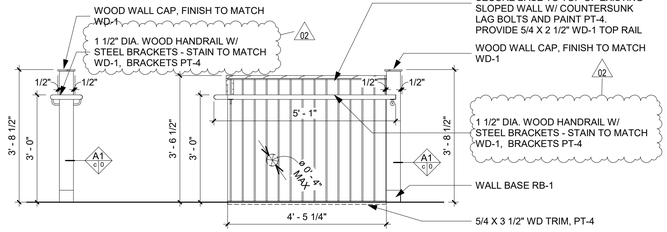
Sheet Name
VERTICAL CIRCULATION PLANS, SECTIONS, AND DETAILS

A141



8 SOUTH AT STAIR S2
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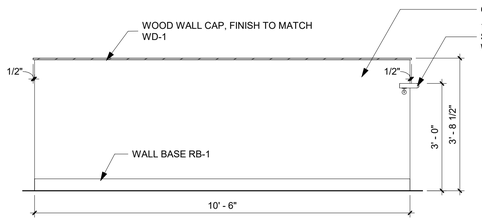

7 SIDE AT STAIR S2
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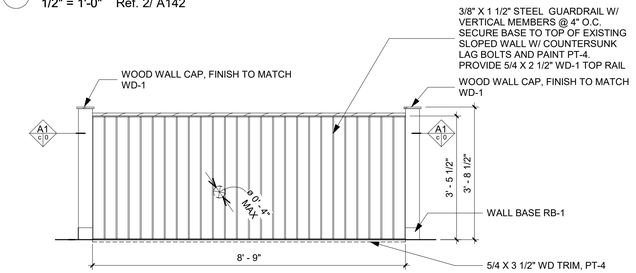
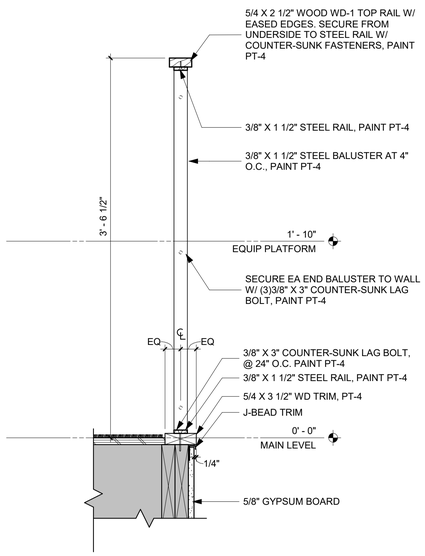
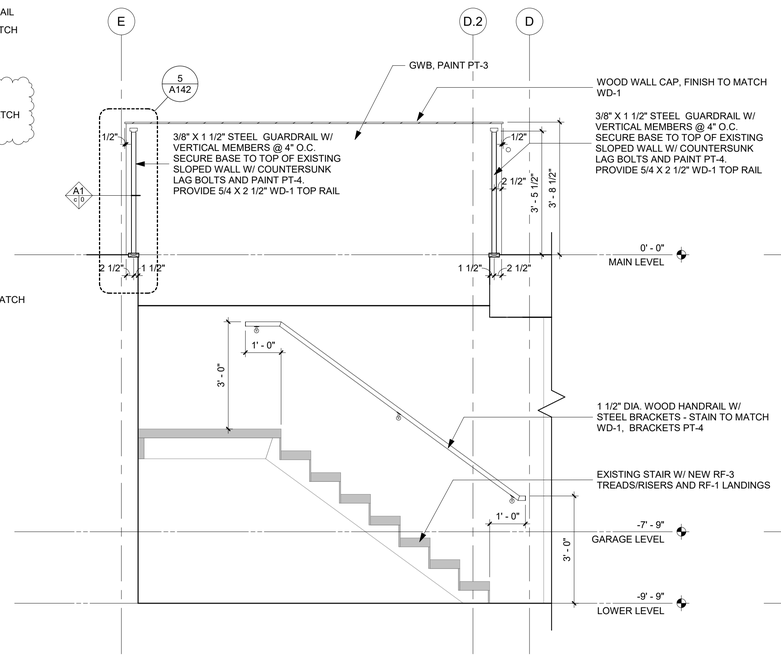


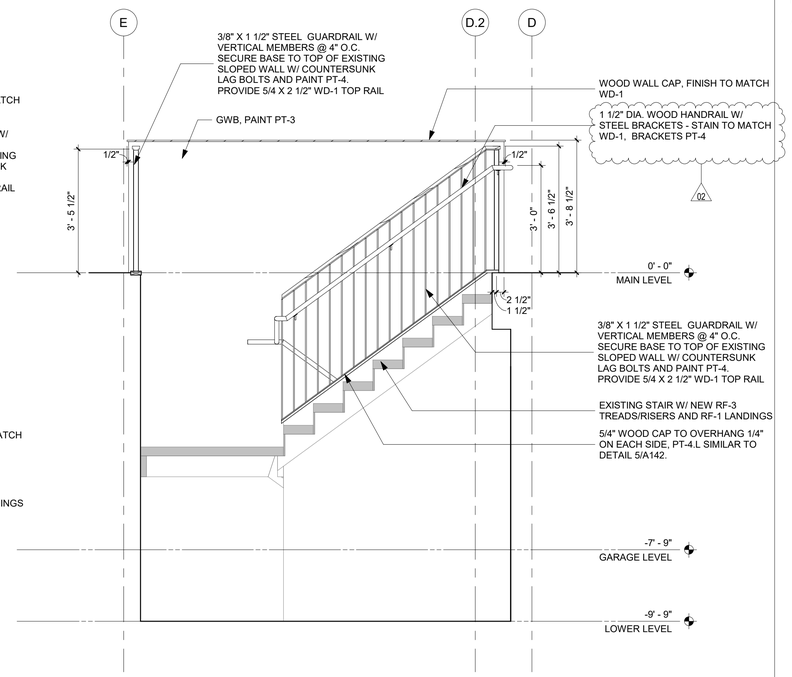
6 NORTH AT STAIR S2
1/2" = 1'-0" Ref. 2/ A142



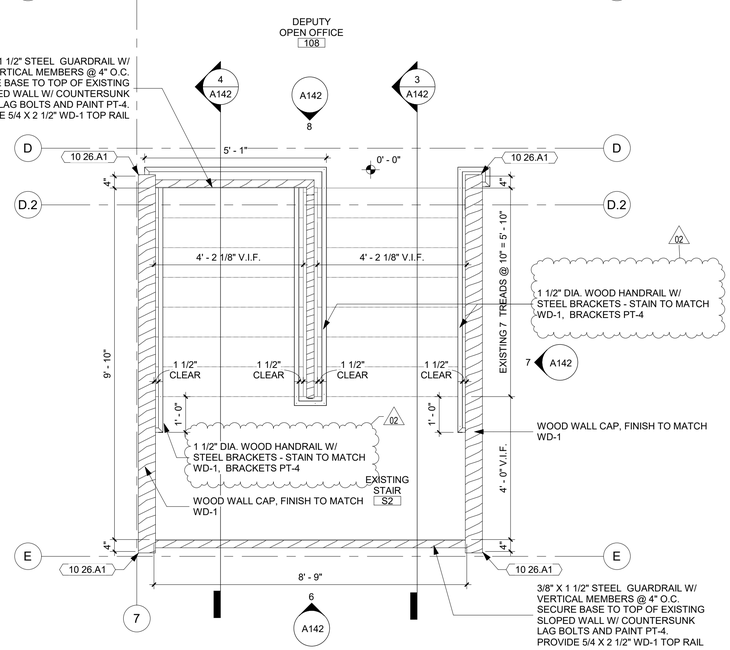
5 STEEL GUARDRAIL DETAIL
1 1/2" = 1'-0" Ref. 4/ A142



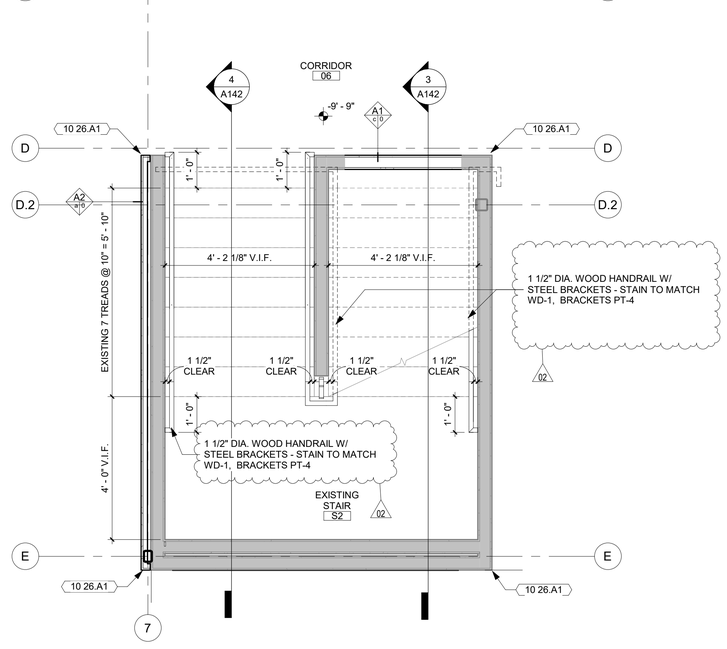
4 EXISTING STAIR S2 - SECTION
1/2" = 1'-0" Ref. 1/ A142



3 EXISTING STAIR S2 - SECTION
1/2" = 1'-0" Ref. 1/ A142



2 ENLARGED STAIR S2 PLAN - MAIN LEVEL
1/2" = 1'-0" Ref. 1/ A112



1 ENLARGED STAIR S2 PLAN - LOWER LEVEL
1/2" = 1'-0" Ref. 1/ A111

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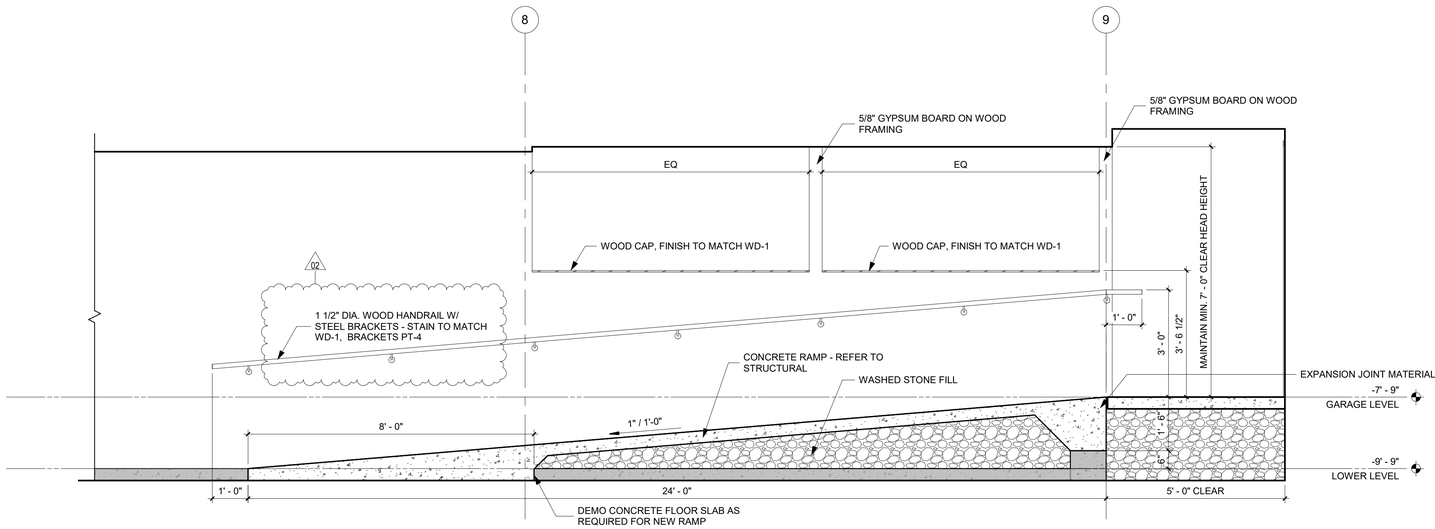
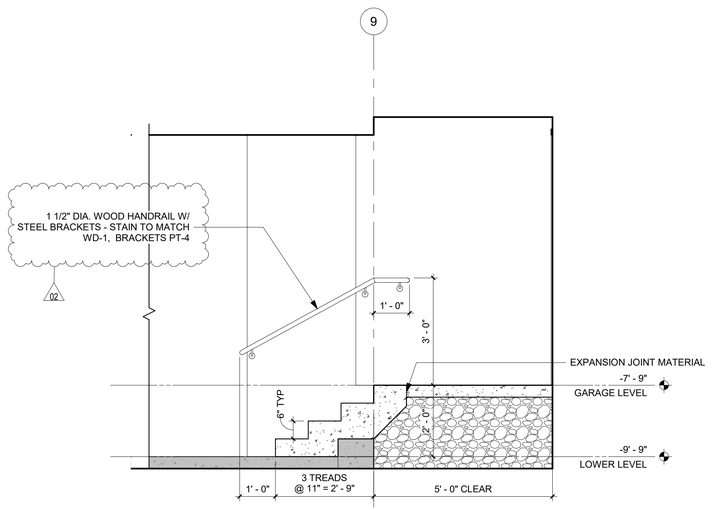
VERTICAL CIRCULATION PLANS, SECTIONS, AND DETAILS

A142



2 GARAGE CONNECTOR RAMP SECTION
1/2" = 1'-0" Ref. 1/ A143



3 GARAGE CONNECTOR STAIR SECTION
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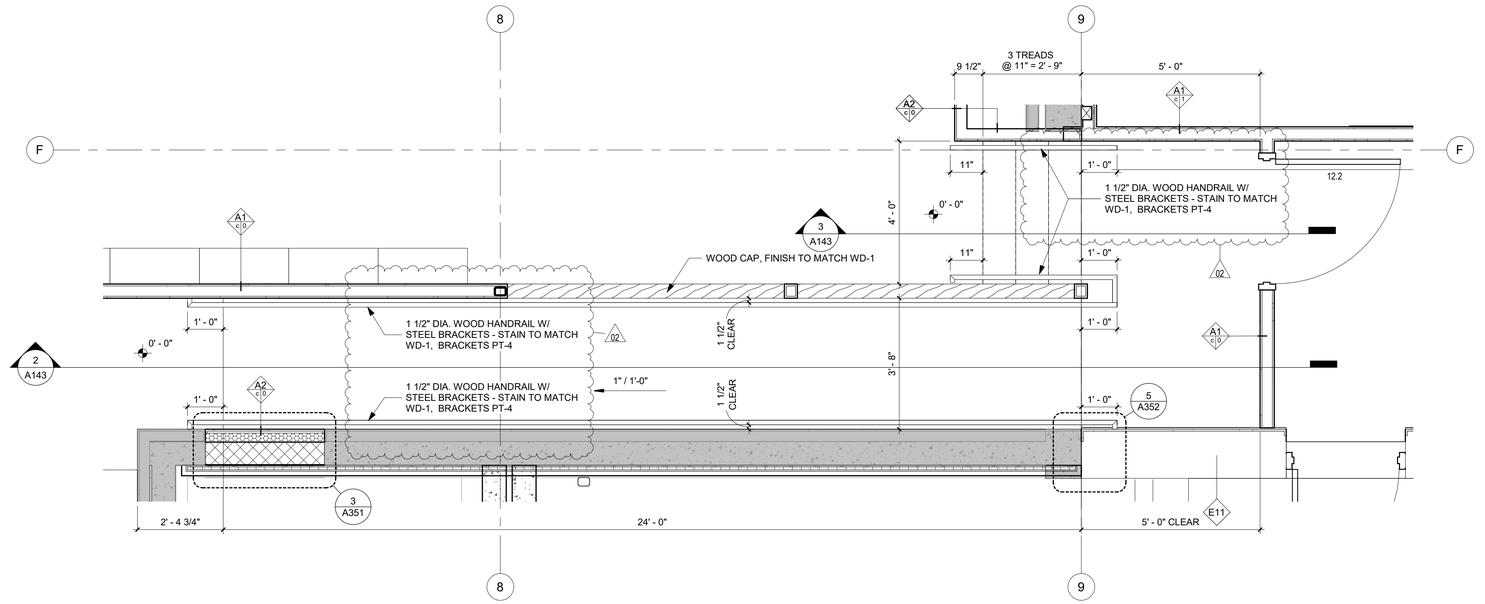

1 ENLARGED RAMP/STAIR PLAN - LOWER LEVEL
1/2" = 1'-0" Ref. 1/ A111

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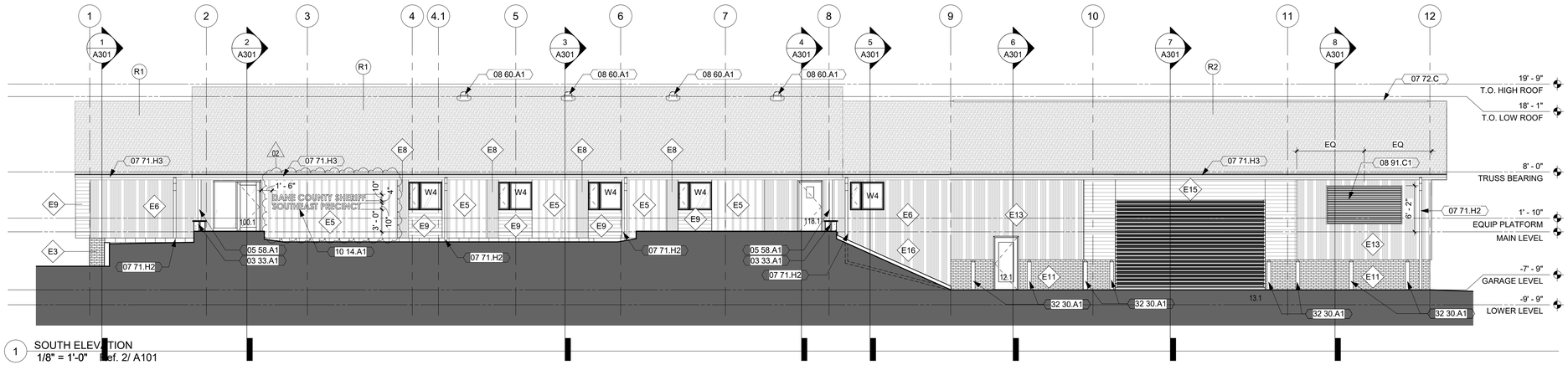
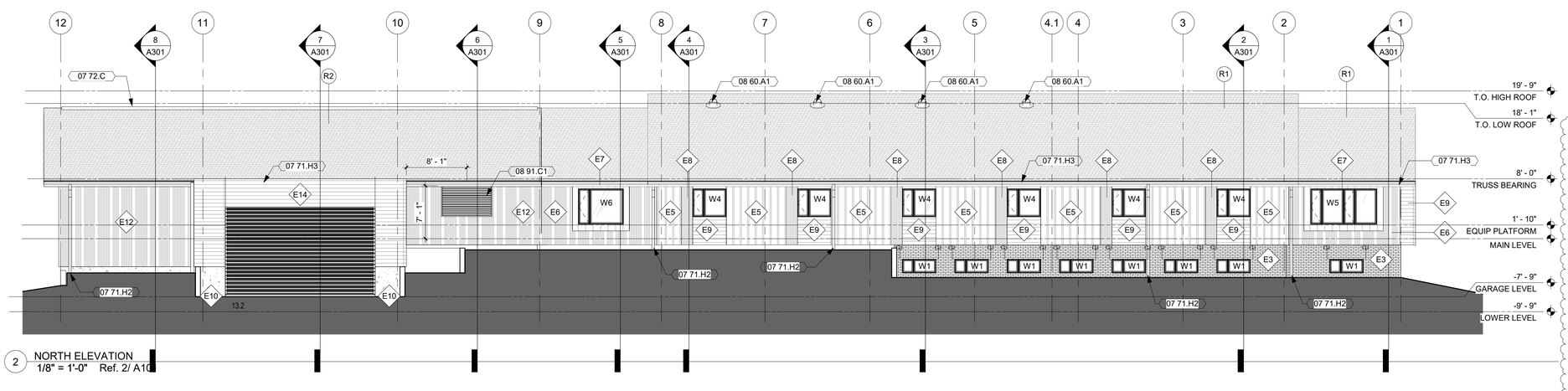
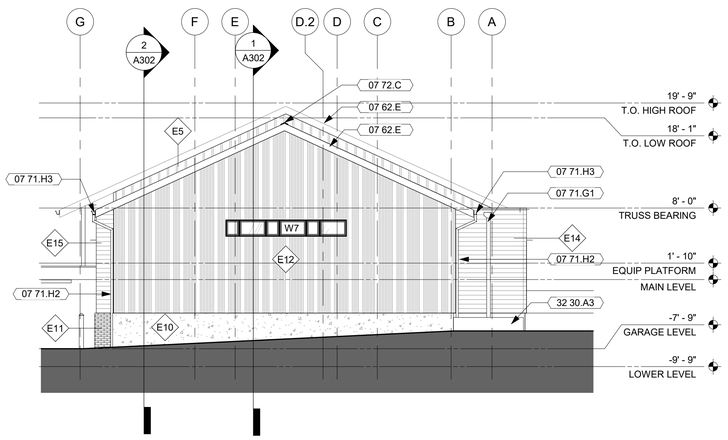


1 SOUTH ELEVATION
1/8" = 1'-0" Ref. 2/ A101



2 NORTH ELEVATION
1/8" = 1'-0" Ref. 2/ A101



3 EAST ELEVATION
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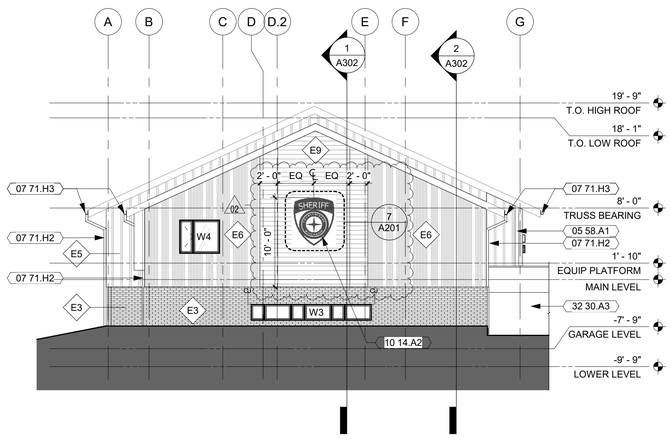
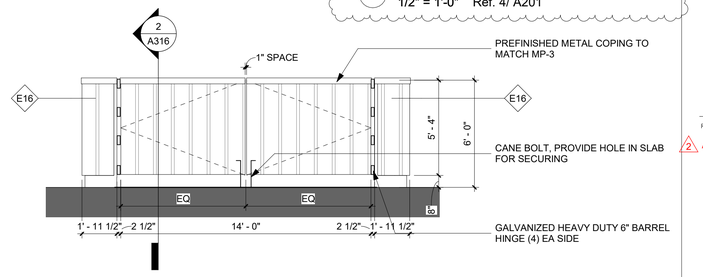


4 WEST ELEVATION
1/8" = 1'-0" Ref. 2/ A101

7 SHIELD SIGN DETAIL
1/2" = 1'-0" Ref. 4/ A201



5 TRASH ENCLOSURE FRONT ELEVATION
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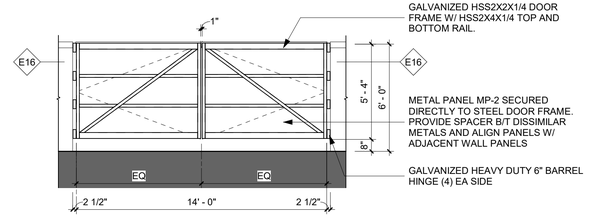

6 TRASH ENCLOSURE DOOR FRAME ELEVATION
1/4" = 1'-0" Ref. 3/ A101

KEYNOTE LEGEND

03 33.A1	POURED CONCRETE BENCH WITH WOOD TOP, INTEGRATED LIGHTING.
05 05.A4	CANE BOLT, PROVIDE HOLE IN SLAB FOR SECURING
05 05.A5	GALVANIZED HEAVY DUTY 6" BARREL HINGE (4) EA SIDE
05 12.E1	GALVANIZED HSS2X2X1/4 DOOR FRAME W/ HSS2X4X1/4 TOP AND BOTTOM RAIL.
05 58.A1	SHEET METAL WRAP AT COLUMN TO MATCH MP-3
07 42.B1	METAL PANEL MP-2 SECURED DIRECTLY TO STEEL DOOR FRAME. PROVIDE SPACER B/T DISSIMILAR METALS AND ALIGN PANELS W/ ADJACENT WALL PANELS
07 62.E	PREFINISHED METAL FASCIA & TRIM TO MATCH MP-3
07 71.B1	PREFINISHED METAL COPING TO MATCH MP-3
07 71.G1	ROOF SCUPPER & DOWNSPOUT. MATCH MP-3.
07 71.H2	PREFINISHED METAL DOWNSPOUT TO MATCH MP-3
07 71.H3	PREFINISHED METAL GUTTER AND FASCIA TO MATCH MP-3
07 72.C	CONTINUOUS RIDGE VENT (ADDITION ONLY)
08 60.A1	14" TUBULAR SKYLIGHT
08 91.C1	FIXED LOUVER - COORDINATE W/ MECHANICAL. MATCH FINISH OF MP-2
10 14.A1	FABRICATED METAL DIMENSIONAL LETTER SIGN, FINISH TO MATCH MP-3.
10 14.A2	CUSTOM ALUMINUM PLATE BUILDING SIGN WITH LED BACKLIT ACRYLIC LETTERS AND GRAPHIC, ALUMINUM FINISH TO MATCH MP-3
32 30.A1	CONCRETE FILLED STEEL PIPE BOLLARD
32 30.A3	BLOCK RETAINING WALL - REFER TO CIVIL

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Key Plan

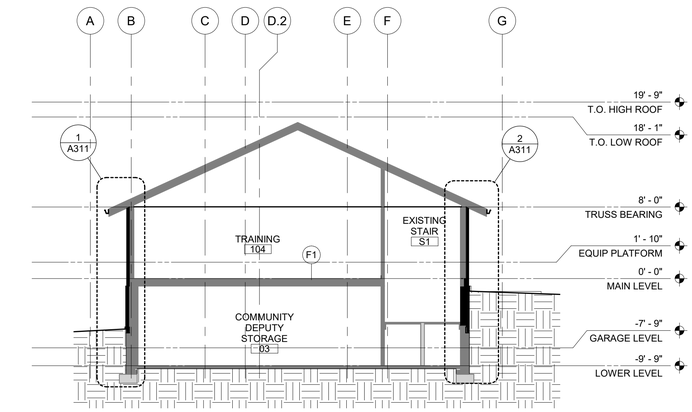
Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

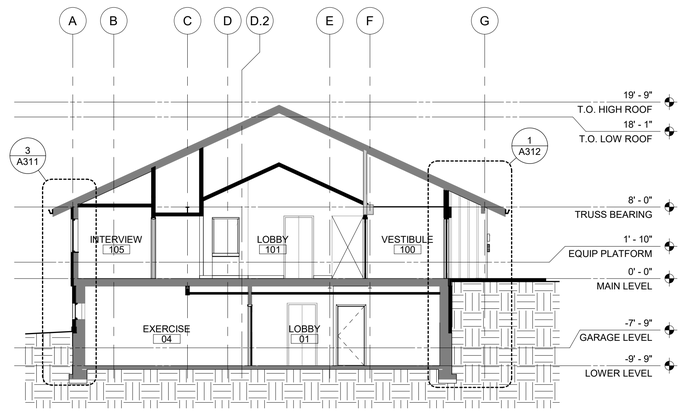
Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
EXTERIOR ELEVATIONS

Sheet Number
A201



1 NORTH-SOUTH SECTION 01
1/8" = 1'-0" Ref. 1/ A101



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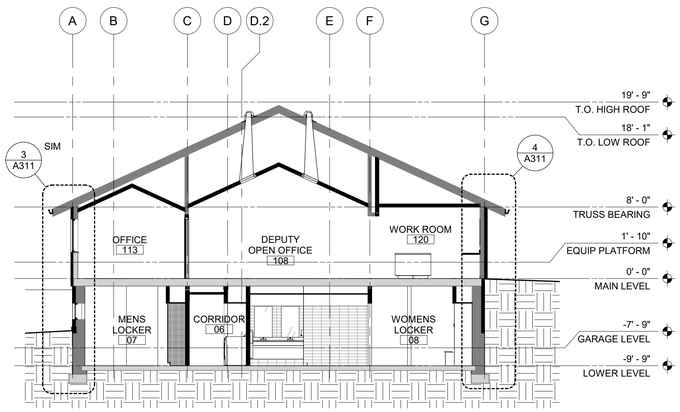
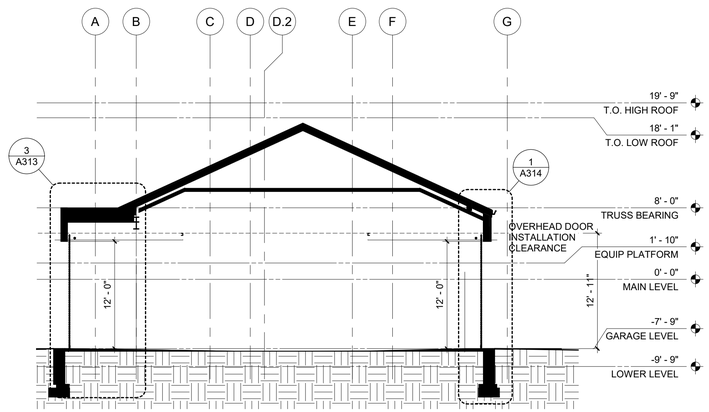


3 NORTH-SOUTH SECTION 03
1/8" = 1'-0" Ref. 1/ A101

4 NORTH-SOUTH SECTION 04
1/8" = 1'-0" Ref. 1/ A101

5 NORTH-SOUTH SECTION 05
1/8" = 1'-0" Ref. 1/ A101

6 NORTH-SOUTH SECTION 06
1/8" = 1'-0" Ref. 1/ A101



7 NORTH-SOUTH SECTION 07
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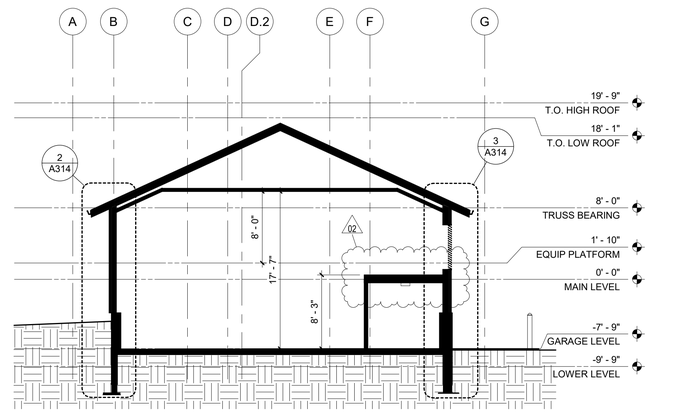

8 NORTH-SOUTH SECTION 08
1/8" = 1'-0" Ref. 1/ A101

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Key Plan

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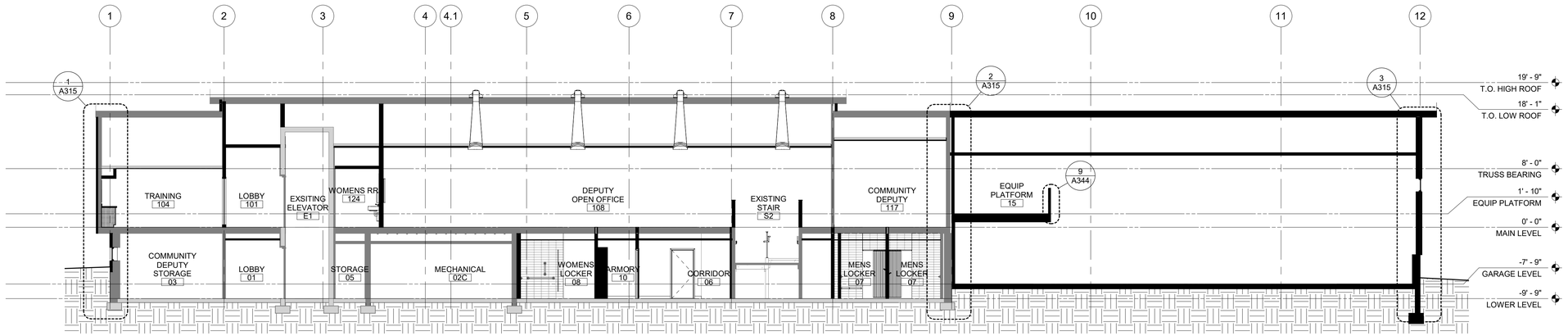
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
BUILDING SECTIONS

Sheet Number
A301



1 EAST-WEST SECTION 01
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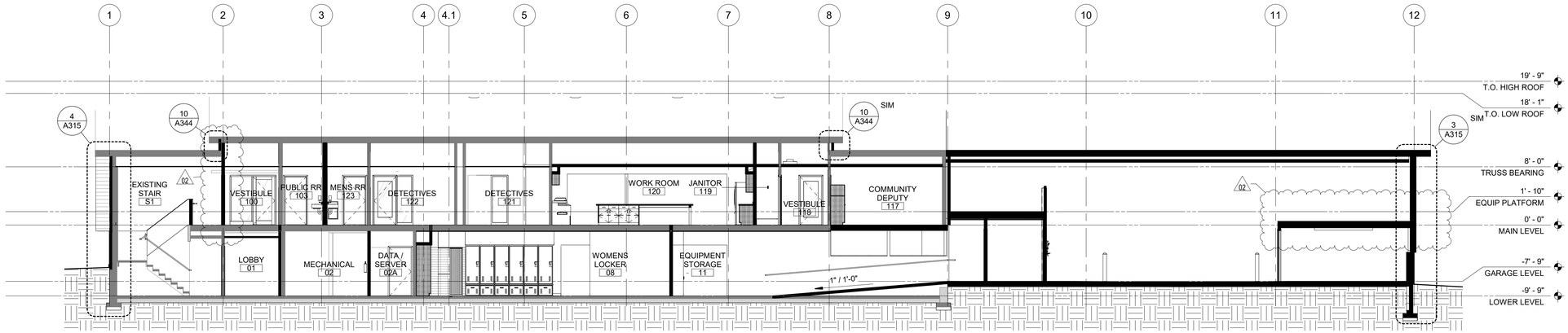

2 EAST-WEST SECTION 02
1/8" = 1'-0" Ref. 1/ A101

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Key Plan

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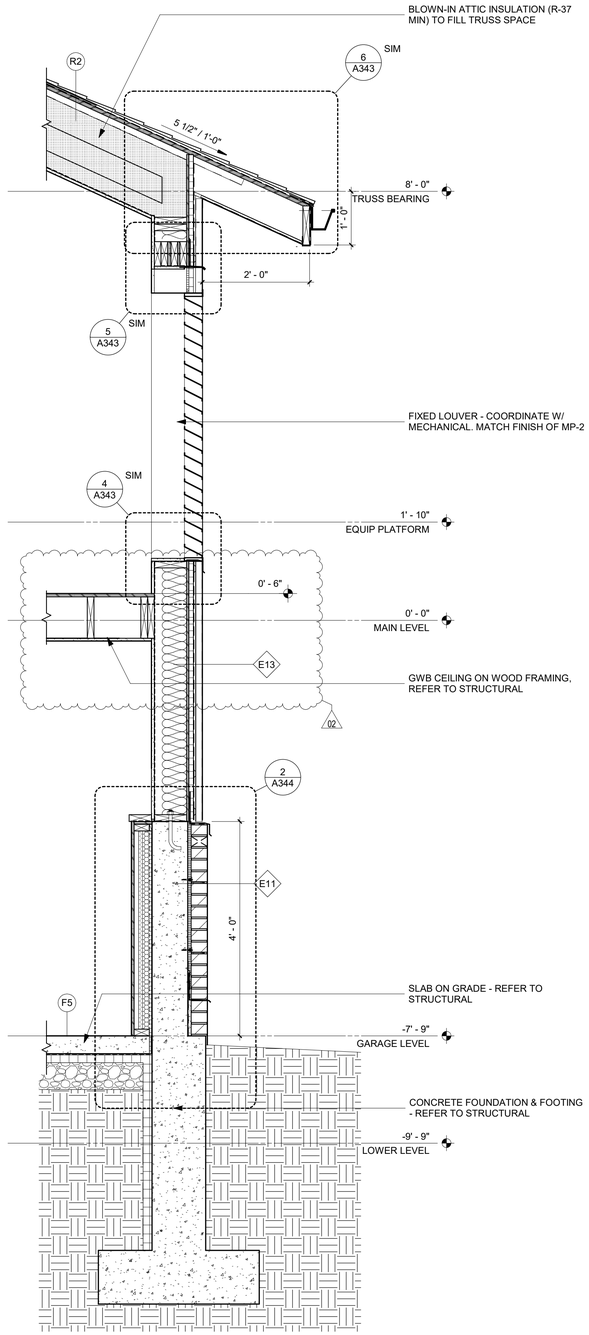
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
BUILDING SECTIONS

Sheet Number
A302



3 WALL SECTION
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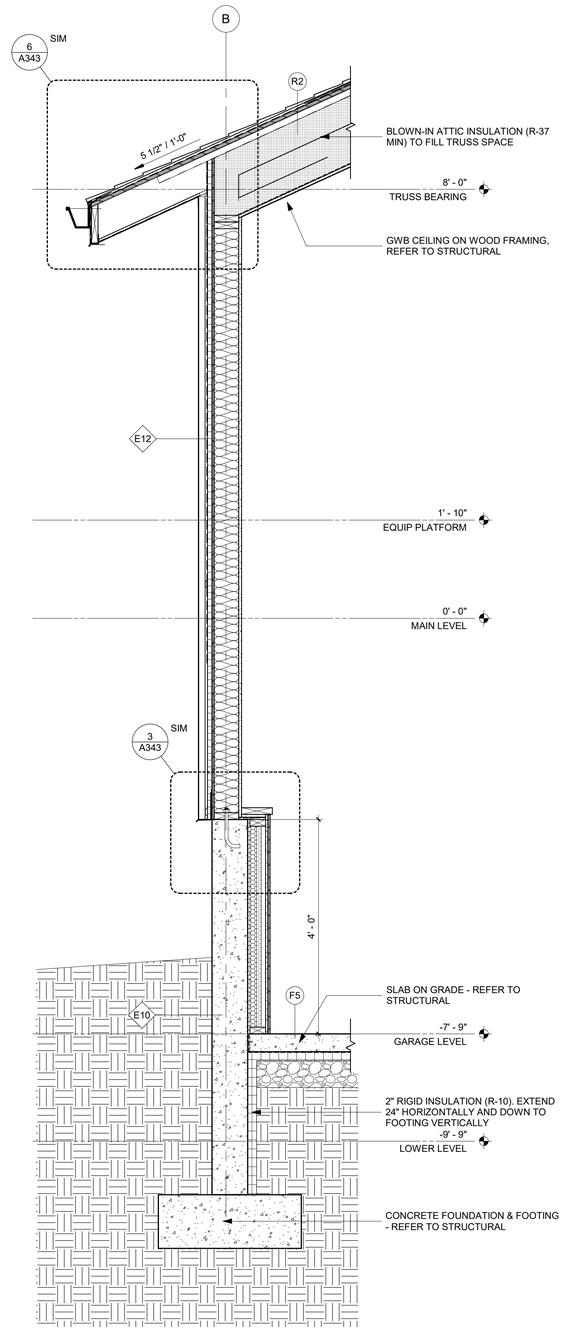

2 WALL SECTION
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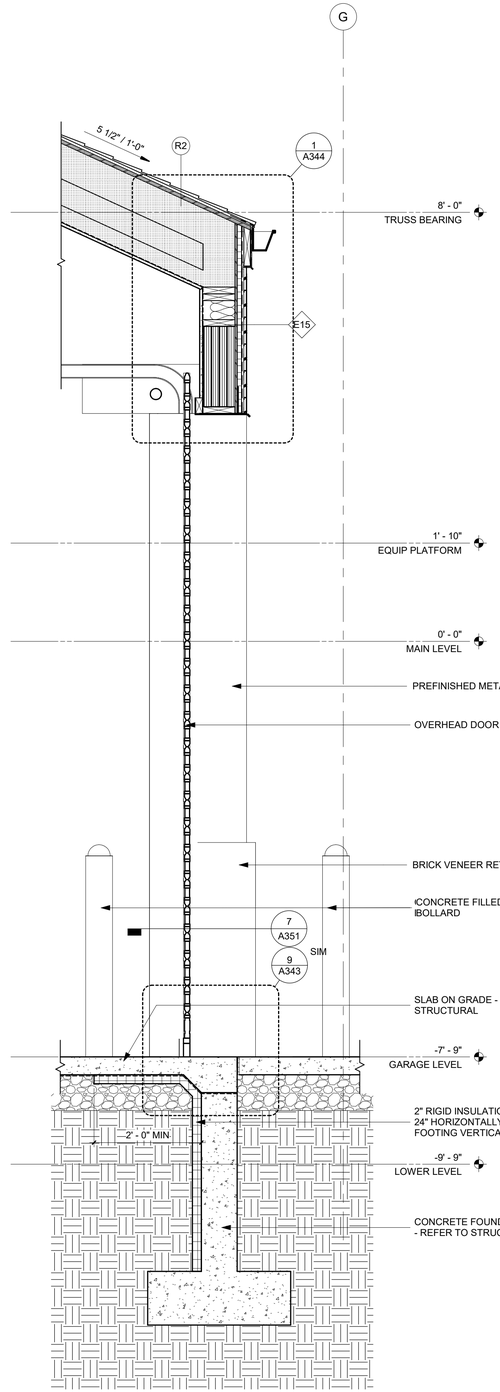

1 WALL SECTION
3/4" = 1'-0" Ref. 7/ A301

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Key Plan

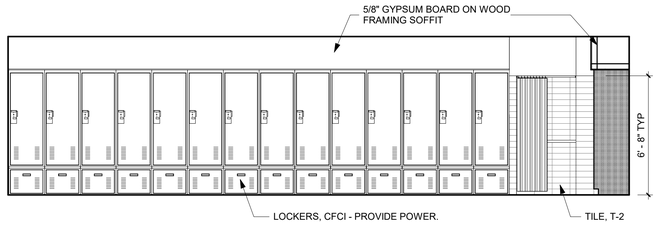
Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

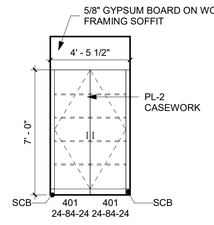
Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
WALL SECTIONS

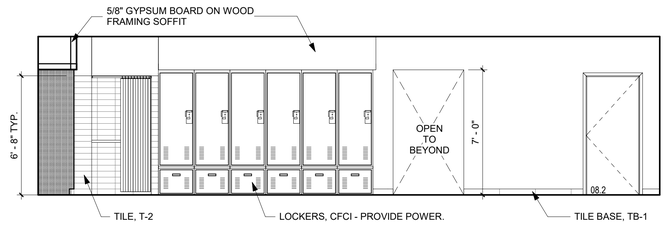
Sheet Number
A314



1 SOUTH AT WOMENS LOCKER
1/4" = 1'-0" Ref. 1/ A111



2 WEST AT WOMENS LOCKER STORAGE
1/4" = 1'-0" Ref. 1/ A111



3 NORTH AT WOMENS LOCKER
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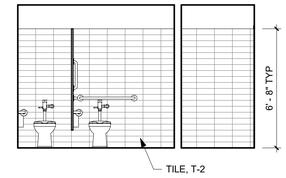

4 WEST AT WOMENS LOCKER
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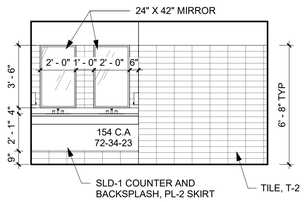

5 EAST AT WOMENS LOCKER
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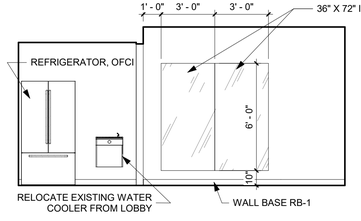
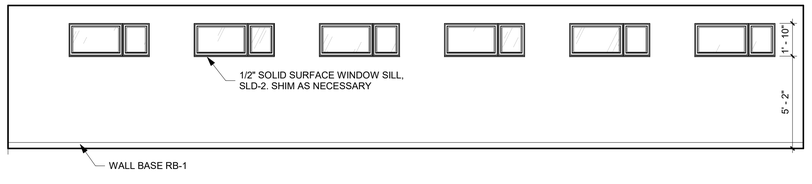


6 WEST AT EXERCISE
1/4" = 1'-0" Ref. 1/ A111



7 NORTH AT EXERCISE
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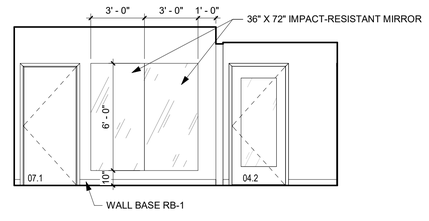

8 EAST AT EXERCISE
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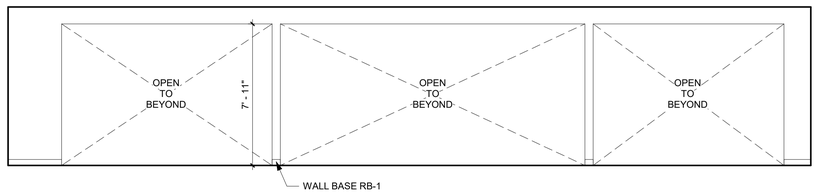
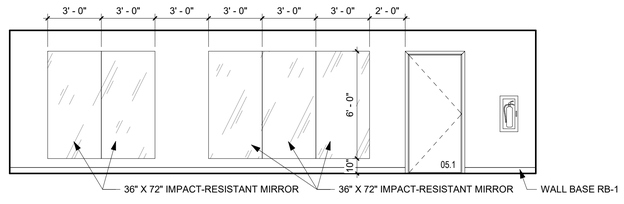


9 SOUTH AT EXERCISE
1/4" = 1'-0" Ref. 1/ A111



9A SOUTH AT EXERCISE HALL
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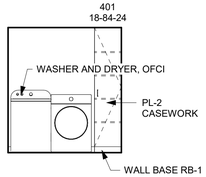

10 SOUTH AT LAUNDRY
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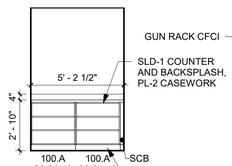
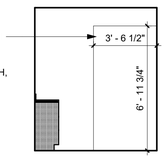
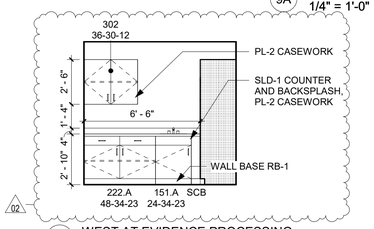


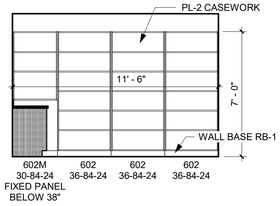
11 SOUTH AT ARMORY
1/4" = 1'-0" Ref. 1/ A111



12 WEST AT ARMORY
1/4" = 1'-0" Ref. 1/ A111



13 WEST AT EVIDENCE PROCESSING
1/4" = 1'-0" Ref. 1/ A111



14 NORTH AT EVIDENCE PROCESSING
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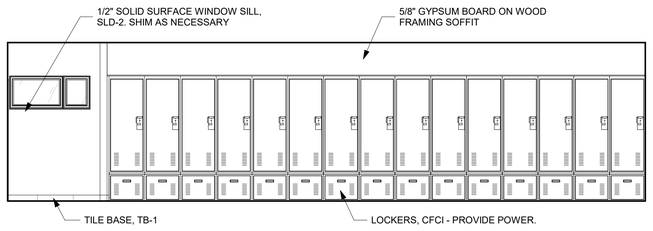
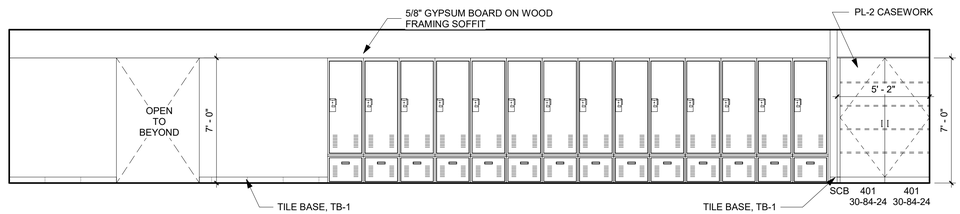


15 NORTH AT MENS LOCKER
1/4" = 1'-0" Ref. 1/ A111



16 SOUTH AT MENS LOCKER
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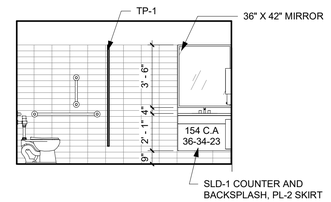

17 EAST AT MENS LOCKER
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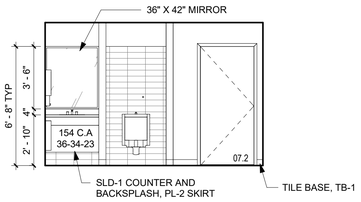

18 WEST AT MEN'S LOCKER
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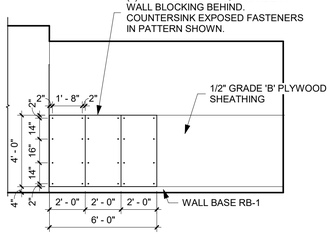

19 SOUTH AT GARAGE
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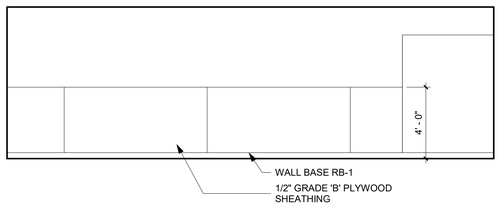

20 WEST AT GARAGE
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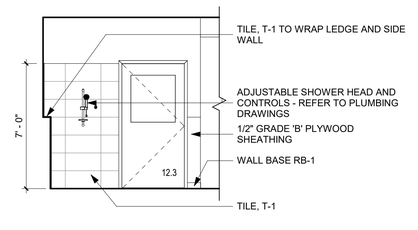
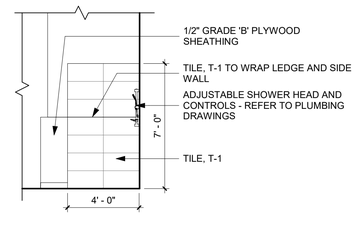


21 WEST AT GARAGE SHOWER
1/4" = 1'-0" Ref. 2/ A111



22 SOUTH AT GARAGE SHOWER
1/4" = 1'-0" Ref. 2/ A111

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Key Plan

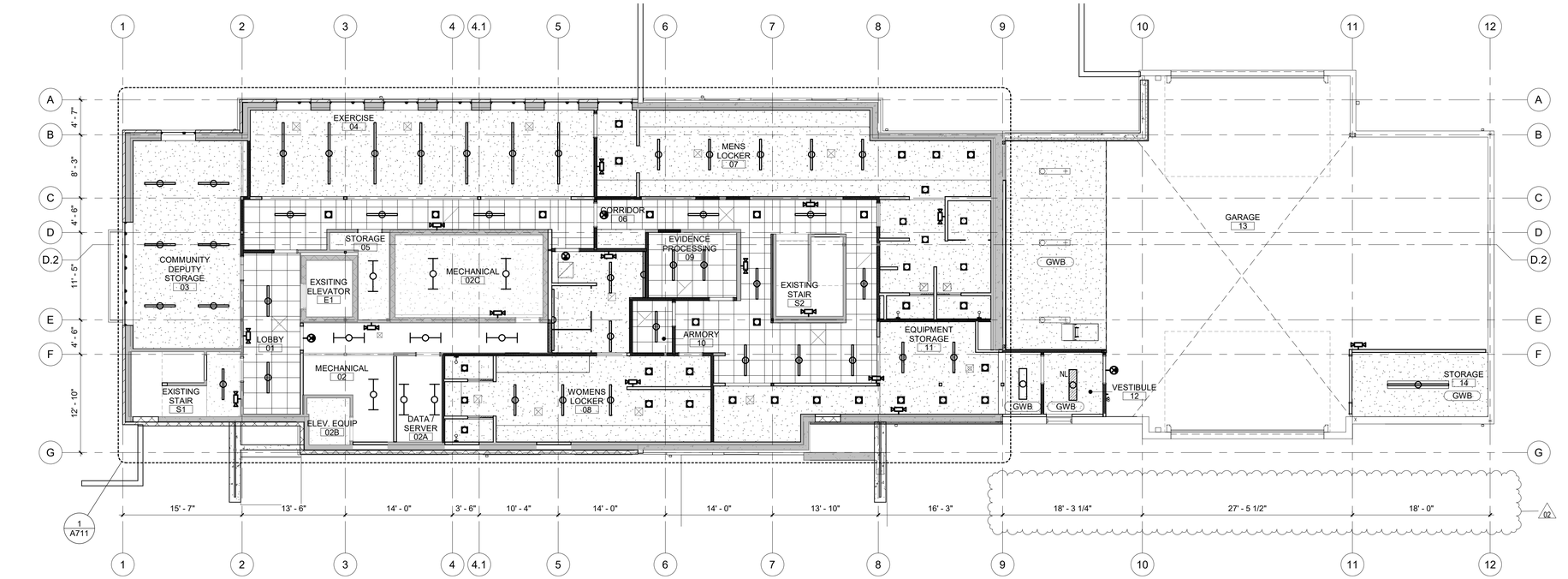
Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

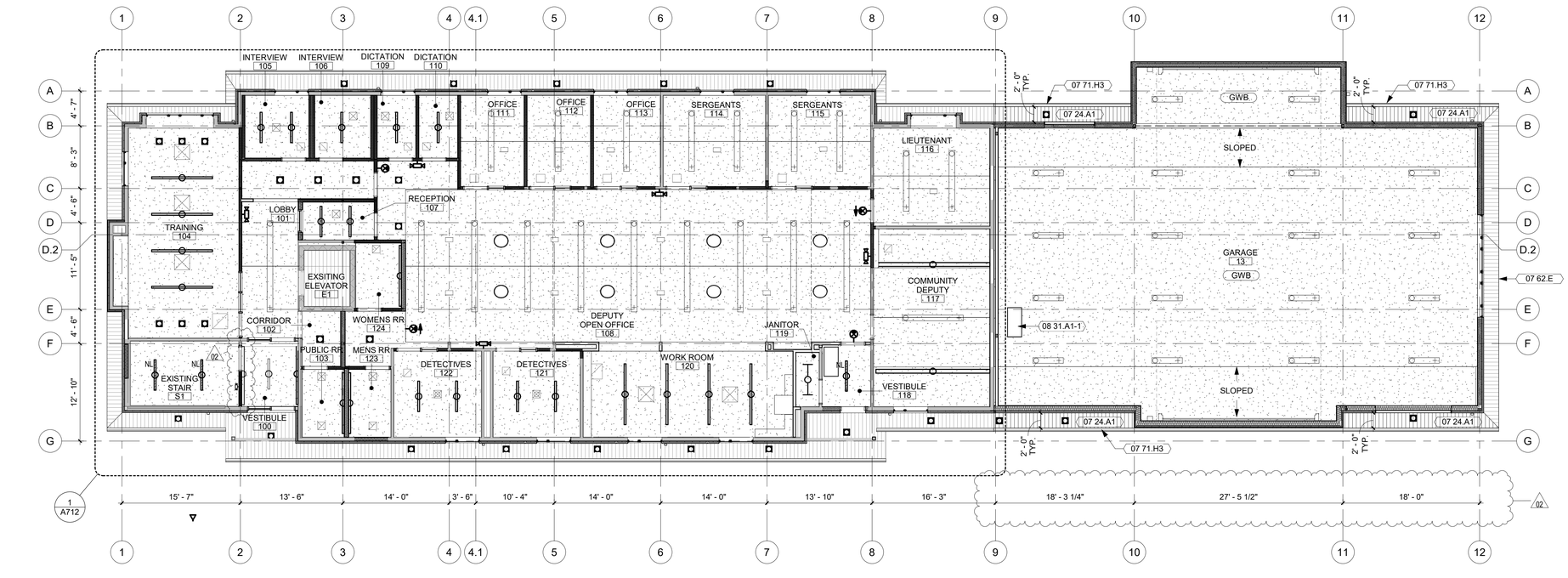
Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
INTERIOR ELEVATIONS

Sheet Number
A601



1 REFLECTED CEILING PLAN - LOWER LEVEL
1/8" = 1'-0"



2 REFLECTED CEILING PLAN - MAIN LEVEL
1/8" = 1'-0"

GENERAL NOTES

1. CEILINGS ARE TYPE A AND INSTALLED TO MATCH EXISTING ELEVATION (8'-2") UNLESS NOTED OTHERWISE
2. CEILING-MOUNTED FIXTURES, SPRINKLERS AND EQUIPMENT SHALL BE CENTERED IN CEILING PANELS OR GYPSUM BOARD SOFFITS AND EQUALLY SPACED UNLESS NOTED OTHERWISE
3. CENTER CEILING GRID IN ROOMS AS SHOWN UNLESS NOTED OTHERWISE.
4. CONCEALED SPRINKLER HEAD COVERS SHALL BE PAINTED BY MANUFACTURER TO MATCH ADJACENT SOFFIT/ACP UNLESS NOTED OTHERWISE.
5. COORDINATE LOCATIONS OF EXIT LIGHTS AND EMERGENCY LIGHTS SHOWN ON ARCHITECTURAL DRAWINGS. IN THE EVENT OF A DISCREPANCY, VERIFY WITH ARCHITECT PRIOR TO INSTALLATION.
6. CEILING FIXTURE DIMENSIONS ARE TAKEN FROM CENTERLINE OF FIXTURE UNLESS NOTED OTHERWISE.
7. REFER TO ARCHITECTURAL DRAWINGS (ELEVATIONS & REFLECTED CEILING PLANS) FOR ALL MECHANICAL AND ELECTRICAL DEVICE AND FIXTURE LOCATIONS & MOUNTING HEIGHTS. IF NOT CLEARLY SPECIFIED, CONTACT ARCHITECT FOR FURTHER CLARIFICATION. MECHANICAL & ELECTRICAL DRAWINGS ARE FOR FIXTURE TYPE REFERENCE ONLY.
8. PAINT ALL EXPOSED STRUCTURE, DECK, DUCTWORK, CONDUIT, ETC. IN AREAS NOTED TO BE OPEN TO STRUCTURE UNLESS NOTED OTHERWISE. PAINTING OF EXPOSED STRUCTURE TO BE DONE AFTER ALL UTILITIES ARE INSTALLED.
9. PAINT GYP CEILINGS PT-2A / PT-2B UNLESS NOTED OTHERWISE.

KEYNOTE LEGEND

07 24.A1	VENTED METAL SOFFIT
07 62.E	PREFINISHED METAL FASCIA & TRIM TO MATCH MP-3
07 71.H3	PREFINISHED METAL GUTTER AND FASCIA TO MATCH MP-3
08 31.A1-1	PULL-DOWN ALUMINUM ACCESS LADDER. COORDINATE EXACT LOCATION IN FIELD W/ ARCHITECT. REFER TO SPECS FOR TYPE AND LOCATION

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Department of Public Works, Highway & Transportation, Engineering Division
1919 Alliant Energy Center Way
Madison, Wisconsin 53713

Project
DANE COUNTY SHERIFF SE PRECINCT REMODEL
125 VETERANS ROAD
STOUGHTON, WI 53589

Civil Engineer and Landscape Architect
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Key Plan

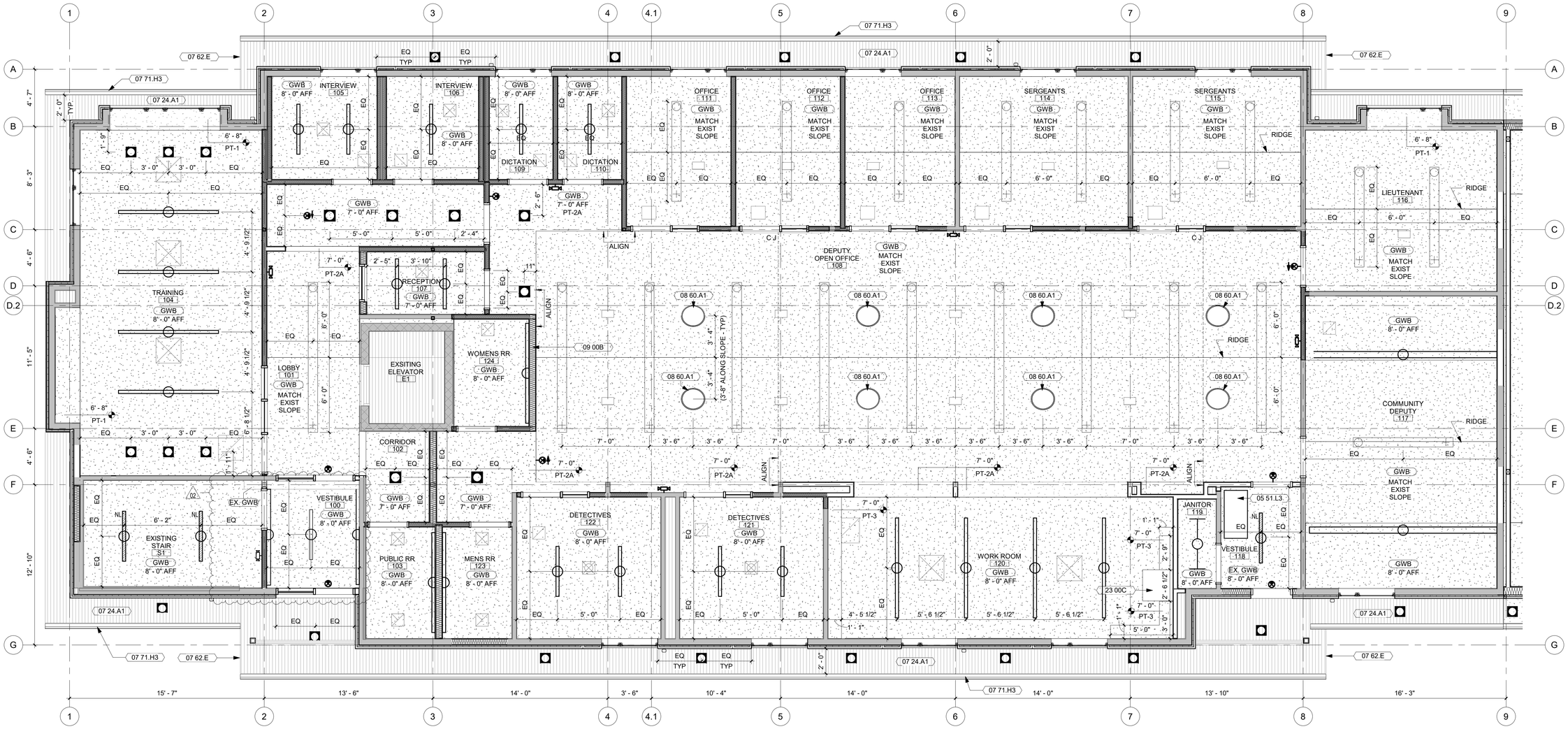
Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
REFLECTED CEILING PLANS

Sheet Number
A701



1 PARTIAL ENLARGED REFLECTED CEILING PLAN - MAIN LEVEL
1/4" = 1'-0" Ref. 2/ A701

KEYNOTE LEGEND

05 51.L3	PULL-DOWN ALUMINUM ACCESS LADDER. HOLD TIGHT TO ROOM CORNER AND FIT WITHIN EXISTING ROOF TRUSSES. COORDINATE EXACT LOCATION IN FIELD W/ ARCHITECT
07 24.A1	VENTED METAL SOFFIT
07 62.E	PREFINISHED METAL FASCIA & TRIM TO MATCH MP-3
07 71.H3	PREFINISHED METAL GUTTER AND FASCIA TO MATCH MP-3
08 60.A1	14" TUBULAR SKYLIGHT
09 00B	EXTEND WOOD FRAMING AND GYP. BD. TO UNDERSIDE OF VAULTED GYP. BD. CEILING ABOVE, TYP.
23 00C	RANGE HOOD CFCI, REFER TO MECHANICAL

GENERAL NOTES

1. CEILINGS ARE TYPE A AND INSTALLED TO MATCH EXISTING ELEVATION (8'-2") UNLESS NOTED OTHERWISE
2. CEILING-MOUNTED FIXTURES, SPRINKLERS AND EQUIPMENT SHALL BE CENTERED IN CEILING PANELS OR GYPSUM BOARD SOFFITS AND EQUALLY SPACED UNLESS NOTED OTHERWISE
3. CENTER CEILING GRID IN ROOMS AS SHOWN UNLESS NOTED OTHERWISE.
4. CONCEALED SPRINKLER HEAD COVERS SHALL BE PAINTED BY MANUFACTURER TO MATCH ADJACENT SOFFIT/ACP UNLESS NOTED OTHERWISE.
5. COORDINATE LOCATIONS OF EXIT LIGHTS AND EMERGENCY LIGHTS SHOWN ON ARCHITECTURAL DRAWINGS. IN THE EVENT OF A DISCREPANCY, VERIFY WITH ARCHITECT PRIOR TO INSTALLATION.
6. CEILING FIXTURE DIMENSIONS ARE TAKEN FROM CENTERLINE OF FIXTURE UNLESS NOTED OTHERWISE.
7. REFER TO ARCHITECTURAL DRAWINGS (ELEVATIONS & REFLECTED CEILING PLANS) FOR ALL MECHANICAL AND ELECTRICAL DEVICE AND FIXTURE LOCATIONS & MOUNTING HEIGHTS. IF NOT CLEARLY SPECIFIED, CONTACT ARCHITECT FOR FURTHER CLARIFICATION. MECHANICAL & ELECTRICAL DRAWINGS ARE FOR FIXTURE TYPE REFERENCE ONLY.
8. PAINT ALL EXPOSED STRUCTURE, DECK, DUCTWORK, CONDUIT, ETC. IN AREAS NOTED TO BE OPEN TO STRUCTURE UNLESS NOTED OTHERWISE. PAINTING OF EXPOSED STRUCTURE TO BE DONE AFTER ALL UTILITIES ARE INSTALLED.
9. PAINT GYP CEILINGS PT-2A / PT-2B UNLESS NOTED OTHERWISE.

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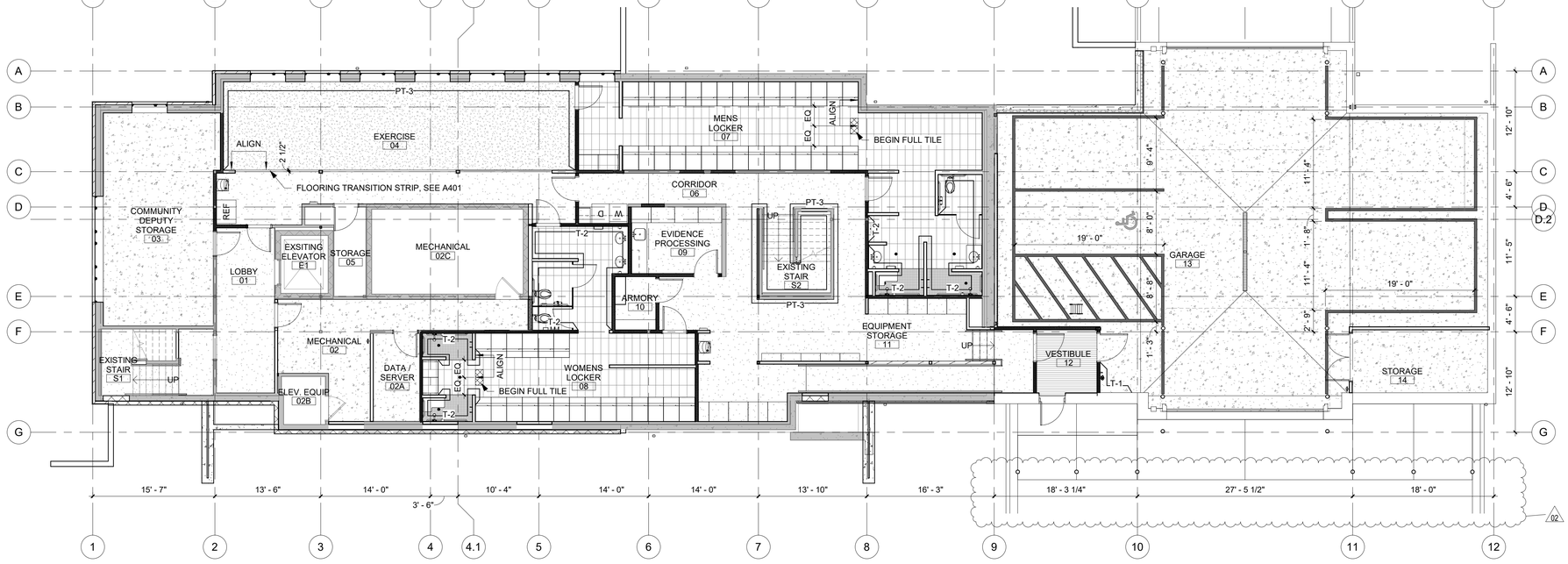
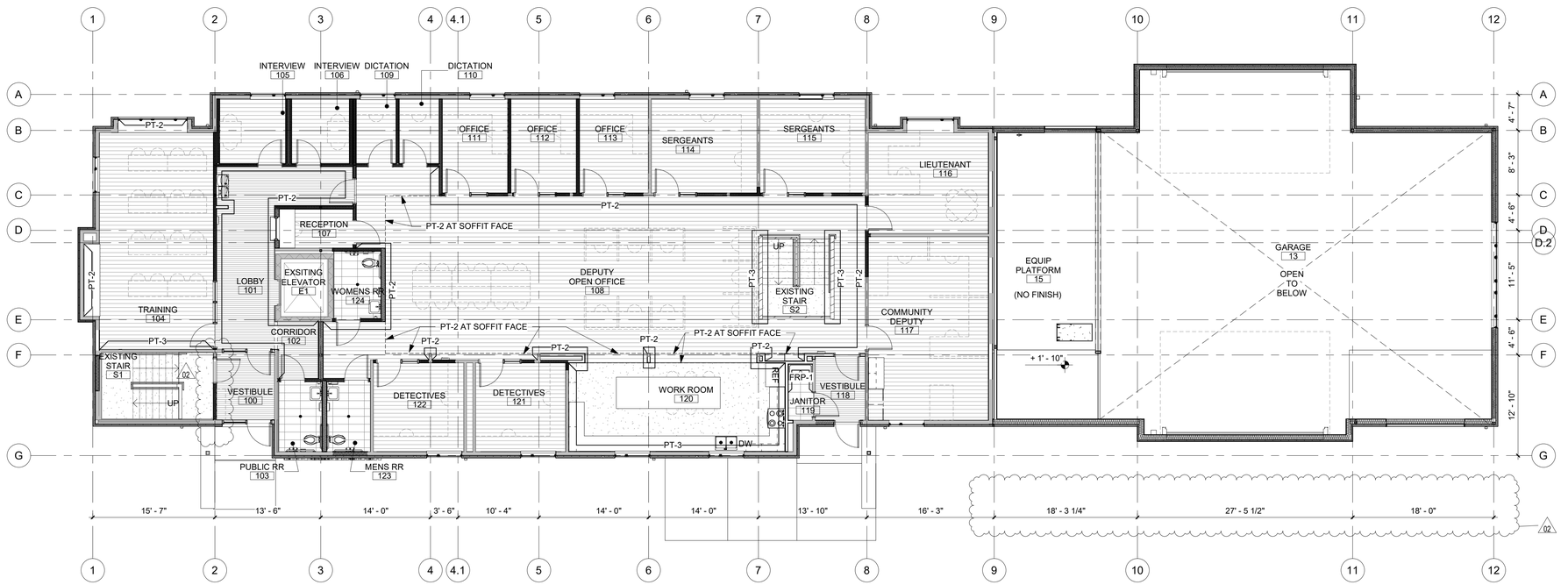
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
ENLARGED REFLECTED CEILING PLANS

Sheet Number
A712



1 FINISH PLAN - LOWER LEVEL
1/8" = 1'-0"



2 FINISH PLAN - MAIN LEVEL
1/8" = 1'-0"

GENERAL NOTES

1. REFER TO FINISH PLANS, REFLECTED CEILING PLANS, AND ELEVATIONS FOR LOCATION AND EXTENT OF FINISHES.
2. PAINT ALL INTERIOR MISCELLANEOUS METAL GRILLES, LOUVERS ACCESS PANELS, PIPES AND CONDUIT EXPOSED TO VIEW TO MATCH THE WALLS IN WHICH THEY OCCUR UNLESS OTHERWISE NOTED.
3. ALL EXPOSED DRYWALL TO RECEIVE PAINT UNLESS NOTED OTHERWISE.
4. PAINT ALL REVEALS TO MATCH THE WALLS IN WHICH THEY OCCUR.
5. PAINT ALL LIGHT FIXTURE TRIMS AND FLANGES OF LINEAR DIFFUSERS TO MATCH THE COLOR TO THE CEILING IN WHICH THEY OCCUR.
6. PAINT ALL EXPOSED SPEAKERS WITH A PAINT THAT WILL NOT DEGRADE THEIR ACOUSTICAL PERFORMANCE IN A COLOR TO MATCH THE WALL OR CEILING IN WHICH THEY OCCUR.
7. ALL PAINTED HOLLOW METAL DOORS AND FRAMES TO BE PAINTED TO MATCH THE COLOR OF THE WALL IN WHICH THEY OCCUR U.N.O
8. REFER TO ROOM FINISH SPECIFICATION FOR CARPET PATTERN AND DIRECTION & FOR ROOM FINISH SPECIFICATIONS AND ADDITIONAL INFORMATION
9. ALL FLOORING MATERIAL TRANSITIONS, TERMINATION AND SEAM LOCATIONS ARE TO BE CENTERED UNDER DOOR LEAFS IN CLOSED POSITION U.N.O.
10. EXTEND FLOORING INTO TOE SPACES, DOOR REVEALS, CLOSETS AND SIMILAR OPENINGS U.N.O.
11. PROVIDE FLOORING TRANSISTION STRIPS AT FLOOR MATERIAL CHANGES. COORDINATE FLOORING TRANSITION MATERIAL, PROFILE, AND COLOR WITH ARCHITECT PRIOR TO INSTALLATION-REFER TO DETAIL DRAWINGS FOR DESIGN INTENT.
12. POWER AND DATA LOCATIONS ARE TO BE COORDINATED IN THE FIELD WITH FINAL FURNISHING PLANS PRIOR TO INSTALLATION OF BOXES, FITTINGS, AND RACEWAYS.
13. ALL WALLS TO BE PAINTED PT-1 U.N.O. REFER TO ROOM FINISH SCHEDULE FOR ADDITIONAL FINISH INFORMATION.
14. ALL ELECTRICAL COVER PLATES TO BE BLACK AT PT-3, WHITE ALL OTHER LOCATIONS.

FINISH LEGEND

- T-1
- CPT-1
- CPT-2
- RF-1 / RF-3
- RF-2
- SEALED CONCRETE
- EXISTING/ NO FINISH

WALL FINISH TO BE PT-1 / PT-1A U.N.O.

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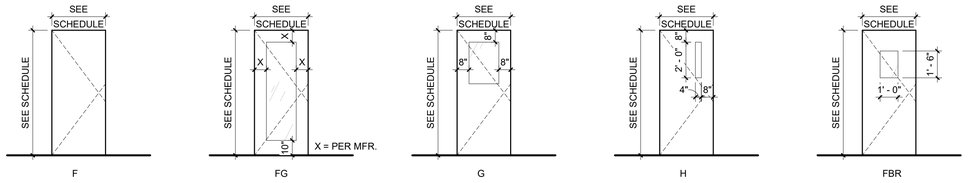
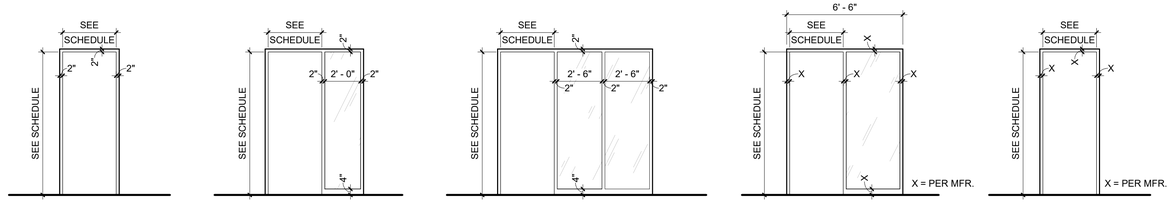
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
FINISH FLOOR PLANS

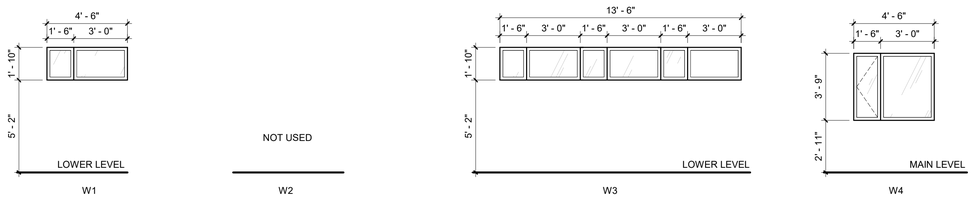
Sheet Number
A801

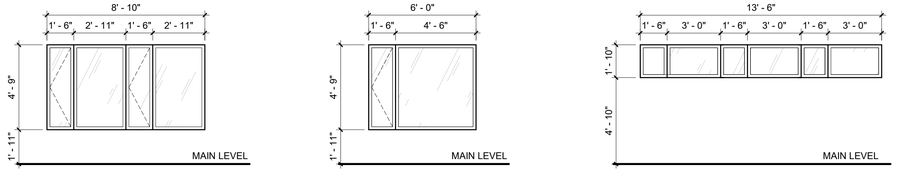


DOOR PANEL TYPES



DOOR FRAME AND SIDELITE ELEVATIONS





WINDOW ELEVATIONS (FROM EXTERIOR)

NOTES:
1. ALL EXTERIOR GLAZING WITHIN 8' - 0" OF GROUND PLANE TO RECEIVE SAFETY/SECURITY FILM APPLIED TO EXTERIOR GLASS SURFACE.
2. OVERALL EXISTING WINDOW OPENINGS SHOWN ARE APPROXIMATE. VERIFY ALL WINDOW OPENING DIMENSIONS IN THE FIELD PRIOR TO FABRICATION.
3. WINDOWS LOCATED IN ROOMS INDICATED IN ROOM FINISH SCHEDULE TO RECEIVE MANUAL ROLLER SHADES, REFER TO SPECIFICATIONS FOR TYPE AND FABRIC.

GENERAL NOTES - DOORS & FRAMES

- SEE FRAME PLANS AND INTERIOR ELEVATIONS FOR DIMENSIONAL SIZES WITH MATERIALS OF FRAMES.
- PREPARE DOOR AND FRAME FOR PAINT - BONDO DENTS AND SAND SCRATCHES SMOOTH.
- PAINT HOLLOW METAL DOORS AND FRAMES AS SCHEDULED.
- REFER TO FLOOR PLANS AND INTERIOR ELEVATIONS FOR DOOR/FRAME ORIENTATION

DOOR SCHEDULE

DOOR NUMBER	PANEL QUANTITY	PANEL TYPE	PANEL WIDTH	PANEL HEIGHT	PANEL 1 WIDTH	PANEL 2 WIDTH	PANEL MATERIAL	PANEL FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FIRE RATING	HARDWARE SET	REMARKS
02.1	1	F	3' - 0"	6' - 8"	3' - 0"		HM	PT-1A	01	HM	PT-4	NOT RATED	10.0	
02A.1	1	F	3' - 0"	6' - 8"	3' - 0"		HM	PT-1A	01	HM	PT-4	NOT RATED	10.0	
02B.1	1	EX	3' - 0"	6' - 8"	3' - 0"		EX	PT-1A	EX	EX	PT-4	EX (1-HR)	EX	
02C.1	1	EX	3' - 0"	6' - 8"	3' - 0"		EX	PT-1A	EX	EX	PT-4	EX (1-HR)	EX	
03.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	8.0	
04.1	1	G	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	14.0	
04.2	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	23.0	
05.1	1	F	3' - 0"	6' - 8"	3' - 0"		HM	PT-1A	01	HM	PT-4	NOT RATED	11.0	
07.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	22.0	
07.2	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	22.0	
08.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	23.0	
08.2	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	23.0	
09.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	8.0	
10.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	6.0	
12.1	1	FG	3' - 0"	7' - 0"	3' - 0"		ALUM.	BLACK ANOD.	01	ALUM.	BLACK ANOD.	NOT RATED	1.0	2
12.2	1	G	3' - 6"	7' - 0"	3' - 6"		HM	PT-1A	01	01	PT-4	NOT RATED	4.0	
12.3	1	G	3' - 6"	7' - 0"	3' - 6"		HM	PT-1A	01	01	PT-4	1 HR	4.0	
13.1	PER MFR.	OVERHEAD	20' - 0"	12' - 0"	20' - 0"		PER MFR.	BLACK	PER MFR.	PER MFR.	PER MFR.	NOT RATED	24.0	4
13.2	PER MFR.	OVERHEAD	20' - 0"	12' - 0"	20' - 0"		PER MFR.	BLACK	PER MFR.	PER MFR.	PER MFR.	NOT RATED	24.0	4
14.1	2	F	6' - 0"	7' - 0"	3' - 0"	3' - 0"	HM	PT-1A	01	HM	PT-4	NOT RATED	9.0	
100.1	1	FG	3' - 0"	6' - 8"	3' - 0"		ALUM.	BLACK ANOD.	04	ALUM.	BLACK ANOD.	NOT RATED	2.0	1
100.2	1	FG	3' - 0"	6' - 8"	3' - 0"		ALUM.	BLACK ANOD.	04	ALUM.	BLACK ANOD.	NOT RATED	3.0	
103.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	18.0	
104.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	03	HM	PT-4	NOT RATED	13.0	
105.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	17.0	
106.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	17.0	
107.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	16.0	
108.1	1	G	3' - 0"	6' - 8"	3' - 0"		PER MFR. W/ WD VENEER	STAIN TO MATCH WD-1	04	PER MFR.	PT-4	NOT RATED	6.0	3
109.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	20.0	
110.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	20.0	
111.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	02	HM	PT-4	NOT RATED	16.0	
112.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	02	HM	PT-4	NOT RATED	16.0	
113.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	02	HM	PT-4	NOT RATED	16.0	
114.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	02	HM	PT-4	NOT RATED	16.0	
115.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	02	HM	PT-4	NOT RATED	16.0	
116.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	16.0	
117.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	15.0	
118.1	1	FBR	3' - 0"	6' - 8"	3' - 0"		ALUM.	BLACK ANOD.	05	ALUM.	BLACK ANOD.	NOT RATED	1.0	2
118.2	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	21.0	
119.1	1	F	3' - 0"	6' - 8"	3' - 0"		HM	PT-1A	01	HM	PT-4	NOT RATED	19.0	
121.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	02	HM	PT-4	NOT RATED	17.0	
122.1	1	FG	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	02	HM	PT-4	NOT RATED	17.0	
123.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	18.0	
124.1	1	F	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	NOT RATED	18.0	
S1.1	1	H	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	1 HR	5.0	
S1.2	1	H	3' - 0"	6' - 8"	3' - 0"		WD	WD-1	01	HM	PT-4	1 HR	7.0	

REMARKS:
1. BULLET-RESISTANT ENTRANCE DOOR, SIDELITE AND FRAME.
2. BULLET-RESISTANT ENTRANCE DOOR AND FRAME.
3. BULLET-RESISTANT INTERIOR DOOR AND FRAME.
4. OVERHEAD COILING DOOR, HARDWARE AND OPERATOR.

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR FINISH	FLOOR BASE	WALL FINISH NORTH	WALL FINISH EAST	WALL FINISH SOUTH	WALL FINISH WEST	CEILING FINISH	WINDOW SHADES
LOWER LEVEL									
01	LOBBY	RF-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
02	MECHANICAL	SEALED CONC.*	RB-1	PT-1	PT-1	PT-1	PT-1	EX	
02A	DATA / SERVER	SEALED CONC.*	RB-1	PT-1	PT-1	PT-1	PT-1	EX	
02B	ELEV. EQUIP	EX	EX	EX	EX	EX	EX	EX	
02C	MECHANICAL	EX	EX	EX	EX	EX	EX	EX	
03	COMMUNITY DEPUTY STORAGE	SEALED CONC.*	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
04	EXERCISE	RF-1 / RF-2	RB-1	PT-3	PT-1 / PT-3	PT-1	PT-1 / PT-3	ACT-1 / PT-2A	No
05	STORAGE	EX	EX	EX	EX	EX	EX	EX	
06	CORRIDOR	RF-1	RB-1	PT-1	PT-1 / PT-3	PT-1 / PT-3	PT-1 / PT-3	ACT-1	
07	MENS LOCKER	T-1 / T-3	TB-1	PT-1A / T-2	PT-1A / T-2	PT-1A / T-2	PT-1A / T-2	PT-2B	Yes
08	WOMENS LOCKER	T-1 / T-3	TB-1	PT-1A / T-2	PT-1A / T-2	PT-1A / T-2	PT-1A / T-2	PT-2B	
09	EVIDENCE PROCESSING	RF-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
10	ARMORY	RF-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
11	EQUIPMENT STORAGE	RF-1	RB-1	PT-1B / PT-3	PT-1B	PT-1B	PT-1B	PT-2A	
12	VESTIBULE	CPT-2	RB-1	PT-1B	PT-1B	PT-1B	PT-1B	PT-2A	
13	GARAGE	SEALED CONC.	RB-1	PT-1	PT-1	PT-1 / T-1	PT-1 / T-1	PT-2A	No
14	STORAGE	SEALED CONC.	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
E1	EXSITING ELEVATOR	CPT-2	-	SEE SPEC	SEE SPEC	SEE SPEC	SEE SPEC	SEE SPEC	
MAIN LEVEL									
15	EQUIP PLATFORM	NONE	NONE	PT-1	PT-1	PT-1	-	PT-2A	
100	VESTIBULE	CPT-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
101	LOBBY	CPT-2	RB-1	PT-2	PT-2	PT-2	PT-2	PT-2A	
102	CORRIDOR	CPT-2	RB-1	PT-2	PT-1	PT-1	PT-2	PT-2A	
103	PUBLIC RR	T-1	TB-1	PT-1A	PT-1A	PT-1A	PT-1A	PT-2A	
104	TRAINING	CPT-1	RB-1	PT-1 / PT-2	PT-1	PT-3	PT-1 / PT-2	PT-2A	Yes
105	INTERVIEW	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
106	INTERVIEW	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
107	RECEPTION	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
108	DEPUTY OPEN OFFICE	CPT-1	RB-1	PT-1 / PT-2	PT-2 / PT-3	PT-1 / PT-2	PT-1 / PT-2 / PT-3	PT-2A	
109	DICTATION	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
110	DICTATION	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
111	OFFICE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
112	OFFICE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
113	OFFICE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
114	SERGEANTS	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
115	SERGEANTS	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
116	LIEUTENANT	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
117	COMMUNITY DEPUTY	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
118	VESTIBULE	CPT-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
119	JANITOR	T-1	TB-1	FRP-1	PT-1A / FRP-1	PT-1A	PT-1A / FRP-1	PT-2A	
120	WORK ROOM	RF-1	RB-1	PT-2	PT-3	PT-3	PT-3	PT-2A	Yes
121	DETECTIVES	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
122	DETECTIVES	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	Yes
123	MENS RR	T-1	TB-1	PT-1A	PT-1A	PT-1A	PT-1A	PT-2A	
124	WOMENS RR	T-1	TB-1	PT-1A	PT-1A	PT-1A	PT-1A	PT-2A	
S1	EXISTING STAIR	RF-3 / RF-1	RB-1	PT-1	PT-1	PT-1	PT-1	PT-2A	
S2	EXISTING STAIR	RF-3	RB-1	PT-3	PT-3	PT-3	PT-3	N/A	

REMARKS:
* REMOVE GLUE AND ANY OTHER DEBRIS FROM EXISTING CONCRETE FLOOR PRIOR TO SEALING

INTERIOR FINISH SPECIFICATIONS

CARPET

CPT-1
MANUFACTURER: INTERFACE
STYLE: ICE BREAKER
COLOR: 105775 QUARRY
SIZE: 50CM X 50CM
INSTALLATION: MONOLITHIC
APPLICATION: FIELD CARPET

CPT-2
MANUFACTURER: INTERFACE
STYLE: STEP REPEAT SR799
COLOR: 104935 GRANITE
SIZE: 50CM X 50CM
INSTALLATION: QUARTER TURN
APPLICATION: WALK-OFF CARPET AT ENTRIES

CASEWORK PULLS

MANUFACTURER: RICHELIEU
STYLE: CONTEMPORARY METAL PULL 5632
SIZE: 5" CENTER-TO-CENTER
FINISH: MATTE CHROME

CEILINGS

ACT-1
MANUFACTURER: USG
STYLE: ECLIPSE ACOUSTICAL PANEL
COLOR: WHITE
SIZE: 2' X 2' X 3/4"
EDGE: FINELINE BEVEL
GRID: DON DXT/DXLT 9/16"
GRID COLOR: WHITE

CERAMIC TILE

T-1
MANUFACTURER: FIANDRE
STYLE: FRENCH CLAY
COLOR: SOMBRE
FINISH: MATT
SIZE: 12" X 24"
GROUT: TEC #927 LIGHT PEWTER
APPLICATION: TILE FLOORS

TB-1
MANUFACTURER: FIANDRE
STYLE: FRENCH CLAY
COLOR: SOMBRE
FINISH: MATT
SIZE: 12" X 24" CUT TO 4" X 24"
GROUT: MATCH T-1
INSTALLATION: CUT SIDE DOWN
APPLICATION: BASE AT TILE FLOORS

T-2
MANUFACTURER: IRIS
STYLE: LINK
COLOR: TAN
FINISH: GLOSSY
SIZE: 4" X 12"
GROUT: TEC #939 MIST, EPOXY GROUT AT SHOWERS
APPLICATION: WALL TILE
NOTE: SCHLUTER FINEC AT ALL OUTSIDE CORNERS, SCHLUTER SCHIENE AT EXPOSED VERTICAL EDGES, SCHLUTER DILEX AT SHOWER WALL BASE. COLOR: BRUSHED NICKEL

T-3
MANUFACTURER: FIANDRE
STYLE: UNI
COLOR: NERO
FINISH: HONED
SIZE: 12" X 12" MOSAIC (2" X 2" TILE)
GROUT: TEC #941 RAVEN. EPOXY GROUT
APPLICATION: FLOOR TILE AT SHOWERS

FIBERGLASS REINFORCED PLASTIC

FRP-1
MANUFACTURER: PANOLAM
STYLE: GENERAL PURPOSE FRP
COLOR: GRAY
FINISH: EMBOSSED
TRIM: MATCH PANEL COLOR
SIZE: SEE ELEVATIONS
APPLICATION: JANITOR'S CLOSET

GLASS MARKER BOARDS

MB-1
MANUFACTURER: CLARIDGE
STYLE: MAGNETIC GLASS WHITEBOARD
COLOR: BRILLIANT WHITE
SIZE: STANDARD SIZES, SEE ELEVATIONS
MOUNTING: INVISIMOUNT

PAINT

PT-1
MANUFACTURER: BENJAMIN MOORE
COLOR: 1473 GRAY HUSKIE
FINISH: EGGSHELL
APPLICATION: FIELD PAINT

PT-1A
MANUFACTURER: BENJAMIN MOORE
COLOR: 1473 GRAY HUSKIE
FINISH: EPOXY
APPLICATION: RESTROOMS, LOCKER ROOMS

PT-1B
MANUFACTURER: BENJAMIN MOORE
COLOR: 1473 GRAY HUSKIE
FINISH: SCUFF-X EGGSHELL
APPLICATION: EQUIPMENT STORAGE 11 AND VESTIBULE 12

PT-2
MANUFACTURER: BENJAMIN MOORE
COLOR: OC-54 WHITE WISP
FINISH: EGGSHELL
APPLICATION: ACCENT

PT-2A
MANUFACTURER: BENJAMIN MOORE
COLOR: OC-54 WHITE WISP
FINISH: FLAT
APPLICATION: GYPSUM CEILINGS U.N.O.

PT-2B
MANUFACTURER: BENJAMIN MOORE
COLOR: OC-54 WHITE WISP
FINISH: EPOXY
APPLICATION: GYPSUM CEILINGS AT LOCKER ROOMS

PT-3
MANUFACTURER: BENJAMIN MOORE
COLOR: 1645 THOUSAND OCEANS
FINISH: EGGSHELL
APPLICATION: ACCENT

PT-4
MANUFACTURER: BENJAMIN MOORE
COLOR: 2125-10 BLACK PANTHER
FINISH: EPOXY
APPLICATION: HOLLOW METAL DOOR FRAMES

PLASTIC LAMINATE

PL-1
MANUFACTURER: WILSONART
STYLE: PREMIUM LAMINATE
COLOR: 7965K-12 WALNUT HEIGHTS
FINISH: SOFTGRAIN

PL-2
MANUFACTURER: FORMICA
STYLE: STANDARD LAMINATE
COLOR: 5882-58 CITADEL WARP
FINISH: MATTE

RESILIENT FLOORING

RF-1
MANUFACTURER: NORA SYSTEMS
STYLE: NORAMENT SATURA
COLOR: 5112 TITAN
SIZE: 6"X6"

RF-2
MANUFACTURER: TARKETT
STYLE: REPLAY
COLOR: SOLID NIGHT
THICKNESS: 0.375"
INSTALLATION: ROLL
APPLICATION: EXERCISE

RF-3
MANUFACTURER: NORA SYSTEMS
STYLE: NORAMENT TREAD
TEXTURE: HAMMERED
COLOR: 0749 STONE GREY

RESILIENT WALL BASE

RB-1
MANUFACTURER: JOHNSONITE
STYLE: TRADITIONAL WALL BASE
PROFILE: STRAIGHT*
HEIGHT: 4"
COLOR: TA4 GATEWAY WG
NOTE: ROLLED GOODS ONLY

*COVE PROFILE AT GARAGE AND GARAGE STORAGE

SOLID SURFACE

SLD-1
MANUFACTURER: WILSONART
STYLE: QUARTZ SELECT
COLOR: Q6010 ARCTIC RAIN
THICKNESS: 2CM
APPLICATION: COUNTERTOPS

SLD-2
MANUFACTURER: CORIAN
STYLE: SOLID SURFACE
COLOR: PEARL GRAY
THICKNESS: 1/2"
APPLICATION: SOLID SURFACE WINDOW SILLS

TOILET PARTITIONS

TP-1
MANUFACTURER: SCRANTON PRODUCTS
STYLE: HINY HIDERS PARTITIONS
COLOR: SHALE
FINISH: ORANGE PEEL
INSTALLATION: FLOOR MOUNT

WOOD VENEER

WD-1
MANUFACTURER: VT INDUSTRIES
SPECIES: RED OAK VENEER
COLOR: RAVINE FINISH, RA07
LAYOUT: BOOK MATCH
APPLICATION: WOOD DOORS

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Key Plan

Revision	Description	Date
02	Addendum #2	03/09/21
2 ADDENDUM 02		March 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
DOOR, WINDOW, AND FINISH INFORMATION

Sheet Number
A811

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STRUCTURAL SHEET INDEX

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S201	1ST FLOOR AND MEZZANINE FRAMING PLAN	03-09-2021	ADDENDUM 02
S202	ROOF FRAMING PLAN		
S301	FOUNDATION DETAILS		
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S401	WOOD WALL DETAILS		
S402	WOOD LATERAL DETAILS		
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S404	FRAMING DETAILS		
S501	STEEL FRAMING DETAILS		

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY REQUIREMENTS.
2. THE BUILDING STRUCTURE IS DESIGNED TO FUNCTION AS A COMPLETE SYSTEM, AND HAS NOT BEEN ANALYZED OR DESIGNED FOR STABILITY DURING ERECTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN AND PROVIDE ADEQUATE TEMPORARY BRACING TO INSURE STABILITY DURING THE ERECTION PROCESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, AND IS RESPONSIBLE TO INSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING ELEMENTS WHEN THOSE LOADS ARE APPLIED.
4. DO NOT SCALE THE DRAWINGS.
5. THE CONTRACTOR IS REQUIRED TO COORDINATE THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS, AND TO BRING ANY DISCREPANCIES, INTERFERENCES, DIMENSIONAL INCONSISTENCIES, OR CONCERNS ASSOCIATED WITH THIS COORDINATION TO THE ARCHITECT AND ENGINEER IMMEDIATELY.
6. THE USE OF THESE DRAWINGS AND SPECIFICATIONS SHALL BE RESTRICTED AND LIMITED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. ALL REPRODUCTION OR DISTRIBUTION IS EXPRESSLY LIMITED TO SUCH USE. ANY OTHER REPRODUCTION OR REUSE, IN WHOLE OR IN PART, FOR ANY OTHER PURPOSE IS PROHIBITED.
7. DETAILS, SECTION CUTS AND NOTES INDICATED ON THESE DRAWINGS APPLY TO ALL SIMILAR CONDITIONS, WHETHER REPEATED OR NOT THROUGHOUT THE DRAWINGS.

DESIGN LOADS

APPLICABLE DESIGN CODE AND REFERENCES

THE CODES AND STANDARDS LISTED HAVE BEEN USED FOR THE DESIGN OF THIS PROJECT.
ALL CONSTRUCTION, FABRICATION, AND MATERIALS SHALL CONFORM TO THESE CODES AND STANDARDS.

2015 INTERNATIONAL BUILDING CODE
ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS
ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
ACI 530-13 SPECIFICATION FOR MASONRY STRUCTURES
NDS-2015 AF&PA NATIONAL DESIGN SPEC FOR WOOD CONSTRUCTION
AISC 360-10 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS

BUILDING DESIGN CRITERIA
BUILDING RISK CATEGORY: IV (SEE ASCE 7-10 TABLE 1.5-1)

BUILDING DESIGN LOADS AND DATA

DEAD LOADS
- ROOF 20 PSF
- MEZZANINE FLOOR 15 PSF

LIVE LOADS
- OFFICE 50 PSF
- CORRIDOR & STAIRS 100 PSF
- PUBLIC AREAS 100 PSF
- MECHANICAL AND ELECTRICAL ROOMS 125 PSF
- STORAGE 125 PSF

ROOF LIVE LOADS
- TRIBUTARY: AREA < 200 SF 20 PSF
- TRIBUTARY: AREA > 600 SF 12 PSF
- ROOF LIVE LOADS FOR A MEMBER WITH TRIBUTARY BETWEEN 200 SF AND 600 SF MAY BE DETERMINED USING LINEAR INTERPOLATION.

SNOW
- GROUND SNOW (Pg) 30 PSF
- SNOW IMPORTANCE FACTOR, (I) 1.2
- EXPOSURE FACTOR (Ce) 1.0
- THERMAL FACTOR (Ct) 1.2
- FLAT ROOF SNOW (Pf) 30.2 PSF
  - SEE SNOW DRIFT SURCHARGE PLAN FOR ADDITIONAL SNOW LOADS REQUIRED

WIND DESIGN DATA
- BASIC WIND SPEED 120 MPH (ULTIMATE)
- DIRECTIONALITY FACTOR (Kd) 0.85
- TOPOGRAPHY FACTOR (Kzt) 1.0
- WIND EXPOSURE C
- ENCLOSURE CLASSIFICATION ENCLOSED
- INTERNAL PRESSURE COEFFICIENT +/- 0.18

SEISMIC DESIGN DATA

- SEISMIC IMPORTANCE FACTOR, Ie 1.5
- MAPPED SPECTRAL RESPONSE COEFFICIENT, Ss 0.091
- MAPPED SPECTRAL RESPONSE COEFFICIENT, S1 0.048
- SITE CLASSIFICATION D
- SPECTRAL RESPONSE COEFFICIENT, Sds 0.097
- SPECTRAL RESPONSE COEFFICIENT, Sd1 0.077
- SEISMIC DESIGN CATEGORY C
- SEISMIC BASE SHEAR CsW
- RESPONSE COEFFICIENT, Cs 0.18 (N/S)
  0.18 (E/W)
- RESPONSE MODIFICATION FACTOR, R
  - NORTH / SOUTH 6.5
    - LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SEISMIC RESISTANCE
  - EAST / WEST 6.5
    - LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SEISMIC RESISTANCE
- ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE

SOIL DESIGN DATA
- ALLOWABLE NET SOIL BEARING PRESSURE 2,000 PSF
- LATERAL EARTH PRESSURES
  - ACTIVE FLUID PRESSURE 55 PSF/FT
  - PASSIVE PRESSURE 250 PSF/FT
- SUBGRADE MODULUS 150 PCI

ALLOWABLE DEFLECTION CRITERIA
- ROOF L/360 LIVE; L/240 TOTAL
- FLOOR L/480 LIVE; L/240 TOTAL
  (WOOD TRUSSES OR I-JOISTS)
  L/360 LIVE; L/240 OTHER (OTHER MEMBERS)
- EXTERIOR WALLS L/600 WIND (BRICK / STONE VENEER)
  L/240 WIND (EIFS / STEEL PANEL)

COMPONENTS & CLADDING WIND DESIGN PRESSURES (ULTIMATE)			
ROOFS	TRIBUTARY AREA = 10 SF	POSITIVE (PSF)	NEGATIVE (PSF)
	ZONE 1	19.6	-31.2
	ZONE 2	19.6	-54.2
	ZONE 3	19.6	-80.2
	TRIBUTARY AREA = 100 SF	POSITIVE (PSF)	NEGATIVE (PSF)
	ZONE 1	16.0	-28.3
	ZONE 2	16.0	-39.8
	ZONE 3	16.0	-62.9
WALLS	TRIBUTARY AREA = 10 SF	POSITIVE (PSF)	NEGATIVE (PSF)
	ZONE 4	34.0	-36.9
	ZONE 5	34.0	-45.6
	TRIBUTARY AREA = 500 SF	POSITIVE (PSF)	NEGATIVE (PSF)
	ZONE 4	25.4	-28.3
	ZONE 5	25.4	-28.3
OVERHANGS	TRIBUTARY AREA = 10 SF	POSITIVE (PSF)	NEGATIVE (PSF)
	ZONE 2	16.0	-63.5
	ZONE 3	16.0	-106.7
	TRIBUTARY AREA = 500 SF	POSITIVE (PSF)	NEGATIVE (PSF)
	ZONE 2	16.0	-63.5
	ZONE 3	16.0	-72.1

FOUNDATION NOTES

1. THE FOUNDATIONS HAVE BEEN DESIGNED TO THE REQUIREMENTS SET FORTH IN THE GEOTECHNICAL REPORT PREPARED BY CGC, INC. DATED SEPTEMBER 14, 2020 (REPORT NO. C20355). FURTHEREMORE, THE CONTRACTOR SHALL EXECUTE THE GEOTECHNICAL RECOMMENDATIONS TO THE FULLEST EXTENT POSSIBLE.
2. THE SUBSURFACE CONDITIONS DESCRIBED IN THE GEOTECHNICAL REPORT REPRESENT CONDITIONS ONLY AT THOSE SPECIFIC LOCATIONS AT THE PARTICULAR TIME THEY WERE MADE. SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS SHOULD BE CONSIDERED APPROXIMATE, AND CONFIRMED IN THE FIELD. THE OWNER'S GEOTECHNICAL CONSULTANT MUST REVIEW AND APPROVE ALL FINISHED EXCAVATIONS AND BEARING SUBGRADES BEFORE PLACING CONCRETE. PROVIDE ADDITIONAL EXCAVATION AS NECESSARY TO ACHIEVE THE REQUIRED BEARING CAPACITY.
3. SEE SITE PLAN FOR ELEVATION DATUM EQUAL TO ARCHITECTURAL MAIN LEVEL (ELEVATION 0'-0) AND ARCHITECTURAL LOWER LEVEL (ELEVATION -9'-9"). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ELEVATIONS BETWEEN THE SITE DRAWINGS AND THE STRUCTURAL DRAWINGS.
4. DO NOT UNDERMINE EITHER NEW OR EXISTING CONSTRUCTION.
5. BEAR ALL FOOTINGS ON UNDISTURBED SOIL OR COMPACTED FILLS HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY INDICATED IN SOIL DESIGN DATA.
6. REMOVE TOPSOIL, ORGANICS, AND UNSUITABLE MATERIAL, AS DIRECTED BY THE OWNERS GEOTECHNICAL CONSULTANT, AND STOCKPILE AS REQUIRED FOR FINAL GRADING. PLACE ENGINEERED FILL AS REQUIRED IN HORIZONTAL LIFTS WITHIN +/-2 PERCENT OF OPTIMUM MOISTURE CONTENT. COMPACT TO THE SPECIFIED DENSITY REQUIREMENTS.
7. MINIMIZE CONSTRUCTION TRAFFIC OVER EXPOSED SUBGRADES IF WET. DO NOT ALLOW WATER TO POND ON THE SUBGRADES.
8. USE SIDE FORMS FOR ALL FOOTINGS AND GRADE BEAMS.
9. CLEAN REINFORCEMENT IMMEDIATELY PRIOR TO PLACING CONCRETE.
10. DO NOT PLACE CONCRETE IN ANY EXCAVATION CONTAINING FREE WATER, FROST, ICE OR FROZEN MATERIALS. PREVENT FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE, BOTH BEFORE AND AFTER CONCRETE PLACEMENT AND UNTIL FOOTINGS OR SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.
11. PLACE THE CONCRETE FOR EACH FOOTING IN ONE CONTINUOUS POUR.
12. BRACE FOUNDATION WALLS AND GRADE BEAMS DURING THE OPERATION OF BACKFILLING AND COMPACTION.
13. BACKFILL AGAINST FOUNDATION WALLS SHALL BE PLACED IN LIFTS SUCH THAT THE DIFFERENCE IN ELEVATION ON OPPOSITE SIDES OF THE WALL DOES NOT EXCEED 1'-6".

CAST IN PLACE CONCRETE NOTES

1. SEE SPECIFICATION DIVISION 03 FOR REQUIREMENTS IN ADDITION TO THOSE LISTED BELOW.
2. MATERIAL SPECIFICATIONS

FOOTINGS	F'c = 4000 PSI @ 28 DAYS
FOUNDATION WALLS	F'c = 4000 PSI @ 28 DAYS
SLAB ON GRADE	F'c = 3000 PSI @ 28 DAYS
PRECAST PLANK TOPPING	F'c = 4000 PSI MIN OR AS REQ'D BY PRECASTER
CONCRETE NOT OTHERWISE NOTED	F'c = 4000 PSI @ 28 DAYS
MILD REINFORCING STEEL BARS	Fy = 60 KSI; ASTM A615
FIBER REINFORCING FOR SLABS	ASTM C1116
ANCHOR RODS	SEE SCHEDULE

3. SUBMIT CONCRETE MIX DESIGNS, WITH REQUIRED BACKUP DATA, INCLUDING RECENT GRADATIONS FOR EACH AGGREGATE USED, FOR EACH TYPE OF CONCRETE PROPOSED FOR USE, TO THE ARCHITECT AND ENGINEER FOR REVIEW A MINIMUM OF TWO WEEKS PRIOR TO PLACEMENT. SEE SPECIFICATIONS FOR ADDITIONAL MIX DESIGN REQUIREMENTS. CONCRETE MIXES SUBMITTED SHALL BE DESIGNED TO BE PLACABLE FOR THE TEMPERATURE CONDITIONS AT THE JOBSITE, AND BE ABLE TO BE PLACED AND CONSOLIDATED AROUND THE REINFORCING INDICATED ON THE PLANS. DO NOT USE CALCIUM CHLORIDE IN ANY CONCRETE.
4. PROVIDE AIR-ENTERTAINING IN CONCRETE AS INDICATED IN THE SPECIFICATIONS.
5. ALL CONCRETE SHALL BE NORMAL WEIGHT (APPROX. 145 PCF) UNO.
6. SUBMIT DETAILED SHOP DRAWINGS INDICATING REINFORCEMENT SIZE, SPACING, BENDING, AND PLACEMENT TO THE ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO FABRICATION. INCLUDE DETAILS AND LOCATIONS OF ALL CURBS, CONSTRUCTION JOINTS, SLAB DEPRESSIONS, SLEEVES, OPENING, ETC.
7. THE MAXIMUM TOTAL AMOUNT OF WATER THAT MAY BE ADDED TO THE MIX AFTER BATCHING IS THE AMOUNT INDICATED AS BEING WITHHELD ON THE BATCH TICKET FOR THE SPECIFIC BATCH.
8. SUBMIT ELECTRONIC COPIES OF ALL CONCRETE DELIVERY TICKETS WITHIN 5 DAYS OF PLACEMENT, INDICATING THE FOLLOWING INFORMATION:
   - TIME AND NUMBER OF CUBIC YARDS BATCHED
   - THEORETICAL TARGET AND ACTUAL BATCH WEIGHTS OF EACH INGREDIENT
   - AMOUNT OF WATER WITHHELD
   - AMOUNT OF WATER ADDED AT JOBSITE
   - MIX DESIGN NUMBER
   - STRUCTURE BEING PLACED
   - LOCATION OF PLACEMENT
   - NUMBER OF REVOLUTIONS AT MIXING SPEED
   - TOTAL REVOLUTIONS AT COMPLETION OF DISCHARGE
   - TIME AT COMPLETION OF DISCHARGE
   - SLUMP AND AIR CONTENT, IF TESTED
   - TEMPERATURE OF AIR AND CONCRETE
   - SAMPLE NUMBERS OF CYLINDERS MADE FROM LOAD
9. DETAIL, FABRICATE, SUPPORT, AND PLACE ALL CONCRETE REINFORCEMENT IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE". FIELD BENDING OF REINFORCING BARS IS NOT PERMITTED EXCEPT WHERE INDICATED ON THE STRUCTURAL DRAWINGS.
10. COVERAGE FOR REINFORCEMENT SHALL NOT BE NOT LESS THAN:

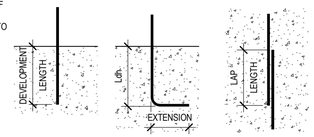
CONDITION	COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	
#5 BARS AND SMALLER	1-1/2"
#6 THROUGH #18 BARS	2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
SLABS, WALLS, & JOISTS	
#14 AND #18 BARS	1-1/2"
#11 BARS AND SMALLER	3/4"
BEAMS AND COLUMNS	
PRIMARY REINFORCEMENT, TIES, & SPIRALS	1-1/2"

11. SEE DETAIL 1/S001 FOR CLASS B TENSION CONTACT LAP SPLICE LENGTHS. STAGGER ADJACENT LAPS 3' – 0" UNO.
12. PROVIDE (2) # 5 BARS DIAGONAL AT CORNERS OF OPENINGS AND AT RE-ENTRANT CORNERS. PROVIDE (2) # 5 BARS AROUND THE PERIMETER OF OPENINGS WITH SIDES EXCEEDING 18 INCHES IN LENGTH.
13. WELDING OF GRADE A615 REINFORCING BARS IS NOT PERMITTED.
14. COORDINATE LOCATION OF ALL CONSTRUCTION JOINTS WITH ENGINEER PRIOR TO COMMENCEMENT OF CONCRETE WORK. EXTERIOR BASEMENT WALLS AND RETAINING WALLS SHALL HAVE VERTICAL CONTROL JOINTS SPACED NOT FARTHER THAN 30'-0" ON CENTER. CONSTRUCTION JOINTS SHALL BE LOCATED TO COINCIDE WITH CONTROL JOINT LOCATIONS.
15. CLEAN AND MOISTEN ALL CONSTRUCTION JOINTS IMMEDIATELY PRIOR TO PLACING FRESH CONCRETE.
16. UNLESS NOTED OTHERWISE, PROVIDE DOWELS TO MATCH MAIN REINFORCEMENT SIZE AND SPACING. PROVIDE TENSION LAP SPLICE UNLESS NOTED OTHERWISE.
17. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR CURBS, PADS, DEPRESSIONS, WALL/SLAB OPENINGS, REVEALS, REGLETS, DRIPS, SPECIAL FLOOR FINISHES, AND OTHER REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.
18. ALUMINUM CONDUIT SHALL NOT BE EMBEDDED IN CONCRETE.
19. DO NOT CAST OPENINGS OTHER THAN INDICATED ON THE REVIEWED SHOP DRAWINGS WITHOUT WRITTEN CONSENT OF ENGINEER OF RECORD. DO NOT CORE HOLES IN COLUMNS, BEAMS, JOISTS, WALLS, OR STRUCTURAL CONCRETE SLABS WITHOUT WRITTEN CONSENT OF THE ENGINEER OF RECORD.
20. REFER TO ACI 305 FOR REQUIREMENTS FOR PLACING CONCRETE IN HOT WEATHER AND TO ACI 306 FOR REQUIREMENTS FOR PLACING CONCRETE IN COLD WEATHER.

BAR SIZE	3,000 PSI CONCRETE: DEVELOPMENT LENGTHS STANDARD	3,000 PSI CONCRETE: DEVELOPMENT LENGTHS TOP BAR	3,000 PSI CONCRETE: CLASS "B" TENSION LAP SPLICE LENGTHS STANDARD	3,000 PSI CONCRETE: CLASS "B" TENSION LAP SPLICE LENGTHS TOP BAR	3,000 PSI CONCRETE: STD HOOK DEVELOPMENT LENGTH, Ldh	4,000 PSI CONCRETE: DEVELOPMENT LENGTHS STANDARD	4,000 PSI CONCRETE: DEVELOPMENT LENGTHS TOP BAR	4,000 PSI CONCRETE: CLASS "B" TENSION LAP SPLICE LENGTHS STANDARD	4,000 PSI CONCRETE: CLASS "B" TENSION LAP SPLICE LENGTHS TOP BAR	4,000 PSI CONCRETE: STD HOOK DEVELOPMENT LENGTH, Ldh
#3	12"	13"	13"	17"	6"	12"	12"	16"	16"	6"
#4	14"	18"	18"	23"	8"	12"	15"	16"	20"	7"
#5	17"	22"	22"	28"	10"	15"	19"	19"	24"	9"
#6	20"	26"	26"	34"	12"	18"	23"	23"	29"	10"
#7	33"	43"	43"	55"	14"	29"	37"	37"	48"	12"
#8	42"	54"	54"	70"	16"	36"	47"	47"	61"	14"
#9	51"	66"	66"	86"	18"	44"	57"	57"	75"	15"
#10	63"	81"	81"	105"	20"	54"	70"	70"	91"	17"
#11	75"	97"	97"	126"	22"	65"	84"	84"	109"	19"

NOTES:

1. TOP BARS ARE DEFINES AT HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW.
2. TABLE VALUES BASED ON 1 1/2" CLEAR COVER AND MINIMUM CENTER TO CENTER BAR SPACING OF 6".
3. SPLICE LENGTH SHALL BE BASED ON LARGER BAR BEING SPLICED.
4. HOOKED BAR EXTENSION = MIN. BEND DIAMETER + 12db
5. MIN. BEND DIAMETER = 6db FOR #3 - #8 (8db FOR #9 - #11)
6. HOOKED BAR DEVELOPMENT LENGTHS, Ldh, ASSUME
   a) SIDE COVER ≥ 2 1/2" AND
   b) COVER AT END OF EXTENSION ≥ 2"



1/S001 REBAR LAP SPLICE LENGTHS
NTS

SLAB ON GRADE NOTES

1. PREPARE SUBGRADE AS INDICATED IN SOIL REPORT. AT A MINIMUM, PROOF ROLL AND REMOVE ALL SOFT AREAS AND REPLACE WITH COMPATIBLE FILL.
2. SEE SPECIFICATIONS FOR SLAB ON GRADE VAPOR BARRIER.
3. UNDER SLAB GRANULAR FILL PER GEOTECHNICAL REPORT.
4. SAWCUT SLABS ON GRADE AT A MAXIMUM SPACING OF 24 TO 36 TIMES THE SLAB THICKNESS, WITH A PANEL WIDTH TO LENGTH RATIO NOT TO EXCEED 1:5. START SAWCUTTING WITH EARLY ENTRY SAW AS SOON AS THE CONCRETE WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR AND NOT RAVEL EDGES OR DISLODGE AGGREGATE, BUT IN NO CASE MORE THAN 6 HOURS AFTER THE SLAB IS PLACED. INSTALLATION OF JOINTS DOES NOT IMPLY ANY WARRANTY AGAINST THE OCCURRENCE OF SHRINKAGE CRACKS. CONTRACTION JOINT LOCATIONS INDICATED ON SLAB ON GRADE PLAN ARE A SUGGESTED PATTERN INTENDED TO AID THE CONTRACTOR, AND DO NOT IMPLY ANY WARRANTY AGAINST THE OCCURRENCE OF SHRINKAGE CRACKS.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND SIZES OF SLAB DEPRESSIONS.
6. SLAB ON GRADE REQUIRES FIBER REINFORCING. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND MINIMUM QUANTITIES.
7. SLAB ON GRADE THICKNESS, ELEVATION AND FLATNESS / LEVELNESS TOLERANCES:
   - THICKNESS: PLUS ½ INCHES; MINUS 0 INCHES
   - ELEVATION: SEE PLANS
   - FLATNESS / LEVELNESS: SEE SPECIFICATIONS
8. IN AREAS REQUIRING ADHERED FLOORING, DO NOT HARD TROWEL FINISH THE CONCRETE SLAB UNLESS INDICATED ON THE PLANS. CONCRETE IN THESE AREAS SHOULD HAVE AN OPEN PORE STRUCTURE WHEN FINISHED TO FACILITATE SLAB DRYING, AND FLOORING ADHESION.
9. WET CURE SLAB UNLESS NOTED OTHERWISE ON DRAWINGS.

STRUCTURAL STEEL NOTES

1. SEE SPECIFICATION DIVISION 05 SECTION OR REQUIREMENTS IN ADDITION TO THOSE LISTED BELOW.
2. PROVIDE NEW MATERIAL CONFORMING TO THE FOLLOWING REQUIREMENTS FOR ALL STRUCTURAL STEEL:

WIDE FLANGE SHAPES (ASTM A992)	Fy = 50 ksi; Fu = 65 ksi
M, S, HP, C, MC, AND L SHAPES (ASTM A36)	Fy = 36 ksi; Fu = 58 ksi
RECTANGULAR HSS SHAPES (ASTM A500-B)	Fy = 46 ksi; Fu = 58 ksi
ROUND HSS SHAPES (ASTM A500-B)	Fy = 42 ksi; Fu = 58 ksi
CARBON STEEL PIPE (ASTM A53-B)	Fy = 35 ksi; Fu = 60 ksi
PLATES AND BARS (ASTM A36)	Fy = 36 ksi; Fu = 58 ksi

3. DETAIL, FABRICATE AND ERECT STRUCTURAL STEEL IN CONFORMANCE WITH THE AISC SPECIFICATIONS AND CODES INDICATED.
4. PERFORM ALL WELDING USING CERTIFIED WELDERS AND IN ACCORDANCE WITH THE AWS "STRUCTURAL WELDING CODE – STEEL".
5. SUBMIT SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR REVIEW. SHOW SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS, AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL. SCHEDULE SUBMISSIONS TO ALLOW ADEQUATE TIME FOR REVIEW PRIOR TO FABRICATION.
6. DETAIL ALL BEAMS FRAMING INTO CONCRETE WALLS, BEAMS OR COLUMNS TO ALLOW FOR HORIZONTAL FIELD TOLERANCES AND THERMAL MOVEMENT. PROVIDE CONNECTION DETAILS REQUIRED BY THE SPECIFIC CONSTRUCTION SEQUENCES.
7. PROVIDE SUITABLE BEARING PLATES AND ANCHOR RODS FOR BEAMS, JOISTS, OR GIRDERS WHICH BEAR ON WALLS. LOCATE ITEMS USING TEMPLATES OR SIMILAR METHODS. SET ALL PLATES IN FULL BEDS OF NON-SHRINK GROUT. COMPLETELY FILL ALL BEAM AND COLUMN POCKETS WITH CONCRETE PRIOR TO CASTING CONCRETE ABOVE.
8. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE REQUIRED FIRE RATINGS AND UL ASSEMBLY NUMBERS
9. DO NOT FIELD CUT ANY STRUCTURAL STEEL UNLESS REVIEWED AND APPROVED IN WRITING BY THE EOR. CLEARLY INDICATE ALL STEEL MEMBER OPENINGS REQUIRED ON THE SHOP DRAWINGS. ALL COSTS FOR PROVIDING PENETRATIONS IN THE FIELD, INCLUDING MEMBER REINFORCING, IS THE RESPONSIBILITY OF THE CONTRACTOR.
10. ERECTION PROCEDURES, SEQUENCES AND COORDINATION OF WORK WITH OTHER TRADES IS THE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE ANY ADDITIONAL STEEL REQUIRED FOR ERECTION PURPOSES AT NO COST TO THE OWNER. REMOVE THIS ADDITIONAL STEEL UNLESS DIRECTED OTHERWISE BY THE OWNER IN WRITING.
11. PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED FOR THE SAFETY, STABILITY AND ALIGNMENT OF THE STRUCTURE. LEAVE TEMPORARY BRACING IN PLACE UNTIL THE PERMANENT STRUCTURAL LATERAL LOAD RESISTING SYSTEM IS COMPLETE, INCLUDING FLOOR AND ROOF DIAPHRAGMS. PERFORM FINAL BOLTING AND WELDING ONLY ON THOSE PORTIONS OF THE STRUCTURE THAT HAVE BEEN ALIGNED AND PLUMBED WITHIN THE SPECIFIED TOLERANCES.
12. GROUT COLUMN BASE PLATES AFTER BUILDING FRAME HAS BEEN ALIGNED AND PLUMBED, AND PRIOR TO PLACEMENT OF CONCRETE FLOOR SYSTEMS (CIP CONCRETE SLABS, SLABS ON STEEL DECK, PRECAST, ETC). GROUT BEAM BEARING PLATES AFTER BEAM ALIGNMENT AND PRIOR TO PLACEMENT OF FLOOR SYSTEMS. MINIMUM GROUT STRENGTH EQUALS THE HIGHER OF 6000 PSI OR THE INDICATED COMPRESSIVE STRENGTH OF THE CONCRETE THE COLUMN IS BEARING ON.
14. ALL STRUCTURAL STEEL IN DIRECT CONTACT WITH FIRE RETARDANT TREATED (FRT) OR PRESERVATIVE TREATED LUMBER MUST BE WRAPPED WITH A BARRIER MEMBRANE (GRACE VYCOR DECK PROTECTOR OR EQUAL). ALL FASTENERS ATTACHING TREATED LUMBER TO STEEL MUST BE GALVANIZED.
15. LONG SLOTTED HOLES ARE PERMITTED ONLY WHERE SHOWN IN THE CONSTRUCTION DOCUMENTS. IF SHOWN, 5/16" PLATE WASHERS ARE REQUIRED AT ALL LOCATIONS. ALTERNATIVELY, A CONTINUOUS BAR BETWEEN LONG SLOTTED HOLES MAY BE USED.
16. ALL EXTERIOR STEEL TO BE GALVANIZED OR COATED WITH HIGH PERFORMANCE PAINT UNLESS NOTED OTHERWISE ON PLAN. VERIFY EXACT COATING REQUIREMENT WITH ARCHITECT.

SEISMIC BRACING OF MEP AND ARCHITECTURAL COMPONENTS

1. DUE TO BUILDING BEING ASSIGNED TO RISK CATEGORY IV (ESSENTIAL FACILITY) AND SEISMIC DESIGN CATEGORY C, SEISMIC BRACING OF MEP AND ARCHITECTURAL COMPONENTS PER ASCE 7-10 CHAPTER 13 IS REQUIRED.
2. SEISMIC BRACING OF MEP AND ARCHITECTURAL COMPONENTS IS OUTSIDE THE SCOPE OF SER'S SERVICES. CONTRACTOR SHALL HIRE SPECIALTY STRUCTURAL ENGINEER TO DETERMINE SCOPE OF BRACING REQUIRED AND DESIGN BRACING SOLUTIONS FOR ALL APPLICABLE ITEMS.
3. ALL ITEMS ASSIGNED A COMPONENT IMPORTANCE FACTOR, Ip = 1.5 REQUIRE EVALUATION AND BRACING SOLUTION BY SPECIALTY STRUCTURAL ENGINEER.

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Key Plan

Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
STRUCTURAL GENERAL NOTES

Sheet Number
S001

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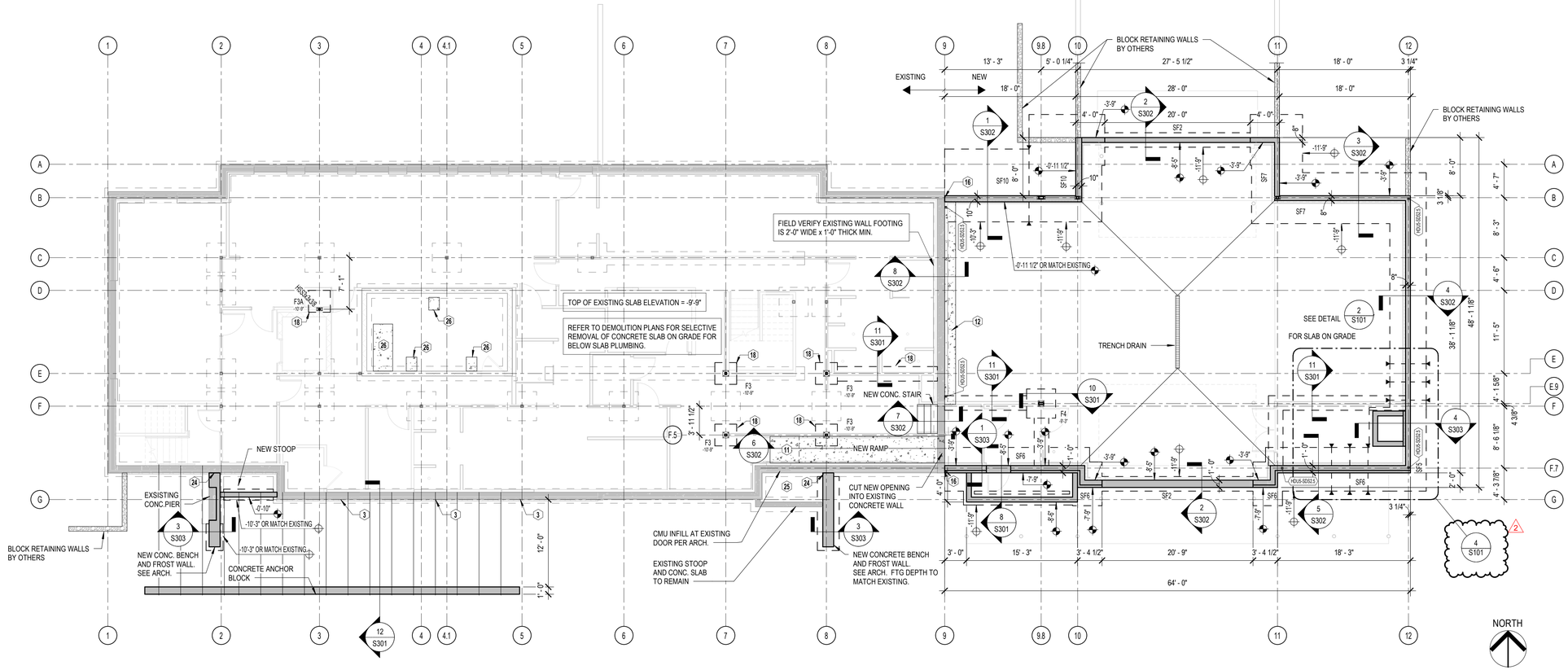
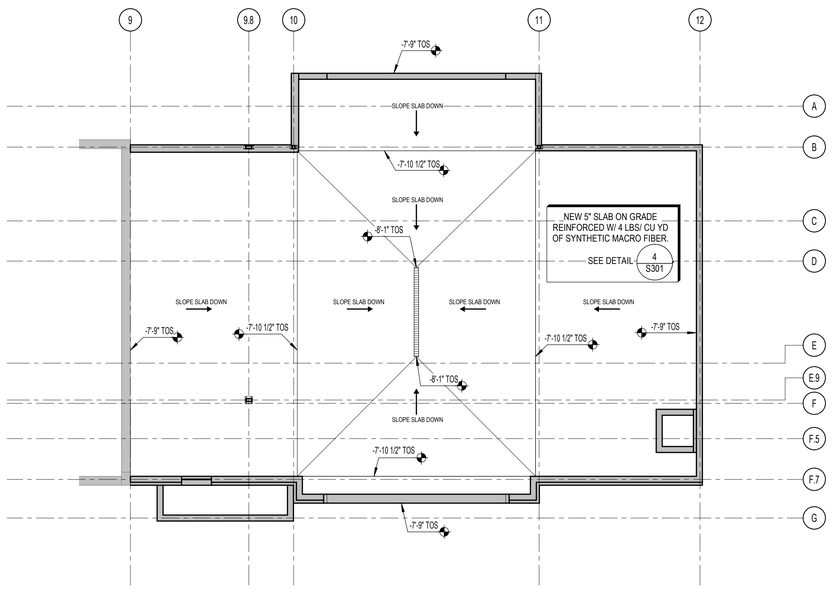


1 S101 FOUNDATION PLAN
1/8" = 1'-0"



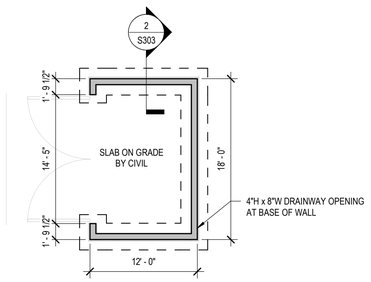
2 S101 SLAB ON GRADE PLAN
1/8" = 1'-0"

FOOTING SCHEDULE

MARK	LENGTH	WIDTH	THICKNESS	BOTTOM REINFORCEMENT	TOP REINFORCEMENT
F3	3' - 0"	3' - 0"	1' - 0"	(4) #5 BARS EACH WAY	NONE
F3A	3' - 0"	3' - 0"	2' - 0"	(4) #5 BARS EACH WAY	(4) #5 BARS EACH WAY
F4	4' - 0"	4' - 0"	1' - 0"	(5) #5 BARS EACH WAY	NONE
F5	5' - 0"	5' - 0"	1' - 0"	(6) #5 BARS EACH WAY	NONE

STRIP FOOTING SCHEDULE

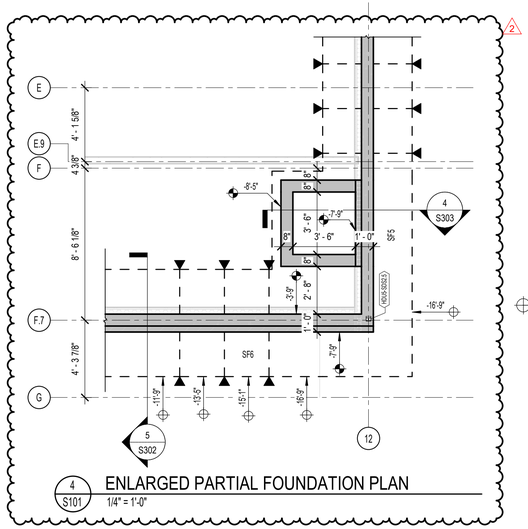
MARK	WIDTH	THICKNESS	REINFORCEMENT
SF2	2' - 0"	1' - 0"	SEE DETAILS
SF5	5' - 0"	1' - 0"	SEE DETAILS
SF6	6' - 0"	1' - 0"	SEE DETAILS
SF7	7' - 0"	1' - 2"	SEE DETAILS
SF10	10' - 0"	1' - 4"	SEE DETAILS



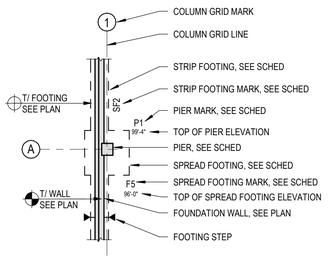
3 S101 FOUNDATION PLAN- TRASH ENCLOSURE
1/8" = 1'-0"

SHEET KEYNOTES

3	INFILL EXISTING WINDOW OPENINGS.
11	REMOVE PORTION OF SLAB ON GRADE TO FACILITATE INSTALLATION OF NEW RAMP.
12	THICKEN SLAB EDGE BELOW NEW STUD WALL.
16	EPOXY NEW HORIZONTAL WALL REBAR INTO EXISTING WALL. MIN EMBEDMENT = 8".
18	REMOVE AND REPLACE SLAB ABOVE FOOTINGS. DOWEL NEW SLAB INTO EXISTING W/ #4 BARS AT 18" O.C. EPOXIED 4" INTO EXISTING SLAB.
24	EPOXY HORIZONTAL REBAR INTO EXISTING WALL. MIN EMBEDMENT DEPTH = 5".
25	GRAVEL INFILL WITH NEW 4" SLAB ON GRADE ABOVE. REINFORCE SLAB WITH #4 BARS AT 12" O.C. EACH WAY.
26	NEW 4" CONCRETE PAD ABOVE EXISTING SLAB ON GRADE. REINFORCE PAD W/ WWR 6x6-W2.1xW2.1.



4 S101 ENLARGED PARTIAL FOUNDATION PLAN
1/4" = 1'-0"



FOUNDATION LEGEND

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Sheet Name
FOUNDATION PLAN

Sheet Number
S101

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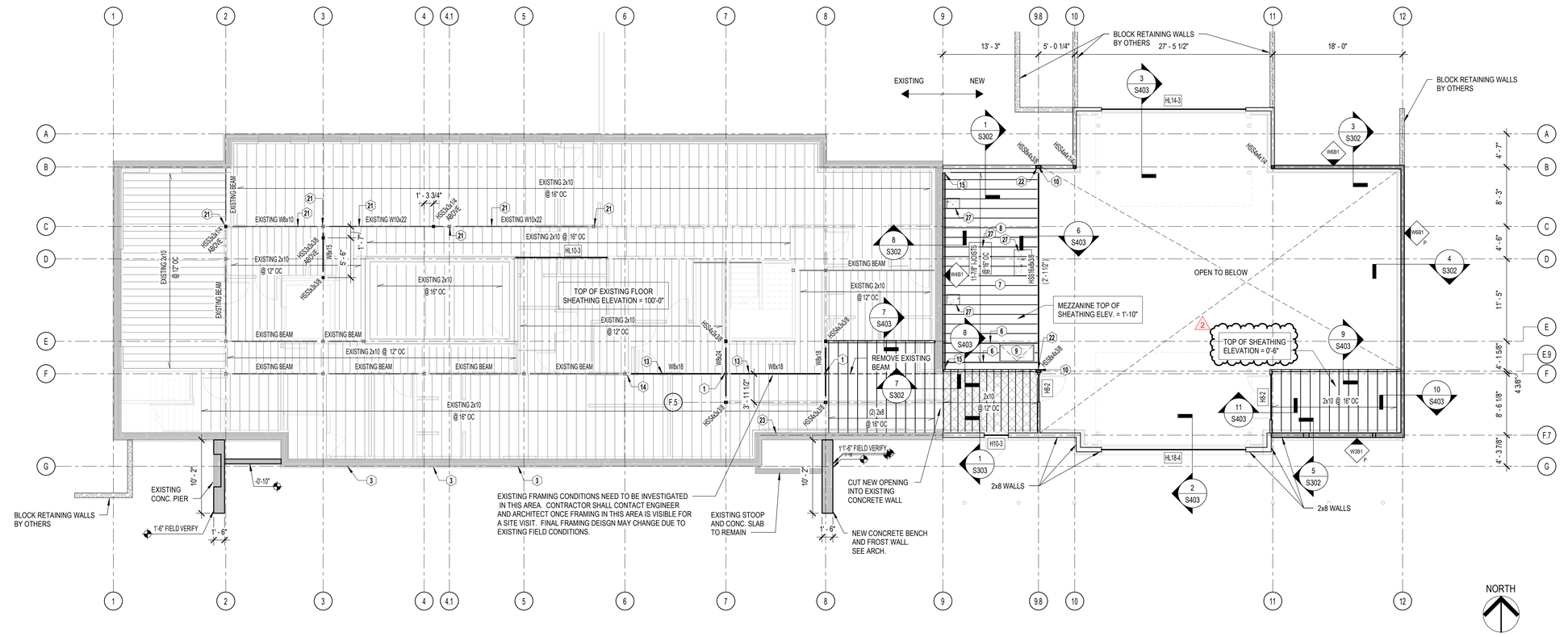


1 S201 1ST FLOOR AND MEZZANINE FRAMING PLAN

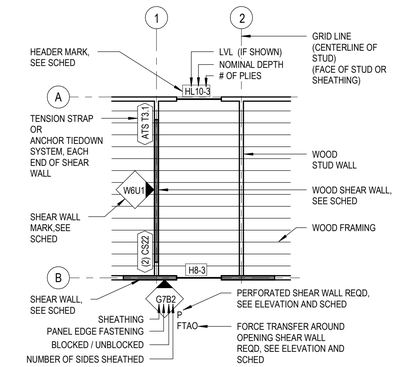
1/8" = 1'-0"

SHEET KEYNOTES

1	SHORE EXISTING BEAMS. REMOVE EXISTING COLUMNS. RESUPPORT EXISTING BEAMS TO NEW BEAM.
3	INFILL EXISTING WINDOW OPENINGS.
6	DOUBLE JOISTS REQUIRED AT ACCESS HATCH OPENING.
7	MEZZANINE HAS NOT BEEN DESINED TO SUPPORT A GENERATOR.
8	MEZZANINE LIVE LOAD = 125 PSF.
9	MEZZANINE LADDER HATCH.
10	EXTEND COLUMN UP TO ATTACH TO RAILING ASSEMBLY.
13	REMOVE AND REPLACE EXISTING BEAMS. REPLACEMENT REQUIRED TO FACILITATE NEW END CONNECTIONS. FIELD VERIFY EXACT TOP OF STEEL ELEVATION. EXISTING BEAMS COULD REMAIN IN PLACE IF CONTRACTOR CAN FIELD MODIFY BEAM LENGTH AND CONNECTIONS TO NEW BEAMS.
14	FIELD VERIFY EXISTING COLUMN SIZE AND CONNECTION PRIOR TO SHOP DRAWING PRODUCTION. COLUMN REINFORCMENT MAY BE REQUIRED DEPENDING ON EXISTING COLUMN SIZE.
15	COIL STRAP CONNECTION PER DETAIL 4/S402.
21	ALL STEEL BEAMS AND COLUMNS SHALL BE UNCOVERED IN FIELD FOR ENGINEER'S EVALUATION. EXISTING BEAM SIZES ARE ASSUMED AND MUST BE VERIFIED. COLUMN SIZES ARE UNKNOWN AND MUST BE EVALUATED FOR POTENTIAL REINFORCEMENT ONCE EXACT SIZE CAN BE DETERMINED.
22	TUBE BEAM TO TUBE COLUMN CONNECTION PER DETAIL 8/S501.
23	CMU INFILL PER ARCH.
27	NEW 4" CONCRETE EQUIPMENT PAD. I-JOIST SUPPLIER SHALL INCLUDE AN ADDITIONAL 50 PSF DEAD LOAD AT THESE LOCATIONS. REINFORCE PAD W/ WWR 6x6-W2.1xW2.1.

1ST FLOOR AND MEZZANINE LEVEL FRAMING PLAN NOTES

1. SEE SHEETS S001 & S002 FOR GENERAL NOTES.
3. SEE DETAILS FOR ROOF TRUSS BEARING ELEVATIONS.
5. TYPICAL FLOOR: 3/4" APA RATED SHEATHING.
   TYPICAL ROOF: 5/8" APA RATED SHEATHING.
   SEE WOOD SHEATHING STRUCTURAL GENERAL NOTES FOR ALL SHEATHING REQUIREMENTS.
6. SEE DETAIL 4/S401 FOR TYPICAL WOOD BEARING WALLS.
7. SEE DETAILS 1/S402 2/S402 FOR TYPICAL WOOD SHEAR WALLS.
8. FRAMING AROUND SHAFT OPENINGS SHALL BE LOCATED, DESIGNED AND PROVIDED BY DEFERRED FRAMING SUPPLIER.
9. **FRAMING LAYOUT SHOWN IS SCHEMATIC ONLY.** VERIFY ALL LOCATIONS AND QUANTITIES OF PLUMBING DROPS, HVAC CHASES AND MECHANICAL EQUIPMENT RELATIVE TO DEFERRED FRAMING W/ ARCH. COORDINATION BETWEEN TRADES IS THE RESPONSIBILITY OF THE CONTRACTOR, PRIOR TO SUBMITTING TO THE SER FOR STRUCTURAL REVIEW. NOTIFY SER OF ANY SIGNIFICANT DEVIATION FOR REVIEW AND VERIFICATION. MEMBER SPACING SHOWN ON PLAN SHALL NOT BE ALTERED UNLESS APPROVED IN WRITING.
10. FOR DRAFTSTOPPING AND ALL OTHER FIRE RATING REQUIREMENTS, SEE ARCH FOR ADDITIONAL MATERIALS AND ASSEMBLIES, ALONG WITH THEIR LOCATIONS
11. SEE MECHANICAL DRAWINGS FOR WEIGHTS AND LOCATIONS OF ALL ROOF TOP EQUIPMENT. CONTRACTOR TO COORDINATE LOADS W/ DESIGN OF DEFERRED FRAMING SUBMITTAL PRIOR TO SUBMITTING TO SER FOR REVIEW.
12. SEE DETAIL 5/S401 9/S401 FOR WOOD HEADERS.
13. EXISTING PLAN FRAMING AS SHOWN IS PRESUMED. NOT ALL CONCEALED AREAS HAVE BEEN VERIFIED. CONTRACTOR SHALL NOTIFY ARCHIECT AND ENGINEER IMMEDIATELY IF FIELD CONDITIONS VARY FROM THOSE SHOWN AND AFFECT PROPOSED WORK.



WOOD FRAMING LEGEND

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Sheet Name
1ST FLOOR AND MEZZANINE FRAMING PLAN

Sheet Number
S201

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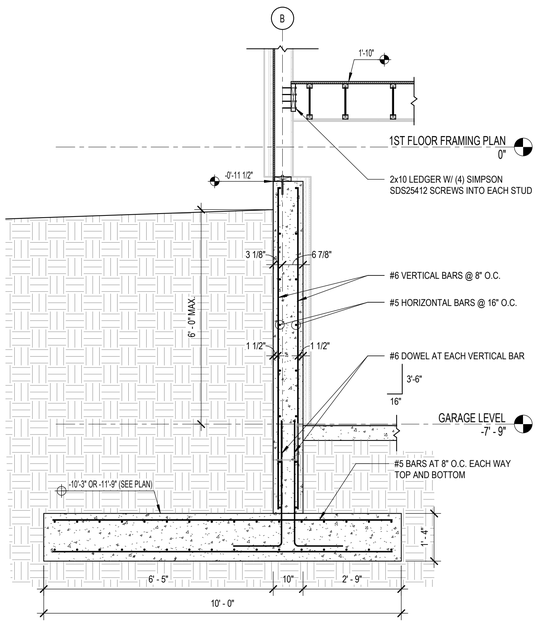
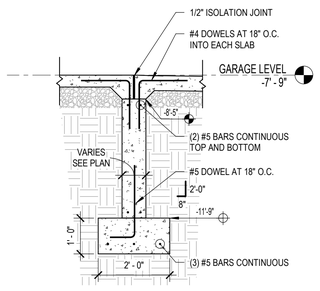
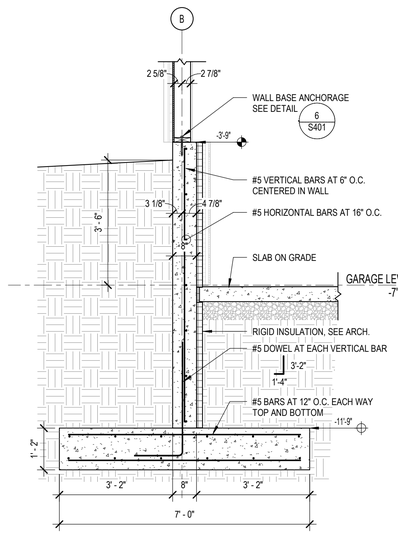


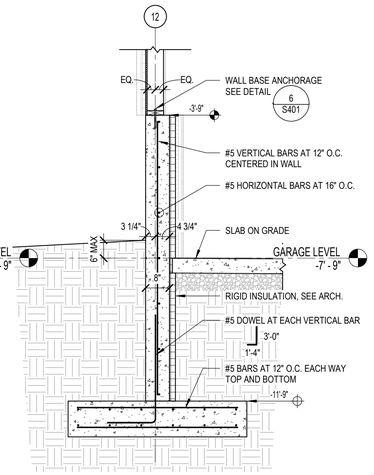
1 S302 FOUNDATION SECTION
1/2" = 1'-0"



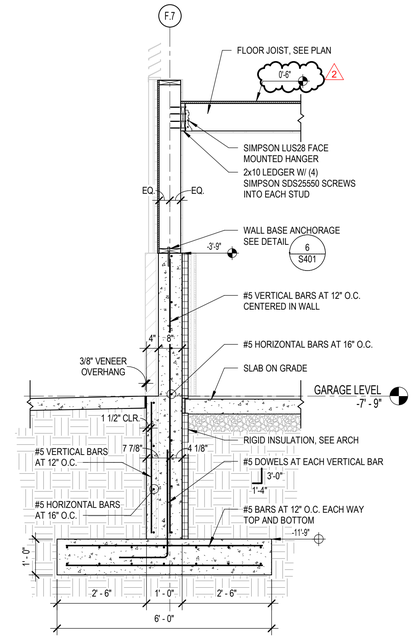
2 S302 FOUNDATION AT OH DOOR
1/2" = 1'-0"



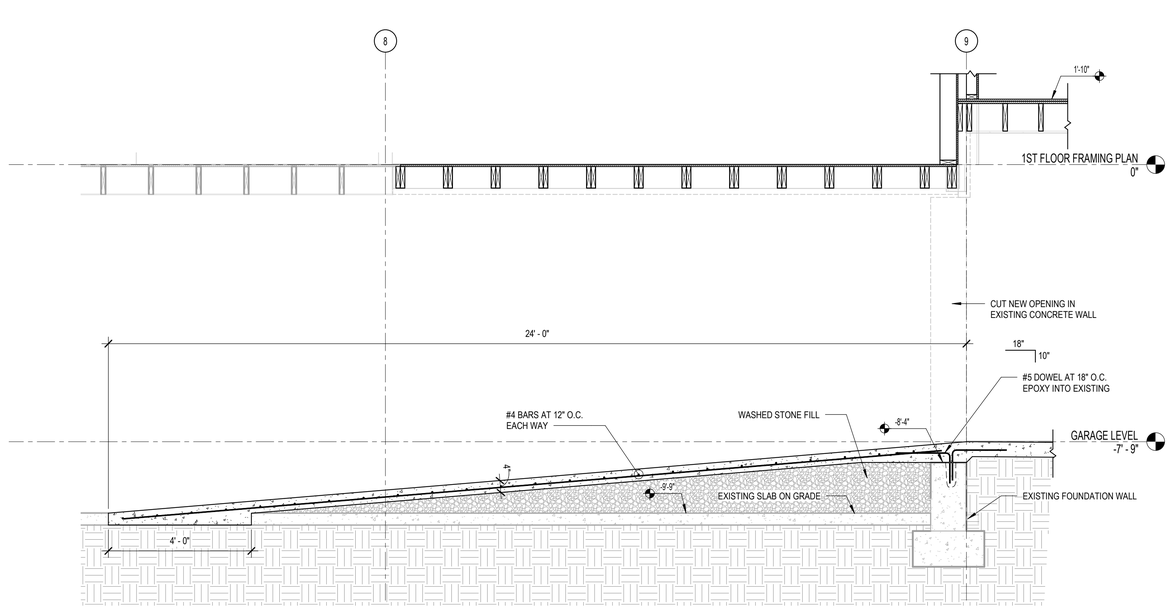
3 S302 SECTION AT NORTH EXTERIOR WALL
1/2" = 1'-0"



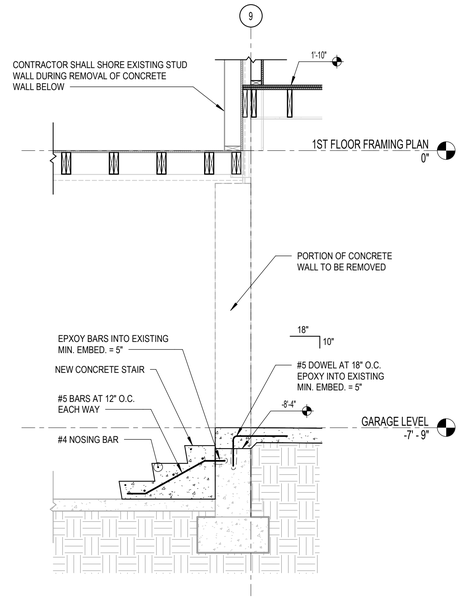
4 S302 SECTION AT EAST EXTERIOR WALL
1/2" = 1'-0"



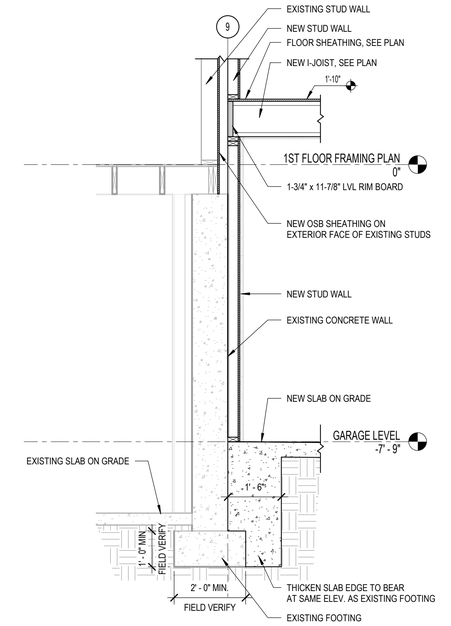
5 S302 SECTION AT SOUTH EXTERIOR WALL
1/2" = 1'-0"



6 S302 SECTION AT NEW RAMP
1/2" = 1'-0"



7 S302 SECTION AT NEW STAIR
1/2" = 1'-0"



8 S302 SECTION AT EXISTING BASEMENT WALL
1/2" = 1'-0"

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CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
FOUNDATION DETAILS

Sheet Number
S302

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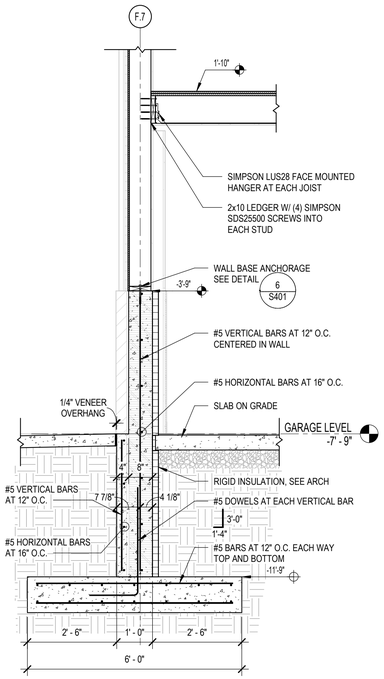

1 S303 SECTION AT SOUTH EXTERIOR WALL
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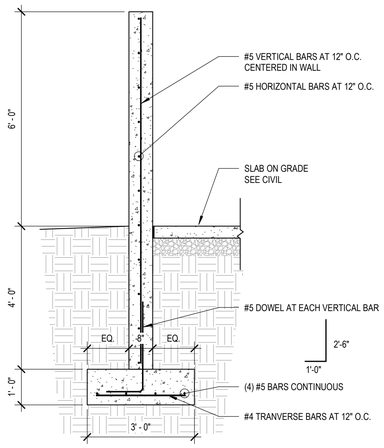
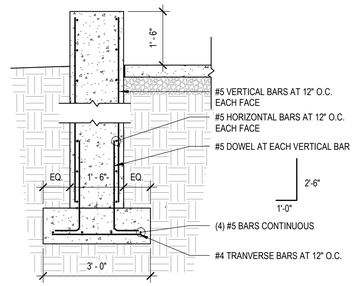
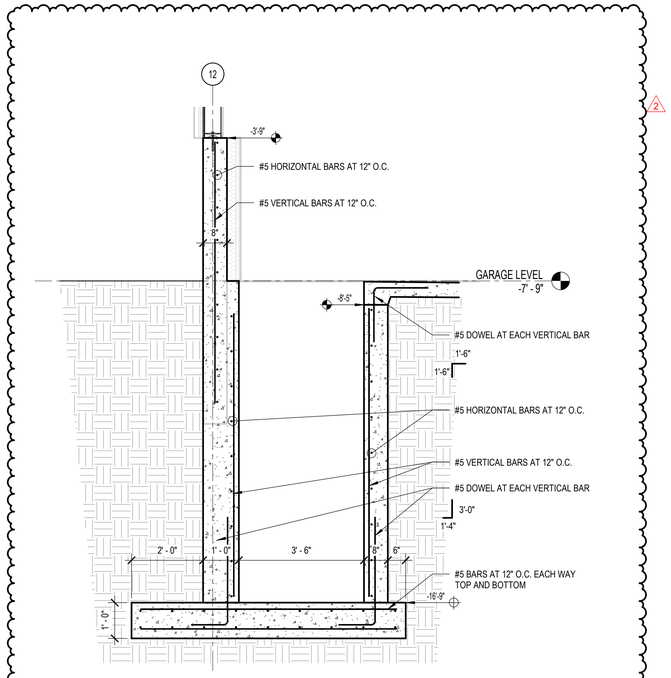


2 S303 TRASH ENCLOSURE WALL
1/2" = 1'-0"



3 S303 CONCRETE WALL DETAIL
1/2" = 1'-0"



4 S303 SUMP PIT DETAIL
1/2" = 1'-0"

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Key Plan

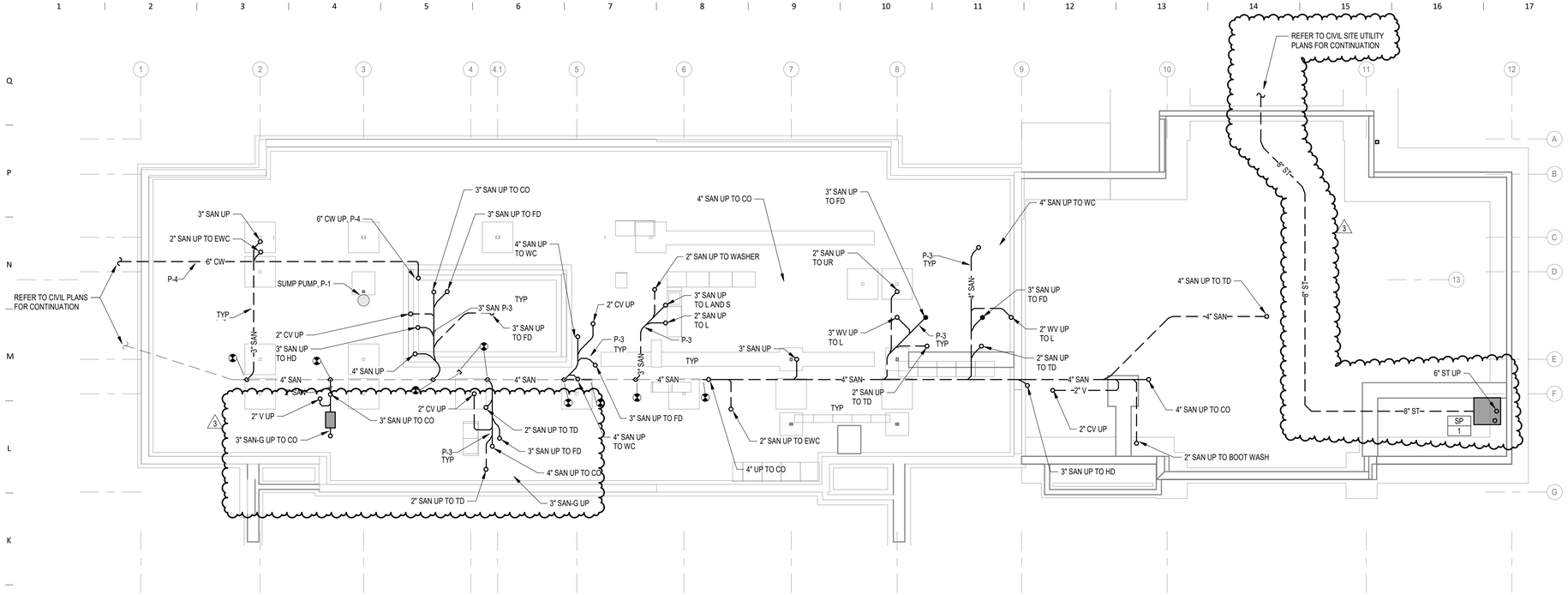
Revision	Description	Date
2	ADDENDUM 02	March 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
FOUNDATION DETAILS

Sheet Number
S303



1 UNDERSLAB PLUMBING PLAN
1/8" = 1'-0"

KEYED NOTES

P-1	EXISTING TO REMAIN.
P-3	ALL NEW PIPING ROUTED BELOW SLAB WILL REQUIRE THE SLAB TO BE CUT AND PATCHED. COORDINATE ALL CUTTING AND PATCHING OF THE FLOOR WITH THE GENERAL CONTRACTOR.
P-4	INSTALL NEW WATER SERVICE PIPING IN THE SAME LOCATION AS THE EXISTING THAT WAS DEMOLISHED. COORDINATING THE PATCHING OF THE FLOOR WITH THE GENERAL CONTRACTOR.

NEW WORK KEY

EXISTING

NEW / REVISED

REFER TO SHEET S001 FOR INFORMATION ON REQUIRED SEISMIC BRACING FOR COMPONENTS. COORDINATE DESIGN AND INSTALLATION OF SEISMIC BRACING WITH THE GENERAL CONTRACTOR.

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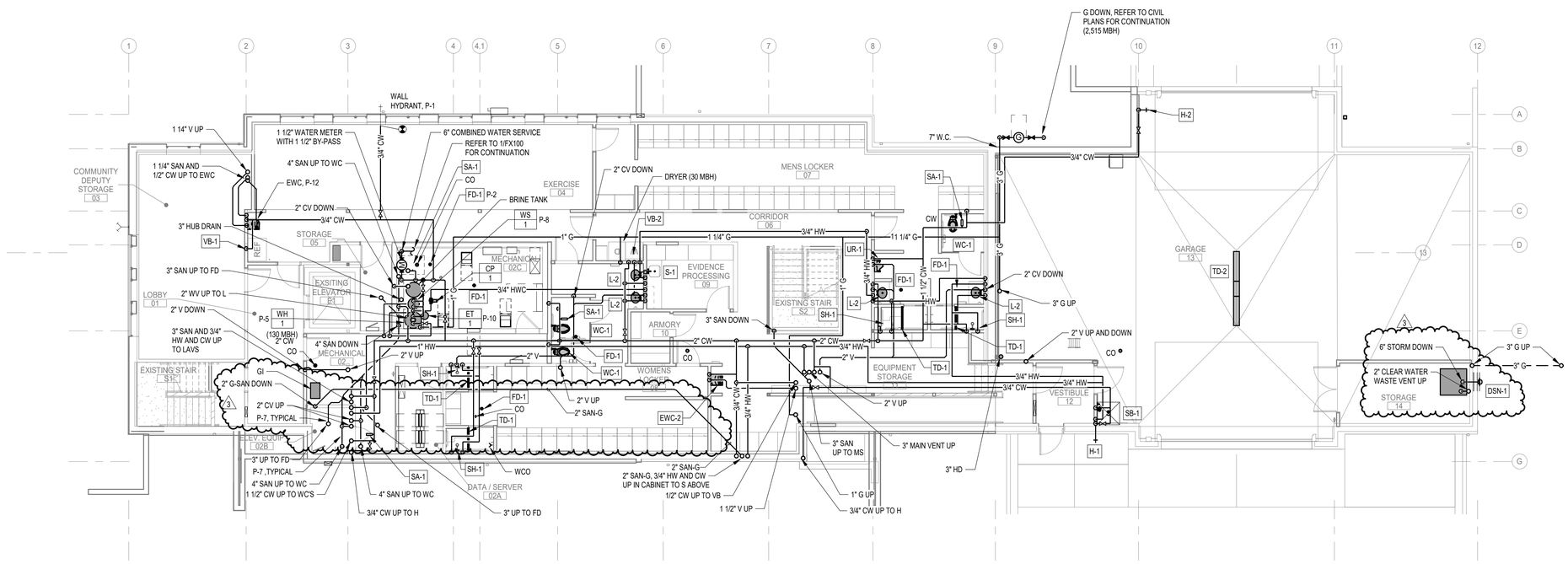
OPN Project No.
20628000

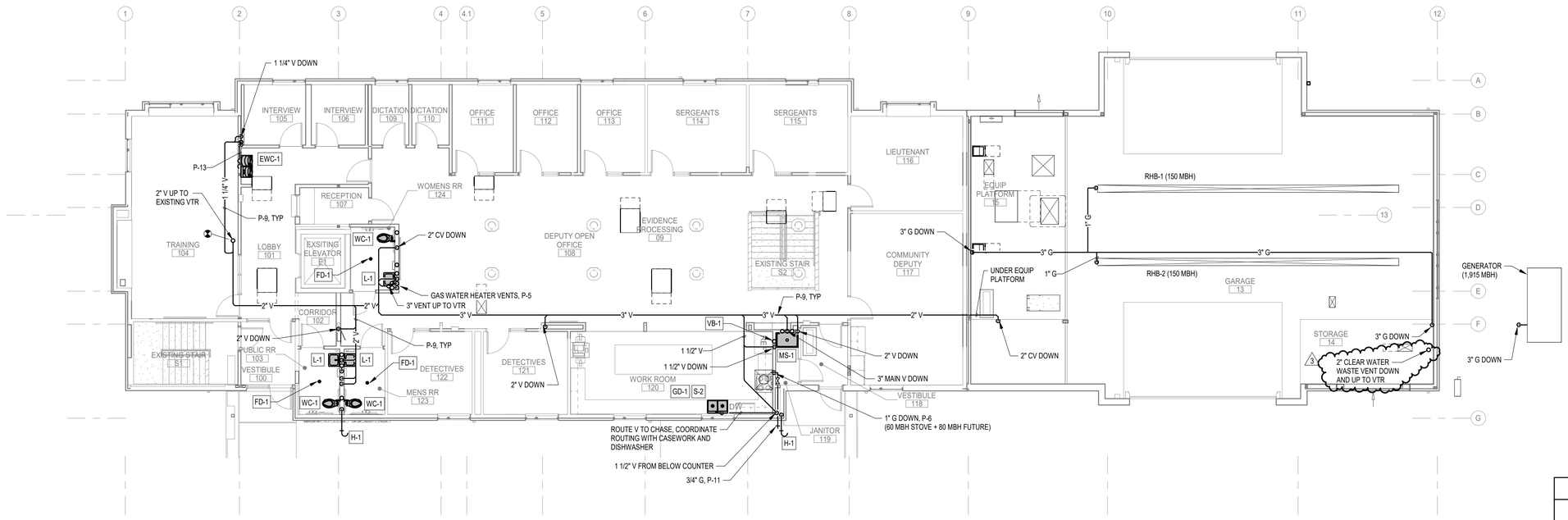
Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
UNDERSLAB PLUMBING PLAN

Sheet Number
P100



1 LOWER LEVEL PLUMBING PLAN
1/8" = 1'-0"



2 MAIN LEVEL PLUMBING PLAN
1/8" = 1'-0"

REFER TO SHEET S001 FOR INFORMATION ON REQUIRED SEISMIC BRACING FOR COMPONENTS. COORDINATE DESIGN AND INSTALLATION OF SEISMIC BRACING WITH THE GENERAL CONTRACTOR.

NEW WORK KEY	
NEW / REVISED	EXISTING
SINGLE LINE	SINGLE LINE
DOUBLE LINE	DOUBLE LINE
EQUIPMENT	EQUIPMENT

KEYED NOTES

P-1	EXISTING TO REMAIN.
P-2	COORDINATE EXACT LOCATION OF FLOOR DRAIN WITH EQUIPMENT LAYOUT TO AVOID WET FLOORS AND DRAIN PIPE TRIPPING HAZARDS.
P-5	ROUTE WATER HEATER INTAKE AND FLUE TO ROOF. IF POSSIBLE, REUSE THE EXISTING WATER HEATER INTAKE AND FLUE PENETRATION.
P-6	COORDINATE THE INSTALLATION OF THE GAS SHUTOFF VALVE FOR THE OVEN/STOVE WITH THE KITCHEN EXHAUST HOOD.
P-7	ROUTE ALL PIPING ABOVE THE RATED CEILING IN ELEVATOR EQUIPMENT 02B AND BETWEEN THE JOISTS. THE JOISTS RUN NORTH-SOUTH IN THIS AREA.
P-8	ROUTE WATER SOFTENER DISCHARGE DRAIN PIPE TO HUB DRAIN.
P-9	ROUTE VENT PIPING IN THE ATTIC ABOVE THE MAIN LEVEL CEILING.
P-10	LOCATE EXPANSION TANK AS HIGH AS POSSIBLE AND TO NOT IMPEDE ON SERVICE ACCESS TO THE WATER SOFTENER OR WATER HEATER. LOCATING THE EXPANSION TANK BEHIND THE WATER HEATER IS ACCEPTABLE.
P-11	ROUTE GAS THROUGH EXTERIOR WALL FOR FUTURE CONNECTION TO GAS GRILLE. LOCATE SHUTOFF VALVE IN AN ACCESSIBLE LOCATION IN JANITOR 119.
P-12	REINSTALL SALVAGED ELECTRIC WATER COOLER.
P-13	ROUTE WASTE AND WATER PIPING CONCEALED ABOVE FINISHED FLOOR AND IN WALL FROM CHASE TO WATER COOLER.

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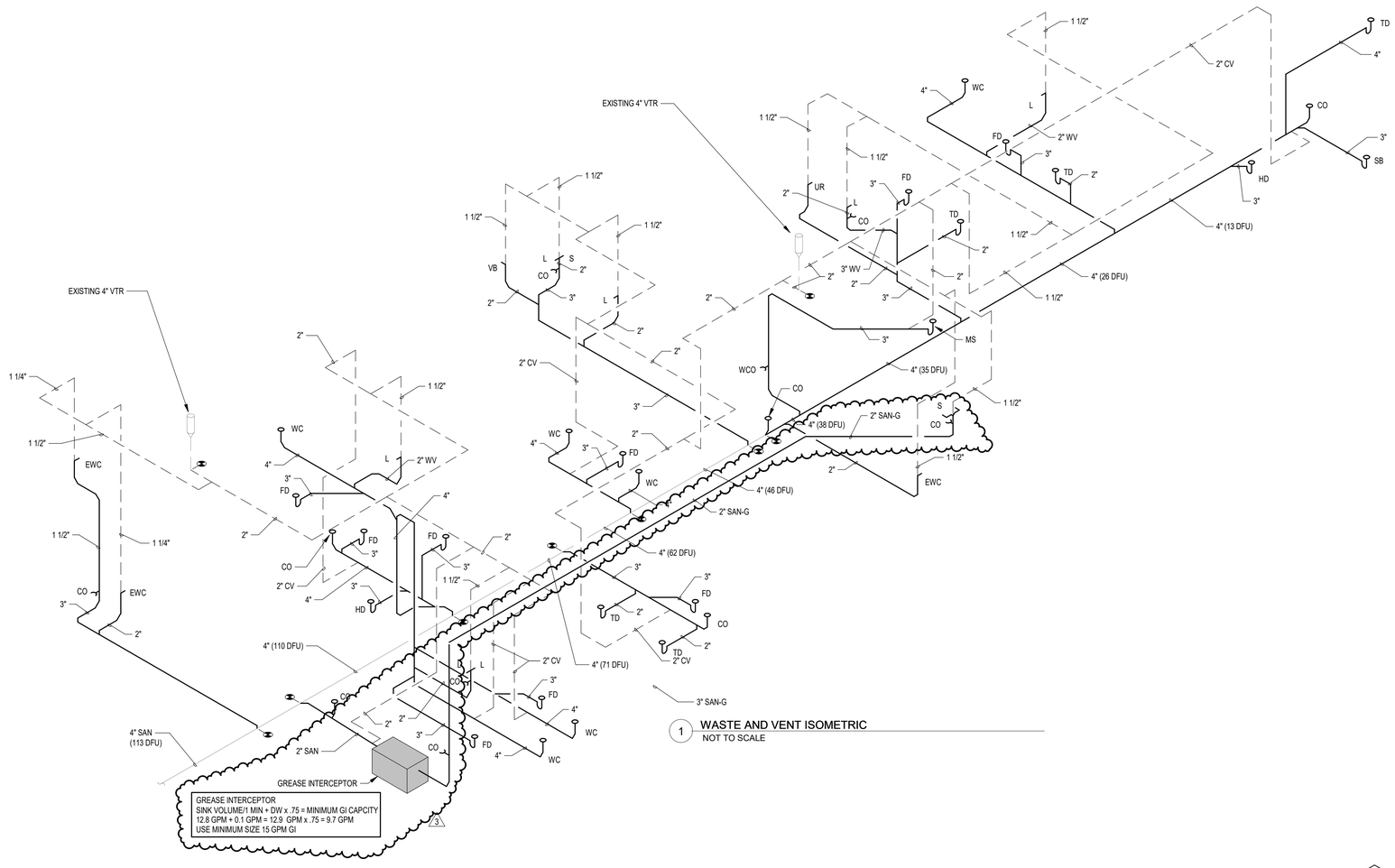
Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
PLUMBING FLOOR PLANS

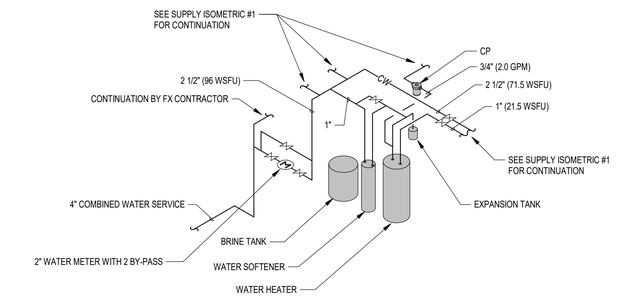
Sheet Number
P101



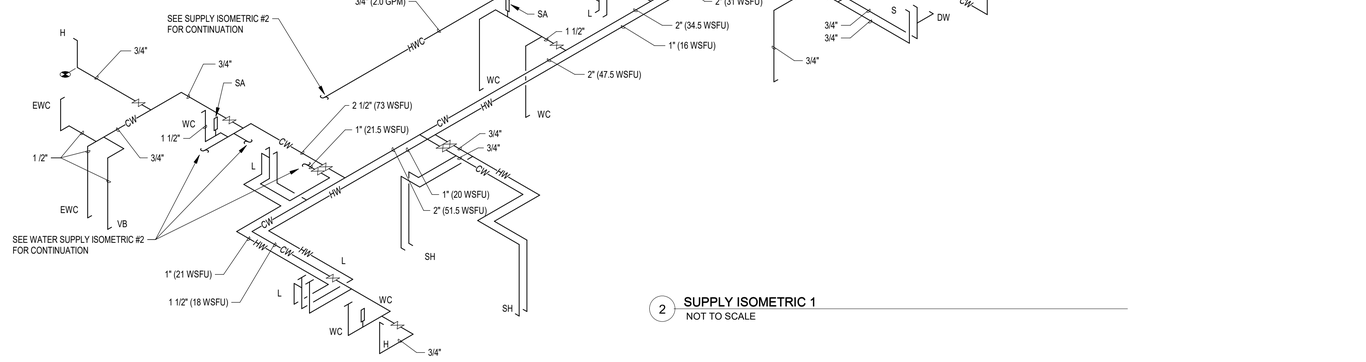
GREASE INTERCEPTOR
SINK VOLUME/1 MIN + DW x .75 = MINIMUM GI CAPCITY
12.8 GPM + 0.1 GPM = 12.9 GPM x .75 = 9.7 GPM
USE MINIMUM SIZE 15 GPM GI

3

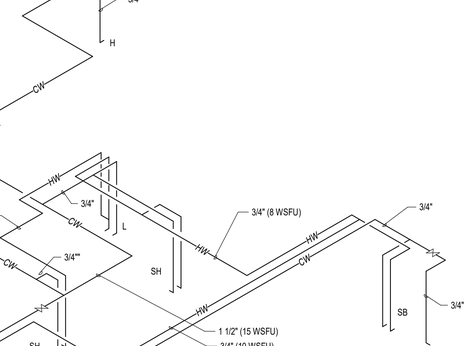
1 WASTE AND VENT ISOMETRIC
NOT TO SCALE



3 SUPPLY ISOMETRIC 2
NOT TO SCALE



2 SUPPLY ISOMETRIC 1
NOT TO SCALE



WATER PIPING SIZING CHART WSFU BASED

LOSS TO FRICTION	COLD WATER @ 32.0 PSI/100' (FLUSHTANK)						
PIPE SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
CPVC - SDR11	5.0	13.0	24.0	41.0	68.0	171	385
COPPER	6.5	16.5	31.0	58.0	107	260	469
LOSS TO FRICTION	HOT WATER @ 16.0 PSI/100'						
PIPE SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
CPVC - SDR11	3.5	13.0	24.0	41.0	68.0	171	385
COPPER	6.0	16.5	31.0	58.0	107	260	469
LOSS TO FRICTION	COLD WATER @ 32.0 PSI/100' (FLUSHOMETER)						
PIPE SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
CPVC - SDR11	-	-	5.5	8.0	19.0	73.0	255
COPPER	-	-	6.5	15.0	37.0	136	356

TABLE 382.40-6 = COPPER 'L'
TABLE 382.40-8 = CPVC SDR11 (2 1/2" AND ABOVE TO BE CORZAN)
NOTE: WHEN USING CPVC FOR WATER DISTRIBUTION PIPING, CHECK MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS FOR EXPANSION LOOPS. CONTRACTOR IS REQUIRED TO COMPLY WITH THOSE REQUIREMENTS AND INSTALL ACCORDINGLY

3

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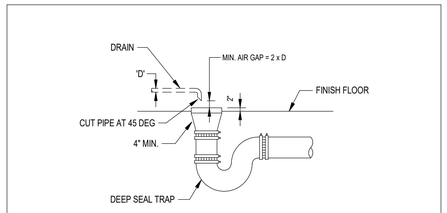
OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

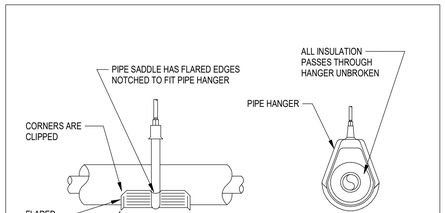
Sheet Name
PLUMBING ISOMETRICS

Sheet Number
P400

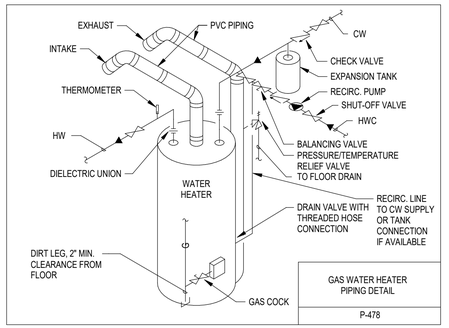


EDIT NOTE: REVISE ELEVATION ABOVE FLOOR AND DIAMETER AS REQUIRED FOR SPECIFIC PROJECT REQUIREMENTS.

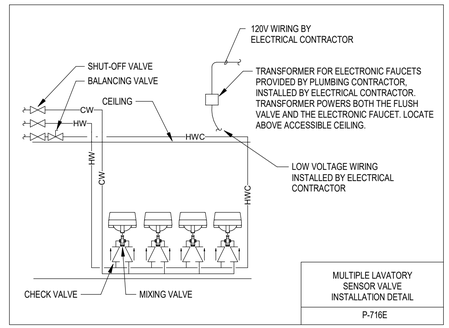
HUB DRAIN DETAIL
P-400



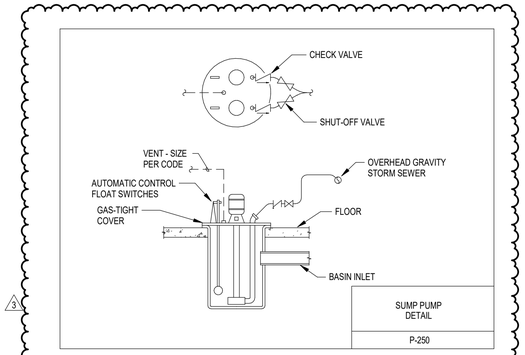
PIPE HANGER DETAIL
P-368



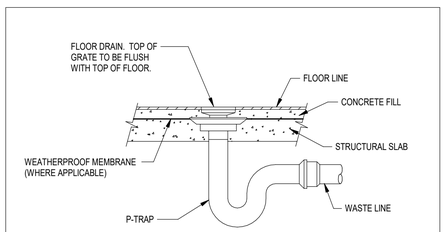
GAS WATER HEATER PIPING DETAIL
P-478



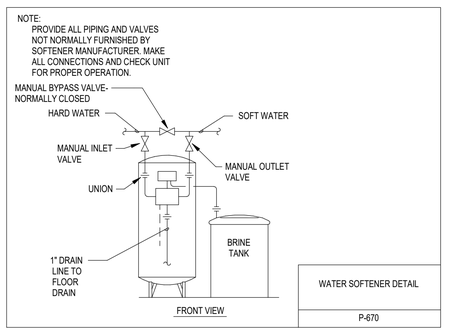
MULTIPLE LAVATORY SENSOR VALVE INSTALLATION DETAIL
P-716E



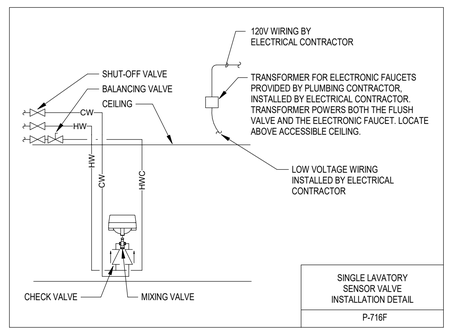
SUMP PUMP DETAIL
P-250



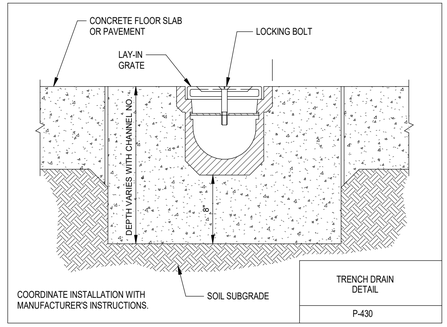
FLOOR DRAIN DETAIL
P-390



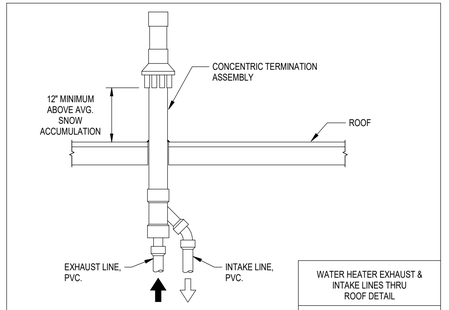
WATER SOFTENER DETAIL
P-670



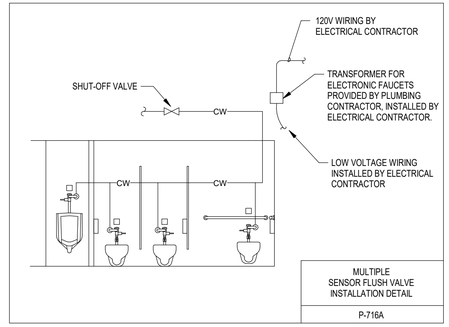
SINGLE LAVATORY SENSOR VALVE INSTALLATION DETAIL
P-716F



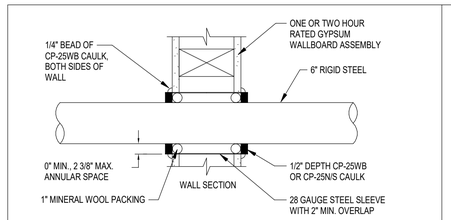
TRENCH DRAIN DETAIL
P-430



WATER HEATER EXHAUST & INTAKE LINES THRU ROOF DETAIL
P-1137

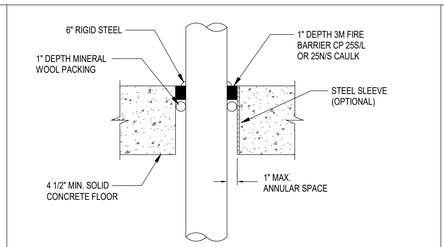


MULTIPLE SENSOR FLUSH VALVE INSTALLATION DETAIL
P-716A



NOTE:
1. MATERIALS AND CONFIGURATION SHOWN ARE FOR 3M SYSTEM #WL1003

BREACH SEALING DETAIL ONE AND TWO HOUR FIRE-STOP
P-1420a



NOTE:
1. MATERIALS AND CONFIGURATION SHOWN ARE FOR 3M SYSTEM #CAJ1001

FLOOR SEALING DETAIL TWO HOUR FIRE-STOP
P-1420b

1. INDIVIDUAL DETAILS APPLY ONLY TO THE MATERIALS, CONSTRUCTION TYPES, AND CONFIGURATIONS SHOWN. REFER TO MANUFACTURERS SYSTEM AND APPLICATION DETAILS FOR OTHER MATERIALS, CONSTRUCTION OR CONFIGURATIONS.
2. DETAILS SHOWN ARE FOR TYPICAL APPLICATIONS AND DO NOT NECESSARILY APPLY TO ANY OR ALL FIRE STOPPING REQUIREMENTS ON THE PROJECT.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL ALL FIRE STOPPING IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTRUCTIONS TO COMPLY WITH THE APPROPRIATE 3M SYSTEM ASSEMBLY REQUIREMENTS.
4. MODEL NUMBERS AND MATERIALS ARE BASED ON 3M PRODUCTS.

TYPICAL FIRE SUPPRESSION FIRE-STOPPING DETAILS
P-1420

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Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
PLUMBING DETAILS

Sheet Number
P500

PLUMBING FIXTURE SCHEDULE

	Base Fixture	Details	Trim	Water Usage	Accessories / Notes	Color
Specification Section 22 1116						
SA-1	Sioux Chief Hydra-Restor 653-B	3/4" size				
Specification Section 22 1316						
FD-1	Watts Series FD-200-A floor drain	round 6" nickel bronze strainer			with SureSeal SS3009V pre-assembled inline floor drain trap sealer	
TD-1	Zurn ZS880-36 Stainless Steel linear shower drain	linear 36" stainless steel slotted heel-proof grate			with SureSeal SS3009V pre-assembled inline floor drain trap sealer	
TD-2	Watts Dead Level D D8-CO-DI-ADA-B6 trench drain with catch basin	6" wide trough	6" wide ADA ductile iron grate, load class F		(2) 4'-0" long sections, end caps, with catch basin, 4" outlet	
Specification Section 22 1429						
DSN-1	Watts RD-940 downspout nozzle	nickel bronze with anchor flange				
Specification Section 22 4000						
GD-1	In-Sink-Erator Evolution Essential XTR garbage disposer	black grey enamel 3/4 HP, 8.1 Amp			includes power cord and sink top switch	
H-1	Woodford Model B67 wall hydrant	automatic draining, freezeless	with locking door with vacuum breaker		with Watts 8A vacuum breaker	
H-2	Woodford Model 24 wall faucet	automatic draining,	with vacuum breaker		with Watts 8A vacuum breaker	
L-1	Kohler K-2032-0 Greenwich vitreous china lavatory	Wall hung, single center hole drilled for concealed arm carrier. ADA complaint	Sloan Optima EAF-350-ISM CP electronic sensor faucet battery powered integrated side mixer.	2.2 gpm	Open grid strainer offset P-trap Concealed arm carrier Angle supplies with stops Insulate all exposed piping.	
L-2	Kohler K-2609-SU Bachata stainless steel undermount lav	single center hole in counter, ADA complaint	Sloan Optima EAF-350-ISM CP electronic sensor faucet battery powered integrated side mixer.	0.5 gpm	Open grid strainer offset P-trap Angle supplies with stops Insulate all exposed piping.	white
MS-1	Fiat MSBID3624100 Modesto 36 x 24 x 10" molded-stone	With factory installed drain	Chicago Faucet 897-RCF faucet with vacuum breaker, 3/4" hose thread, pail hook, and wall brace.		with Watts 8AC vacuum breaker	
S-1	Elkay LRAD1918 19 x 18 x 5-1/2 deep ADA stainless steel sink	Single compartment Two hole punched 4" centers	Chicago Faucet 350-G8AE36-317XKAB side handle faucet with rigid/swing goosneck spout and wristblade handle.	2.2 gpm	LK99 Basket strainer Offset P-trap Angle supplies with stops	
S-2	Elkay ETCSRAD33226TBG 33 x 22 x 6 deep ADA stainless steel sink	Double compartment Single hole punched	Kohler K-596 faucet side handle and side spray and counter mounted air gap for dishwasher	1.5 gpm	LK99 Basket strainer Offset P-trap Angle supplies with stops	
SH-1	Tiled shower stall Refer to architectural plans		Symmons Unity S-6600-X pressure balancing shower valve. Symmons T36-WT 36" slide/grab bar with ADA hand shower. Five foot flexible metal hose and in-line vacuum breaker.			
UR-1	Sloan SU-1009 urinal	washdown type, 1/2 gpf 3/4" top spud	includes Sloan EBV500A battery powered sensor flush valve, with push button override.	0.5 gpf	Wall carrier. See architectural elevations for mounting height.	white
VB-1	Guy Gray FRIB12ABSHA ice maker outlet box	1/2" sweat connection fire rated resin construction	includes quarter turn valve includes water hammer arrestor			
VB-2	Guy Gray FR12SSHA washing machine supply and drain box	top supplies 2" drain fire rated resin construction	includes single lever valve and water hammer arresters			
SB-1	Fiat Terrazzo Mop Service Basin TSB3002MSG with optional galvanized tiling flange.	Boot wash	T&S Faucet B-0289 with B-0107 1.15 GPM spray valve, 104" flexible stainless steel hose. include 18" riser and B-0109-01 6" wall bracket with finger hook			
WC-1	Sloan ST-2029 vitreous china toilet	Elongated, floor mounted ADA height	includes Sloan EBV550A battery powered sensor flush valve, with push button override.	1.28 gpf	Open front seat, less cover, with check hinges. Flange package with setting seal and bolt caps	white seat and fixture.
Specification Section 22 4700						
EWC-1	Elkay EZH20 LZSTL8WSLP electric water cooler	Barrier-free, bi-level Wall mounted with bottle filler			P-trap, angle supply with stop. Provide cane apron as required per ADA for units not located in an alcove. Power cord.	two-tone gray molded.
EWC-2	Elkay EZH20 LZS8WSLP electric water cooler	Barrier-free, single-level Wall mounted with bottle filler			P-trap, angle supply with stop. Provide cane apron as required per ADA for units not located in an alcove. Power cord.	two-tone gray molded.

NOTES:

1. In general, refer to Architectural elevations for mounting heights of all fixtures. Contractor to confirm which fixtures are to comply with the requirements of ADA prior to rough-in of piping and install all piping and fixtures as required per ADA.
2. All flush valves shall be roughed in to meet ADA requirements as if they are a manual valve, even where electronic valves are specified. This allows the Owner the flexibility to use either manual or electronic valves in the future and remain in ADA compliance without requiring piping modifications.

3 with ASSE 1020 or CSA B64.1.2 compliant vacuum breaker on the supply connections.

GREASE INTERCEPTOR SCHEDULE

PLAN MARK	MAX. FLOW RATE (GPM)	GREASE CAPACITY (LBS)	LIQUID CAPACITY (GAL)	DIMENSIONS L x W x H (IN)	MANUFACTURER & MODEL NUMBER	NOTES
GI-1	15	30	20	22 x 15 x 14	Watts WD-15	1, 2

NOTES:

1. Provide extension as required for lid to mount at floor level.
2. Provide with anti buoyancy anchors.

CIRCULATING PUMP SCHEDULE

PLAN MARK	GPM	HEAD FT. WATER	WATER TEMP.	SIZE SUCT x DISCH	MOTOR HP	MOTOR VOLTS	MOTOR PH	MANUFACTURER & MODEL NUMBER	SERVICE	NOTES
CP-1	2	37	120	3/4" x 3/4"	1/12	120	1	Bell & Gossett PL-36	DWH Recirculating	

NOTES:

WATER SOFTENER SCHEDULE

PLAN MARK	CAPACITY PER CYCLE (GRAINS/TANK)	SERVICE FLOW RATE PEAK GPM FLOW	PEAK PSI DROP	CONTINUOUS GPM FLOW	CONTINUOUS PSI DROP	PIPE SIZE (IN.)	RESIN QTY CUBIC FEET	SOFTENER TANK SIZE D x H	BRINE TANK SIZE (IN.)	MANUFACTURER & MODEL NUMBER	NOTES
WS-1	90,000	75	25	57	15	2	3	16" x 55"	24" x 40"	Culligan CTM-90	

NOTES:

PLUMBING FIXTURE CONNECTION SCHEDULE

ITEM NO.	DESCRIPTION OF PLUMBING FIXTURE	CONNECTIONS CW	HW	WASTE	VENT
EWC-1,2	Electric Water Cooler	1/2"	-	1 1/4"	1 1/4"
FD-1	Floor Drain (Note 2)		-	3"	2"
H-1	Hose Bibb/Wall Hydrant	3/4"	-	-	-
H-2	Hose Bibb	1/2"	-	-	-
L-1,2	Lavatory	1/2"	1/2"	1 1/2"	
MS-1	Sink	3/4"	3/4"	3"	2"
DW	Dishwasher	-	1/2"	-	-
S-1,2	Sink	1/2"	1/2"	2"	1 1/2"
SH-1	Shower	3/4"	3/4"	2"	1 1/2"
VB-1	Ice Box	1/2"	-	-	-
VB-2	Washer Box	1/2"	1/2"	2"	1 1/2"
TD-1	Trench Drain	-	-	2"	1 1/2"
TD-2	Trench Drain	-	-	4"	2"
UR-1	Urinal	1"	-	2"	1 1/2"
WC-1	Water Closet	1 1/4"	-	4"	2"

NOTES:

1. CW and HW supply piping to be a minimum of 3/4"; where smaller connection size is scheduled, reduction in pipe size to be made within 10 feet of fixture.
2. Floor drain connections to be as scheduled unless noted otherwise on plans.

PLUMBING EXPANSION TANK SCHEDULE

PLAN MARK	SYSTEM	SIZE DIA x HT	TANK VOL GALLONS	ACCEPT VOL GALLONS	MANUFACTURER & MODEL NUMBER	NOTES
ET-1	WH-1	11" x 15"	4.4	3.2	Amtrol Thermxtrol ST-12	1

NOTES:

1. Set tank pre-charge setting equal to domestic water supply inlet pressure prior to installation.

PLUMBING DEMOLITION KEYED NOTES

PD-1	EXISTING TO REMAIN.
PD-2	REMOVE EXISTING WATER METER.
PD-3	REMOVE EXISTING WATER SOFTENER AND BRINE TANK AND ALL RELATED PIPING.
PD-4	REMOVE EXISTING WATER HEATER AND ALL RELATED PIPING, AIR INTAKE, FLUE, ETC. COORDINATE PATCHING OF ROOF WITH GENERAL CONTRACTOR IF EXISTING ROOF PENETRATION IS NOT REUSED FOR NEW WATER HEATER INTAKE/FLUE.
PD-5	REMOVE EXISTING SINK. REMOVE WASTE TO BELOW LOWER LEVEL FLOOR SLAB AND CAP AND ABANDON BELOW SLAB PIPING. REMOVE ALL VENT PIPING TO VENT TERMINATION. REMOVE ALL SUPPLY PIPING.
PD-6	REMOVE ALL EXISTING FIXTURES IN TOILET ROOM. REMOVE WASTE TO BELOW LOWER LEVEL FLOOR SLAB AND CAP AND ABANDON BELOW SLAB PIPING. REMOVE ALL VENT PIPING TO VENT TERMINATION. REMOVE ALL SUPPLY PIPING TO MECHANICAL ROOM.
PD-7	REMOVE EXISTING ELECTRIC WATER COOLER AND SALVAGE FOR REINSTALLATION PER NEW WORK PLAN. REMOVE WASTE TO BELOW LOWER LEVEL FLOOR SLAB AND CAP AND ABANDON BELOW SLAB PIPING. REMOVE ALL VENT PIPING TO VENT TERMINATION. REMOVE ALL SUPPLY PIPING.
PD-8	REMOVE EXISTING SHOWER. REMOVE WASTE TO BELOW LOWER LEVEL FLOOR SLAB AND CAP AND ABANDON BELOW SLAB PIPING. REMOVE ALL VENT PIPING TO VENT TERMINATION. REMOVE ALL SUPPLY PIPING.
PD-9	LOCATE AND REMOVE ALL SUPPLY, WASTE AND VENT PIPING ABOVE FLOOR AND IN THE ATTIC. REMOVE PIPING TO BELOW SLAB, ABANDON BELOW SLAB PIPING, AND PATCH FLOOR. VENTS THROUGH ROOF SHALL REMAIN FOR RECONNECTION.
PD-10	REMOVE WALL HYDRANT, FILL AND PATCH WALL TO MATCH EXISTING.
PD-11	REMOVE EXISTING WATER SERVICE PIPING BELOW SLAB AND OUT PAST THE EXTERIOR WALL. COORDINATE DEMOLITION OF WATER SERVICE PIPING WITH CIVIL CONTRACTOR. EXISTING ROUTING OF THE UNDERSLAB WATER SERVICE IS NOT KNOWN. CONTRACTOR TO FIELD VERIFY EXACT LOCATION. COORDINATE CUTTING AND PATCHING OF FLOOR WITH GENERAL CONTRACTOR.
PD-12	REMOVE EXISTING GAS SERVICE AND ALL GAS PIPING INSIDE THE BUILDING.
PD-13	REMOVE EXISTING FLOOR DRAIN AND CAP AND ABANDON BELOW SLAB PIPING. REMOVE ALL VENT PIPING TO VENT TERMINATION. COORDINATE CUTTING AND PATCHING OF FLOOR WITH GENERAL CONTRACTOR.
PD-14	ELEVATOR SUMP PUMP AND ALL ASSOCIATED PIPING SHALL REMAIN.
PD-15	REMOVE EXISTING WATER METER AND ASSOCIATED PIPING TO BELOW LOWER LEVEL FLOOR SLAB. CAP AND ABANDON BELOW SLAB PIPING AND PATCH FLOOR.
PD-16	REMOVE ANY CATCH BASIN PIPING LOCATED WITHIN THE BUILDING. FOR WORK ASSOCIATED WITH THE CATCH BASIN AND PIPING OUTSIDE OF THE BUILDING, REFER TO CIVIL PLANS.

PLUMBING KEYED NOTES

P-1	EXISTING TO REMAIN.
P-2	COORDINATE EXACT LOCATION OF FLOOR DRAIN WITH EQUIPMENT LAYOUT TO AVOID WET FLOORS AND DRAIN PIPE TRIPPING HAZARDS.
P-3	ALL NEW PIPING ROUTED BELOW SLAB WILL REQUIRE THE SLAB TO BE CUT AND PATCHED. COORDINATE ALL CUTTING AND PATCHING OF THE FLOOR WITH THE GENERAL CONTRACTOR.
P-4	INSTALL NEW WATER SERVICE PIPING IN THE SAME LOCATION AS THE EXISTING THAT WAS DEMOLISHED. COORDINATING THE PATCHING OF THE FLOOR WITH THE GENERAL CONTRACTOR.
P-5	ROUTE WATER HEATER INTAKE AND FLUE TO ROOF. IF POSSIBLE, REUSE THE EXISTING WATER HEATER INTAKE AND FLUE PENETRATION.
P-6	COORDINATE THE INSTALLATION OF THE GAS SHUTOFF VALVE FOR THE OVEN/STOVE WITH THE KITCHEN EXHAUST HOOD.
P-7	ROUTE ALL PIPING ABOVE THE RATED CEILING IN ELEVATOR EQUIPMENT 02B AND BETWEEN THE JOISTS. THE JOISTS RUN NORTH-SOUTH IN THIS AREA.
P-8	ROUTE WATER SOFTENER DISCHARGE DRAIN PIPE TO HUB DRAIN.
P-9	ROUTE VENT PIPING IN THE ATTIC ABOVE THE MAIN LEVEL CEILING.
P-10	LOCATE EXPANSION TANK AS HIGH AS POSSIBLE AND TO NOT IMPEDE ON SERVICE ACCESS TO THE WATER SOFTENER OR WATER HEATER. LOCATING THE EXPANSION TANK BEHIND THE WATER HEATER IS ACCEPTABLE.
P-11	ROUTE GAS THROUGH EXTERIOR WALL FOR FUTURE CONNECTION TO GAS GRILLE. LOCATE SHUTOFF VALVE IN AN ACCESSIBLE LOCATION IN JANITOR 119.
P-12	REINSTALL SALVAGED ELECTRIC WATER COOLER.
P-13	ROUTE WASTE AND WATER PIPING CONCEALED ABOVE FINISHED FLOOR AND IN WALL FROM CHASE TO WATER COOLER.

PLUMBING SYMBOLS

(NOTE: ALL SYMBOLS SHOWN MAY NOT BE REQUIRED FOR THIS PROJECT)

*** PLUMBING SYMBOLS ***

- ALL BELOW GRADE SYSTEMS
- ST — STORM SEWER - ST
- OST — OVERFLOW STORM SEWER - OST
- SPD — SUMP PUMP DISCHARGE - SPD
- SAN — SANITARY SEWER - SAN
ACID WASTE - AW
- SAN-G — GREASE SANITARY SEWER - SAN-G
- V — PLUMBING VENT. VENT - V, VENT THRU ROOF - VTR, ACID VENT - AV
- CV — CIRCUIT VENT - CV
- WV — WET VENT - WV
- CW — COLD WATER - CW
- HW — 120º HOT WATER - HW
- HW1 — 140º HOT WATER - HW1
- HWC — HOT WATER CIRCULATING - HWC
- TW — TEMPERED WATER - TW
- G## — LOW PRESSURE GAS - G-## (## NUMBER CORRESPONDS TO DESIGN PRESSURE ***)
- G## — HIGH PRESSURE GAS - G-## (*** NUMBER CORRESPONDS TO DESIGN PRESSURE ***)
- A — COMPRESSED AIR - A
- CLEANOUT - CO, WALL CLEANOUT - WCO
YARD CLEANOUT - YCO
- PLUMBING DRAIN. FLOOR DRAIN - FD, FLOOR SINK - FS, AREA DRAIN - AD
- ROOF DRAIN - RD
- DOWNSPOUT - DSN
- WALL HYDRANT - H
- HOSE BIBB - H
- SHOWER - SH
- UNION
- DIELECTRIC UNION
- SHUT-OFF VALVE
- STRAINER
- ANGLE SHUT-OFF VALVE
- BALANCING OR SHUT-OFF COCK
- FLOW CONTROL VALVE
- AUTOMATIC CONTROL VALVE
- RELIEF OR SAFETY VALVE
- PRESSURE REDUCING VALVE
- CHECK VALVE
- BACKFLOW PREVENTER
- VALVE IN RISER
- 3-WAY AUTOMATIC CONTROL VALVE
- PRESSURE-TEMPERATURE RELIEF VALVE
- W — WATER METER
- X / XX — EQUIPMENT DESIGNATION PER EQUIPMENT SCHEDULE
- X-XX — FIXTURE DESIGNATION PER FIXTURE SCHEDULE
- XX — CONNECTION DESIGNATION PER KITCHEN EQUIPMENT CONNECTION SCHEDULE
- XX — CONNECTION DESIGNATION PER LAB EQUIPMENT CONNECTION SCHEDULE

*** PIPING SPECIALITIES ***

- ELBOW TURNED UP OR TOWARDS
- ELBOW TURNED DOWN OR AWAY
- TEE TURNED UP OR TOWARDS
- TEE TURNED DOWN OR AWAY
- DROP / RISE — DROP OR RISE
- ARROW IN LINE INDICATES DIRECTION OF FLOW
PITCH DOWN IN DIRECTION OF ARROW
- CAP OR PLUG
- CONNECTION - NEW TO EXISTING

*** REFERENCE ***

- ELECTRICAL PANEL SHOWN FOR COORDINATION

GENERAL PLUMBING DEMOLITION NOTES:

1. REFER TO DEMOLITION KEY FOR ITEMS TO BE REMOVED VERSUS ITEMS TO REMAIN.
2. WHERE PIPING THROUGH A FLOOR OR A WALL IS REMOVED, PATCH ALL REMAINING HOLES TO MATCH EXISTING.
3. WHERE EXISTING PIPING TO BE REMOVED IS ROUTED IN AN EXISTING WALL OR FLOOR SLAB TO REMAIN, PIPING TO BE CAPPED AND ABANDONED IN WALL AND/OR SLAB.
4. NOTIFY THE OWNER PRIOR TO CREATING ANY SMOKE, HEAT, MOISTURE, VAPORS OR DUST AROUND ANY FIRE ALARM EQUIPMENT.
5. FOR EXISTING PIPING SHOWN TO BE REMOVED TO BELOW SLAB, SLAB TO BE CUT AND PIPING TO BE REMOVED TO BELOW SLAB AS REQUIRED. FLOOR TO BE THEN BE PATCHED AS REQUIRED TO PROVIDE FLUSH FINISH FOR FLOOR. PIPING SHOWN TO BE REMOVED BELOW SLAB MAY REMAIN TO BE ABANDONED IN PLACE EXCEPT WHERE REMOVAL IS REQUIRED TO FACILITATE THE ROUTING OF NEW PIPING OR SYSTEMS. PATCH SURFACES TO MATCH ADJACENT SURFACES AT ALL REMOVED PIPING, ETC.
6. UNLESS SPECIFICALLY NOTED OTHERWISE, WHERE EQUIPMENT IS INDICATED TO BE REMOVED, DEMOLITION WORK SHALL INCLUDE REMOVAL OF ASSOCIATED CONCRETE EQUIPMENT PAD AND/OR SUPPORT STEEL.
7. EXISTING PLUMBING PLANS DO NOT EXIST. ALL PIPING SHOWN WAS ATTEMPTED TO BE FIELD VERIFIED. HOWEVER, SOME PIPING IS CONCEALED AND COULD NOT BE VERIFIED (E.G. UNDERSLAB PIPING), SO SOME PIPING SHOWN IS ASSUMED. CONTRACTOR SHALL FIELD VERIFY ALL PIPING SIZES AND LOCATIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN PIPING SHOWN AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL.
8. DEMOLITION PLANS HAVE BEEN PROVIDED FOR REFERENCE BUT IT IS KNOWN THAT ALL EXISTING PIPING IS NOT SHOWN. IN GENERAL, ALL EXISTING ABOVE SLAB PIPING AND EQUIPMENT NOT SHOWN TO REMAIN ON THE NEW WORK PLANS SHALL BE REMOVED. WHERE THERE IS A QUESTION AS TO WHETHER THE PIPING SHOULD REMAIN, THE CONTRACTOR SHALL REVIEW WITH OWNER'S REPRESENTATIVE AND DESIGN PROFESSIONAL PRIOR TO REMOVAL OF THE PIPING AND EQUIPMENT.

GENERAL PLUMBING NOTES:

1. DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK, AND TO INDICATE THE GENERAL LOCATIONS OF EQUIPMENT, PIPING AND DUCTWORK. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LAYOUT THEIR OWN WORK ACCORDING TO THE FOLLOWING GUIDELINES:
   a. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS FOR EQUIPMENT AND ROUGH-INS AND THE EXACT ROUTING OF PIPING PRIOR TO CONSTRUCTION SO AS TO BEST FIT THE LAYOUT OF THE WORK. SPACE ABOVE CEILINGS IS EXTREMELY LIMITED; COORDINATE FINAL LAYOUT WITH ALL TRADES.
   b. WHERE OFFSETS IN PIPING ARE REQUIRED TO COORDINATE THE WORK OF OTHER TRADES, WITH EXISTING STRUCTURE, PIPING, CONDUIT, DUCTWORK, ETC, OR TO MAINTAIN REQUIRED CEILING HEIGHTS, THEY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
   c. ALL EXISTING PIPING ROUTING SHOWN IS INTENDED TO INDICATE APPROXIMATE SIZE, NUMBER AND LOCATION OF PIPING BRANCHES FOR BIDDING PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT SIZE AND CONFIGURATION PRIOR TO CONSTRUCTION.
   d. UNLESS OTHERWISE NOTED, ALL PIPING TO BE ROUTED CONCEALED IN WALLS, CHASES OR ABOVE SUSPENDED CEILING. WATER PIPING SHALL NOT BE ROUTED IN EXTERIOR WALLS. COORDINATE LAYOUT WITH EXISTING CONDITIONS AND ALL OTHER TRADES. ROUTE ALL PIPING AS HIGH AS POSSIBLE AND ALONG WALLS TO MAXIMIZE SPACE AVAILABLE FOR OTHER TRADES.
   e. COORDINATE ROUTING OF PIPING TO MAINTAIN ACCESS TO FILTERS, MOTORS, ELECTRICAL EQUIPMENT, AND CONTROLS. IN NO CASE SHALL PIPING PASS DIRECTLY OVER ELECTRICAL PANELS OR DISCONNECTS OR RESTRICT ACCESS TO ANY ELECTRICAL EQUIPMENT INCLUDING JUNCTION BOXES.
   f. VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SYSTEMS REQUIRING CONNECTION TO NEW PIPING PRIOR TO COMMENCING WORK.
2. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN PIPING OR ITEMS SUCH AS UNIONS, FITTINGS, OR VALVES, OR CLEANOUTS MAY NOT BE SHOWN, BUT WHERE SUCH ITEMS ARE REQUIRED BY CODE, THE SPECIFICATIONS, OR WHERE THEY ARE REQUIRED BY THE NATURE OF THE WORK, THEY SHALL BE FURNISHED AND INSTALLED.
3. UNLESS SPECIFICALLY SHOWN OTHERWISE, CLEANOUTS SHALL BE LOCATED IN WALLS. CLEANOUTS SHALL NOT BE LOCATED ABOVE CEILINGS. FOR CLEANOUTS THAT ARE REQUIRED, BUT NOT SHOWN ON PLANS, COORDINATE EXACT LOCATIONS WITH DESIGN PROFESSIONAL PRIOR TO INSTALLATION. INSTALL CLEANOUTS IN WALL AT 30" A.F.F. OR AT 42" A.F.F. WHEN LOCATED BEHIND CABINETS OR WATER CLOSETS.
4. ALL ELEMENTS OF THE CONSTRUCTION SHALL BE PERFORMED BY TRADES PEOPLE SKILLED IN THE PARTICULAR CRAFT INVOLVED, AND REGULARLY EMPLOYED IN THAT PARTICULAR CRAFT. ALL WORK SHALL BE PERFORMED IN A NEAT MANNER IN KEEPING WITH THE HIGHEST STANDARDS OF THE CRAFT.
5. COORDINATE INSTALLATION OF VENTS AND ALL OTHER ITEMS PENETRATING THE EXTERIOR BUILDING ENVELOPE WITH GENERAL CONTRACTOR. ALL ITEMS PENETRATING THE ROOF ARE TO BE INSTALLED AS PER ROOFING MANUFACTURER REQUIREMENTS.
6. CUT AND PATCH WALLS AND FLOORS AS REQUIRED FOR INSTALLATION OF NEW SYSTEMS.
   a. ALL OPENINGS IN CONCRETE OR MASONRY CONSTRUCTION SHALL BE CORE DRILLED OR SAW CUT. COORDINATE WITH EXISTING STRUCTURE AND GENERAL CONTRACTOR AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY AND MINIMIZE SIZE OF OPENINGS.
   b. SEAL AROUND ALL PIPING PENETRATIONS WITH NON-SHRINK GROUT OR SIMILAR MATERIAL. WHERE PENETRATIONS ARE IN FIRE RATED CONSTRUCTION, PLUMBING CONTRACTOR SHALL FIRE STOP TO MATCH THE FIRE RATING. REFER TO ARCHITECTURAL PLANS FOR REQUIRED FIRE RATINGS. SEE DETAILS AND SPECIFICATIONS FOR FIRE STOPPING REQUIREMENTS.
   c. PATCHING AND FIRESTOPPING OF ABANDONED EXISTING OPENINGS SHALL BE BY THE GENERAL CONTRACTOR.
   d. WHEN PATCHING OPENINGS IN AREAS WHICH ARE NOT TO RECEIVE NEW FINISHES, PLUMBING CONTRACTOR PATCHING SHALL MATCH ADJACENT FINISH.
   e. REFER TO ARCHITECTURAL PLANS FOR INFORMATION ON WHICH PORTIONS OF THE EXISTING STRUCTURE ARE TO BE REMOVED AND WHICH ARE TO REMAIN AS WELL AS WHICH AREAS ARE TO RECEIVE NEW FINISHES.
7. COORDINATE LOCATIONS AND SIZES OF OPENINGS IN NEW STRUCTURE WITH GENERAL CONTRACTOR. WHEN ADDITIONAL CUTTING AND PATCHING IS REQUIRED DUE TO PLUMBING CONTRACTOR'S FAILURE TO COORDINATE THIS WORK, IT SHALL BE THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ADDITIONAL CUTTING AND PATCHING. SEAL AND/OR FIRE STOP ALL PENETRATIONS AS REQUIRED.
8. PLUMBING CONTRACTOR SHALL PROVIDE ALL REQUIRED SUPPORT STEEL FOR PIPING.
9. PROVIDE ISOLATION VALVES FOR ALL EQUIPMENT AND ALL BRANCH LINES SERVING TWO OR MORE FIXTURES.
10. WHERE THERE IS NO CEILING INDICATED NEW PIPING WILL BE ROUTED EXPOSED WITHIN ROOM. ALL EXPOSED PIPING SHALL BE PAINTED TO MATCH ADJACENT WALL/CEILING COLOR.
11. CONTRACTOR SHALL NOTE THAT IN NEARLY ALL AREAS THE SPACE ABOVE CEILINGS IS EXTREMELY LIMITED, AND COORDINATION OF WORK IS MANDATORY.
12. ALL MECHANICAL ROOM FLOOR DRAIN LOCATIONS SHALL BE COORDINATED WITH EQUIPMENT SUBMITTALS AND ROOM EQUIPMENT LAYOUT. LOCATE DRAINS TO ACCOMMODATE EQUIPMENT CONDENSATE DRAINS TO MINIMIZE DRAIN PIPE LENGTH AND AVOID TRIPPING AND WET FLOOR HAZARDS.
13. SANITARY, STORM, AND VENT PIPING SIZES ARE BASED ON STANDARD CAST IRON PIPE SIZES; WHERE AN ALTERNATIVE MATERIAL IS USED, IF A DISCREPANCY IN AVAILABLE PIPE SIZE EXISTS FOR THAT MATERIAL, THE NEXT LARGEST AVAILABLE SIZE SHALL BE PROVIDED.

GENERAL STRUCTURE NOTES:

1. THE LOCATION AND SIZE OF ANY HOLES THROUGH STRUCTURE WILL REQUIRE REVIEW AND APPROVAL OF STRUCTURAL ENGINEER.
2. COORDINATE THE EXACT LOCATION OF DRAINS TO MISS FLOOR JOISTS. CONTRACTOR SHALL FORM ALL RECESSED DRAINS INTO CONCRETE POUR.
3. ALL HORIZONTAL PIPING SHALL BE SUPPORTED ON INTERVALS OF 10' ON CENTER OR LESS.
4. CONTRACTOR TO COORDINATE EXACT SIZE AND LOCATIONS OF ALL HOUSEKEEPING PADS PRIOR TO POURING OF CONCRETE.
5. CONTRACTOR TO SLEEVE PIPING OPENINGS IN FLOORS. REFER TO STRUCTURAL PLANS FOR TYPICAL DETAILS FOR OPENINGS IN FLOORS.
6. REFER TO SHEET S001 FOR INFORMATION ON REQUIRED SEISMIC BRACING FOR COMPONENTS. COORDINATE DESIGN AND INSTALLATION OF SEISMIC BRACING WITH THE GENERAL CONTRACTOR.

SUMP PUMP SCHEDULE

PLAN MARK	GPM	HEAD (FT)	PUMP TYPE	SYSTEM TYPE	DISCHARGE SIZE (IN)	ELECTRICAL HP	ELECTRICAL VOLTS	ELECTRICAL PH	MANUFACTURER & MODEL NUMBER	NOTES
SP-1	225	25	Vertical Shaft	Duplex	4	3	208	3	Weil 2109	1, 2, 3, 4

NOTES:

1. Provide with solid basin cover for 42" x 42" x 108" deep concrete sump.
2. Provide with single point power, 8158 control panel with main disconnect, pump disconnects, electric alternator, high water alarm, and 8230 tethered float. Provide with auxiliary contact for BAS monitoring of the high water alarm.
3. Provide with stainless steel shaft in two section construction (maximum section length shall be limited to 72" long).
4. Horsepower listed is per pump.

3

GAS WATER HEATER SCHEDULE

PLAN MARK	INPUT BTU/HR	STORAGE GALLONS	RECOVERY GPH	DEG. F TEMP RISE	FUEL	GAS PRESSURE	MANUFACTURER & MODEL NUMBER	NOTES
WH-1	130,000	80	166	90	NG	7" W.C.	Rheem HE80-130	

NOTES:

REFER TO SHEET S001 FOR INFORMATION ON REQUIRED SEISMIC BRACING FOR COMPONENTS. COORDINATE DESIGN AND INSTALLATION OF SEISMIC BRACING WITH THE GENERAL CONTRACTOR.

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Key Plan

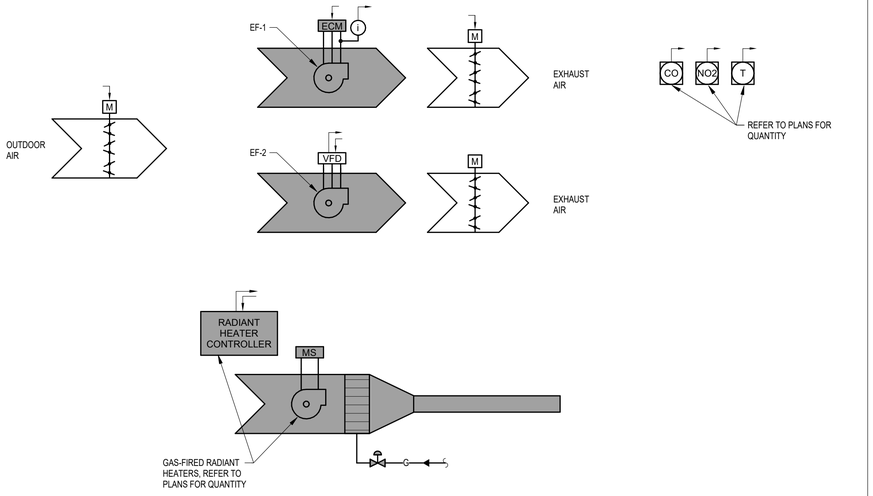
Revision	Description	Date
2	ADDENDUM 02	MARCH 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
PLUMBING SCHEDULES, NOTES AND DETAILS

Sheet Number
P510



1 GARAGE EXHAUST FANS AND HEATERS CONTROLS SCHEMATIC
NOT TO SCALE

SEQUENCE OF OPERATION

A. General:
1. The controls for the garage consists of exhaust fans, outdoor air motorized dampers, exhaust motorized dampers, CO and NO2 sensors, temperature sensors, and gas-fired radiant heaters.
2. The system is controlled to maintain the garage space temperature within the normal operating range for the VRF system condensing units as well as to prevent the build-up of CO and NO2 gases from vehicle exhaust.
3. Refer to the Occupancy and Set Point Schedule for a description of all occupancy modes and set points.
4. EF-1 shall be provided with an EC motor with 0-10V control input.
5. The Electrical Contractor shall provide a VFD for EF-2.
6. The space thermostat(s) shall have a minimum sensing range of 30 to 120 deg F.
7. All references to space temperature or CO or NO2 concentration shall be the worst case reading of all sensors.
8. The BAS Contractor shall coordinate with the TAB Contractor to determine the required fan speeds associated with each airflow rate indicated in this sequence.

B. Outdoor Air Damper Control
1. The damper shall open anytime either exhaust fan is called to start, except when only EF-1 is operating and it is in normal mode at its minimum airflow rate, the damper shall be closed.
2. The damper shall be closed at all other times.

C. CO/NO2 Concentration Control
1. During all occupied times and normal operation, the EF-1 exhaust damper shall be open and EF-1 shall operate at 120 cfm (EF-1 minimum airflow rate).
2. Upon detection of 25 ppm of CO or 0.7 ppm of NO2, the system shall increase the EF-1 exhaust airflow rate to 863 cfm (half of the EF-1 maximum airflow rate). Upon reduction of CO below 10 ppm and NO2 below 0.5 ppm, the fan shall return its normal operation airflow.
3. Upon detection of 100 ppm of CO or 1.5 ppm of NO2, the system shall increase the exhaust airflow rate to 1,725 cfm (the EF-1 maximum airflow rate), and an audible local alarm shall sound. Upon reduction of CO below 10 ppm and NO2 below 0.5 ppm, the fan shall return to its normal operation airflow and alarm shall be silenced. The alarm shall also have a push button to silence the alarm if pressed.
4. During all unoccupied times, the EF-1 exhaust damper shall be closed and EF-1 shall be off. If high concentrations of CO or NO2 are detected, EF-1 shall operate as described above.

D. Cooling Temperature Control
1. General: EF-2 is the primary source of cooling with EF-1 providing additional cooling for peak conditions.
2. When any space temperature rises above the cooling temperature set point, the EF-2 exhaust damper shall open and the fan shall start and modulate its speed to maintain the cooling temperature set point at the worst-case space temperature sensor.
3. If EF-2 is at its maximum speed and the space temperature continues to rise, the EF-1 exhaust damper shall open and the fan shall start and modulate its speed to maintain the cooling temperature set point at all space temperature sensors.
4. When all space temperatures fall below the cooling temperature set point, EF-1 shall stop and the EF-1 exhaust damper shall close.
5. If all space temperatures continue to fall below the cooling temperature set point, EF-2 shall stop and the EF-2 exhaust damper shall close.

E. Heating Temperature Control
1. RHB-1 shall operate as the lead gas-fired radiant heater between 10 AM on Mondays and 10 AM on Thursdays. RHB-2 shall operate as the lead heater between 10 AM on Thursdays and 10 AM on Mondays.
2. When any space temperature falls below the heating temperature set point, the lead heater shall be enabled and the heater controller shall stage the heater firing stage to maintain the heating space temperature set point at all space temperature sensors. If the lead heater is firing in second stage and unable to maintain the space temperature, the lag heater shall be enabled and the heater controller shall stage the heater firing stage to maintain the heating space temperature set point.
3. When all space temperatures rise above the heating space temperature set point, the gas-fired radiant heaters shall be disabled.

MINIMUM POINTS LIST

A. Analog Inputs
1. Space Temperature (refer to plans for quantity)
2. CO Concentration (refer to plans for quantity)
3. NO2 Concentration (refer to plans for quantity)

B. Analog Outputs
1. EF-1 Speed
2. EF-2 Speed

C. Binary Inputs
1. EF-1 Status
2. EF-2 Status

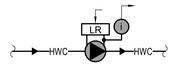
D. Binary Outputs
1. Outdoor Air Damper Position
2. EF-1 Start / Stop
3. EF-1 Exhaust Damper Position
4. EF-2 Start / Stop
5. EF-2 Exhaust Damper Position

E. Software Points
1. Occupancy Schedule & Set Points
2. Minimum Space Temperature Sensor Value
3. Maximum Space Temperature Sensor Value

F. Gas-Fired Radiant Heater Controller Points
1. Fan Start / Stop (Qty 2)
2. Fan Status (Qty 2)
3. Gas Valve Position (Qty 2)
4. Burner Firing Stage Low / High (Qty 2)
5. Alarm (Qty 2)

G. Software Points
1. Occupancy Schedule & Set Points

H. Suggested Alarm Values
1. Space Temperature: 10 deg F above or below set point
2. EF-1 Status
3. EF-2 Status
4. EF-2 VFD Fault
5. Gas-Fired Radiant Heater Alarm (Qty 2)



2 DOMESTIC HOT WATER CIRCULATING PUMP CONTROLS SCHEMATIC
NOT TO SCALE

SEQUENCE OF OPERATION

A. General:
1. The BAS Contractor shall provide a line voltage relay for the pump and coordinate installation with the Electrical Contractor.
2. The system circulates domestic hot water to provide faster response time when hot water fixtures are turned on.
3. Refer to the Occupancy and Setpoint Schedule for additional information.

B. Operation:
1. When the system is in occupied mode, the pump shall be on.
2. In unoccupied mode the pump shall be off.

MINIMUM POINTS LIST

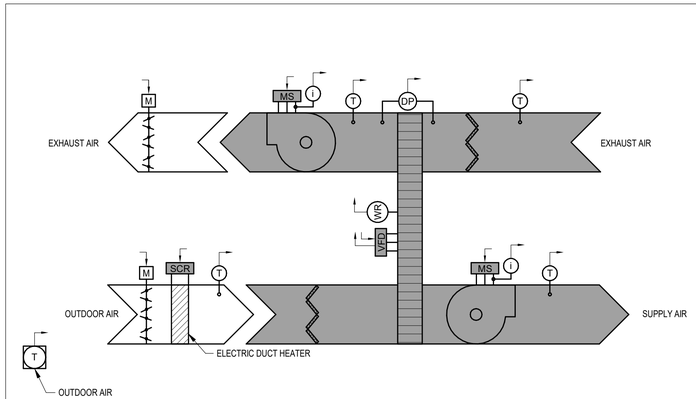
A. Analog Inputs
1. None

B. Analog Outputs
1. None

C. Binary Inputs
1. Pump Status

D. Binary Outputs
1. Pump Start / Stop

E. Alarms
1. None



3 ERU-1 CONTROL SCHEMATIC
NOT TO SCALE

SEQUENCE OF OPERATION

A. General:
1. The unit supplies year-round ventilation air to the VRF terminal units and extracts all dedicated exhaust from the building. The supply side unit components include an outdoor air damper (provided by the BAS Contractor), electric duct heater (not part of the unit), filters and a supply fan. The exhaust side unit components include filters, an exhaust fan, and an exhaust air damper (provided by the BAS Contractor). The unit will also include a total energy recovery wheel with VFD and wheel rotation sensor (both provided with the ERU).
2. The Electrical Contractor will provide motor starters for the supply fan and exhaust fan.
3. Refer to the Occupancy and Set Point Schedule for a description of occupancy modes and set points.
4. Actuators for the outdoor air and exhaust dampers shall be provided as fail closed with spring return. All damper actuators shall be 24V. Refer to specifications for additional information.
5. Provide both a software reset button and reset push button at the control panel to reset the unit.

B. Occupied Mode:
1. The operation of the ERU shall be enabled any time the VRF system is in occupied mode.
2. The total energy recovery wheel shall start and operate at full speed, unless in defrost mode.
3. The exhaust damper and outdoor air damper shall open.
4. The exhaust fan and supply fan shall start.
5. Total Energy Recovery Wheel Defrost Mode:
a. The wheel shall be in defrost mode when the wheel leaving exhaust air temperature is 25 deg F or less.
b. The wheel speed shall modulate to maintain the wheel leaving exhaust air temperature at 25 deg F.
c. If the wheel is at its minimum speed and the leaving exhaust air temperature falls below 25 deg F for 5 minutes, then the electric duct heater shall energize and vary it's capacity to maintain the leaving exhaust air temperature at 25 deg F.

C. Unoccupied Mode:
1. The ERU fans shall be off, all dampers shall be closed, and the total energy recovery wheel shall initially be off.
2. After 4 hours in unoccupied mode, the wheel shall start and rotate for 5 minutes and then stop again. This periodic wheel rotation shall occur every 4 hours until the unit goes back into occupied mode.

D. Safeties and Interlocks:
1. If for any reason, the supply or exhaust fan is not proved on when the unit is called to run, the opposite fan shall be shut off, the outdoor air and exhaust air dampers shall close, the wheel shall stop, and an alarm shall register.

MINIMUM POINTS LIST

A. Analog Inputs
1. Outdoor Air Temperature
2. Electric Duct Heater Leaving Air Temperature
3. Unit Discharge Air Temperature
4. Entering Exhaust Air Temperature
5. Leaving Exhaust Air Temperature
6. Total Energy Recovery Wheel Differential Pressure

B. Analog Outputs
1. Total Energy Recovery Wheel Speed
2. Electric Duct Heater Power

C. Binary Inputs
1. Supply Fan Status
2. Exhaust Fan Status
3. Total Energy Recovery Wheel Status
4. Total Energy Recovery Wheel Rotation Status
5. Unit Reset Button Status

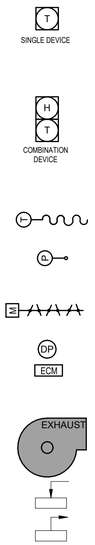
D. Binary Outputs
1. Supply Fan Start / Stop
2. Exhaust Fan Start / Stop
3. Total Energy Recovery Wheel Enable
4. Exhaust Air Damper Position
5. Outside Air Damper Position

E. Software Points
1. Occupancy Schedule & Set Points

F. Suggested Alarm Values
1. Supply Fan Status
2. Exhaust Fan Status
3. Total Energy Recovery Wheel Status
4. Exhaust Air Filter Status
5. Outdoor Air Filter Status
6. Total Energy Recovery Wheel Frost Alarm

CONTROLS SCHEMATIC SYMBOLS

(NOTE: ALL SYMBOLS SHOWN MAY NOT BE REQUIRED FOR THIS PROJECT.)



SPACE SENSOR
(REFER TO CONTROL SCHEMATICS AND SPECIFICATIONS)
T = TEMPERATURE SENSOR WITH SETPOINT ADJUSTMENT
T° = TEMPERATURE SENSOR ONLY
H = HUMIDITY SENSOR
CO_2 = CARBON DIOXIDE SENSOR
CO = CARBON MONOXIDE SENSOR
NG = NATURAL GAS SENSOR
NO_2 = NITROGEN DIOXIDE SENSOR
VO = VENTILATION OVERRIDE BUTTON
$ = SWITCH WITH PILOT LIGHT
B = PUSH BUTTON
OCC = OCCUPANCY SENSOR
OA = EXTERIOR MOUNTED OUTDOOR AIR TEMPERATURE SENSOR

AVERAGING/LOW POINT SENSORS
T = TEMPERATURE (AVERAGING)
F = FREEZE STAT (LOW POINT)

SENSOR
P = PRESSURE
T = TEMPERATURE
H = HUMIDITY
I = CURRENT

DAMPER
M = MOTORIZED
SD = SMOKE
FSD = FIRE/SMOKE

DIFFERENTIAL PRESSURE SENSOR

MOTOR
ECM = ELECTRONICALLY COMMUTATED
VFD = VARIABLE FREQUENCY DRIVE
MS = MOTOR STARTER
LR = LINE VOLTAGE RELAY

FAN
EXHAUST
RETURN
SUPPLY
RELIEF

OUTPUT FROM DDC CONTROLLER

INPUT TO DDC CONTROLLER

N.C. NORMALLY CLOSED
N.O. NORMALLY OPEN

TWO WAY CONTROL VALVE

THREE WAY CONTROL VALVE

PUMP

FILTER

AFMS = AIR FLOW MEASURING STATION
WFMS = WATER FLOW MEASURING STATION

COMPRESSOR

THIRD PARTY CONTROLLER

VAV - AIR VALVE

HUMIDIFIER DISPERSION TUBE

COIL, ENERGY RECOVERY WHEEL, ETC.

DUCTWORK

EQUIPMENT

FACE AND BYPASS COIL

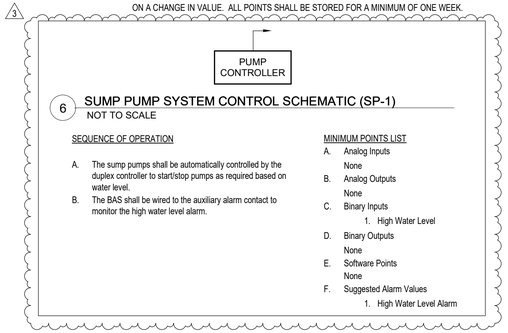
HOURS OF OCCUPANCY AND TEMPERATURE SETPOINT SCHEDULE (NOTE 1)

BUILDING AREA (Note 2)			Office Building	Garage
EQUIPMENT (Note 2)			VRF System, ERU, CP	Gas-fired Radiant Heaters and Exhaust Fans
OCCUPIED SCHEDULE				
	Monday thru Friday	N/A	24 hours	24 hours
	Saturday & Sunday	N/A	24 hours	24 hours
OCCUPIED				
	Cooling Set Point (Note 4)	Deg F	75	102
	Heating Set Point (Note 4)	Deg F	70	50
	Temperature Deadband	Deg F	+/- 0.5	+/- 2.0
	Ventilation (Note 5)	On/Off	On	N/A
UNOCCUPIED				
	Cooling Set Point (Note 4)	Deg F	75	102
	Heating Set Point (Note 4)	Deg F	70	50
	Temperature Deadband	Deg F	+/- 5.0	+/- 2.0
	Ventilation (Note 5)	On/Off	Off	N/A
THERMOSTAT CHARACTERISTICS				
	Temperature Set Point Adjustment (Note 3)	Deg F	+/- 3.0	None
	Unoccupied Override	N/A	Thermostat Button	N/A
	Display	N/A	Digital	None
NOTES				

NOTES:
1. All settings listed in this schedule shall be reviewed with the Owner prior to programming and shall be adjustable in the DDC system. The DDC system shall also have the capability to program holidays.
2. Equipment and building areas are used to define general occupancy schedules for areas of the building. Building areas may include other equipment that have the same occupancy schedule but that may have more or less detailed zones within the zone area.
3. Unless noted otherwise, the space temperature setpoint shall be adjustable at the sensor within the range as indicated.
4. The controls sequences shall include optimal start. Optimal start uses the outdoor air temperature and space temperature difference from set point to determine when a piece of equipment must turn on to have the room at the occupied temperature set point at the time the occupancy mode changes to occupied.
5. Refer to the plans and sequences for more details regarding ventilation.

GENERAL CONTROL NOTES

1. THE BUILDING AUTOMATION SYSTEM (BAS) SHALL CONNECT TO THE OWNER'S CENTRAL BAS SYSTEM, WHICH IS A NIAGARA N4 SYSTEM (NIAGARA AX NOT ACCEPTABLE). THE TIER 2 LEVEL CONTROL NETWORK SHALL BE DISTECH CONTROLS.
2. ALL HVAC SYSTEMS SHALL BE CONTROLLED WITH DIRECT DIGITAL CONTROL (DDC) ACCORDING TO THE CONTROL SEQUENCES. ALL POINTS, SOFTWARE PROGRAMMING AND HARDWARE, WHICH ARE REQUIRED TO MEET THE SEQUENCES OF OPERATION, SHALL BE PROVIDED.
3. ACTUATION OF ALL DAMPERS ENERGY RECOVERY UNITS AND EXHAUST FANS SHALL BE ELECTRIC WITH SPRING RETURN ON THE ACTUATORS.
4. ALL MASTER CONTROLLERS SHALL BE PROVIDED WITH A MINIMUM OF 25% SPARE CAPACITY. LIST THE USED CAPACITY FOR EACH MASTER CONTROLLER ON THE SHOP DRAWINGS.
5. ALL POINTS AND SET POINTS SHALL BE PROGRAMMED TO BE ADJUSTABLE.
6. REFER TO THE VRF SYSTEM SPECIFICATION FOR REQUIRED POINTS TO BE COMMUNICATED BETWEEN THE BAS AND THE VRF CONTROLLER.
7. COORDINATE TRENDING REQUIREMENTS WITH THE OWNER. AT A MINIMUM, ALL ANALOG POINTS SHALL BE LOGGED EVERY 15 MINUTES AND ALL BINARY POINTS SHALL BE LOGGED ON A CHANGE IN VALUE. ALL POINTS SHALL BE STORED FOR A MINIMUM OF ONE WEEK.



6 SUMP PUMP SYSTEM CONTROL SCHEMATIC (SP-1)
NOT TO SCALE

SEQUENCE OF OPERATION

A. The sump pumps shall be automatically controlled by the duplex controller to start/stop pumps as required based on water level.
B. The BAS shall be wired to the auxiliary alarm contact to monitor the high water level alarm.

MINIMUM POINTS LIST

A. Analog Inputs
None
B. Analog Outputs
None
C. Binary Inputs
1. High Water Level
D. Binary Outputs
None
E. Software Points
None
F. Suggested Alarm Values
1. High Water Level Alarm

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Key Plan

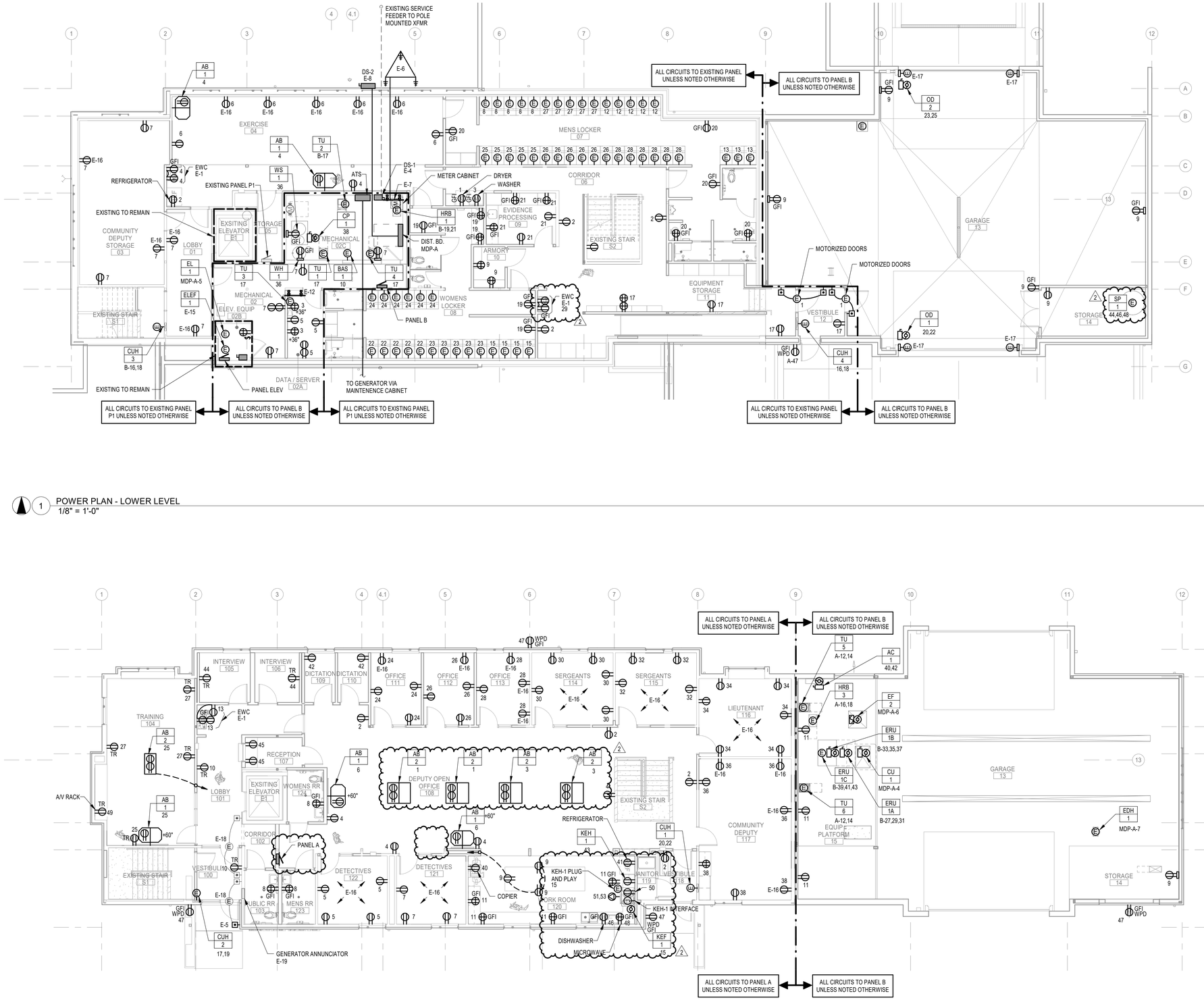
Revision	Description	Date
2	ADDENDUM 02	MARCH 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
HVAC CONTROLS

Sheet Number
H500



1 POWER PLAN - LOWER LEVEL
1/8" = 1'-0"

2 POWER PLAN - MAIN LEVEL
1/8" = 1'-0"

KEYED NOTES

E-1	ELECTRIC WATER COOLER (EWC) SHALL BE GFCI PROTECTED THROUGH ADJACENT GFI RECEPTACLE SHOWN ON PLANS. COORDINATE EWC CONNECTION WITH DIVISION 22 PRIOR TO ROUGH-IN. PROVIDE LABEL TO IDENTIFY SOURCE GFI LOCATION.
E-4	BOND SERVICE DISCONNECT GROUND TERMINALS TO GROUND BAR WITH #1/0 COPPER (KEY NOTE E-7). PROVIDE NEUTRAL GROUND BUS LINK.
E-5	REUSE EXISTING ADA PUSHBUTTON AND REINSTALL. EXTEND CONDUIT AS NECESSARY.
E-6	PROVIDE TRIAD GROUND TO SUPPLEMENT BUILDING GROUND SYSTEM. BOND TO BUILDING GROUND BAR. SEAL PENETRATION THROUGH EXTERIOR WALL. PROVIDE CONDUIT SUPPORTS AS NECESSARY. USE #1/0 COPPER AND GROUND RODS PER SPEC 26 0526. SPACE GROUND RODS 6'-0" APART.
E-7	PROVIDE 24"Wx4"Hx0.25"D COPPER GROUND BAR FOR SERVICE GROUND.
E-8	FUTURE LOCATION OF SOLAR SERVICE PANEL.
E-12	TELECOM MAIN GROUND BAR. BOND TO SERVICE GROUND BAR WITH #1/0 COPPER (KEY NOTE E-7).
E-15	PROVIDE CONNECTION TO EXISTING ELEVATOR AND MACHINE ROOM FAN PER DETAILS ON SHEET E530.
E-16	PROVIDE NEW RECEPTACLE DEVICE AND FACEPLATE IN EXISTING BOX. USE EXISTING RACEWAY WHERE FEASIBLE AND EXTEND AS NECESSARY TO PROVIDE NEW BRANCH CIRCUIT NOTED.
E-17	ELECTRICAL CONTRACTOR SHALL PROVIDE RACEWAY AND WIRING AS REQUIRED TO INSTALL ALL SAFETIES AND CONNECT TO OVERHEAD DOOR MOTOR AND CONTROLLER.
E-18	MAINTAIN EXISTING CIRCUIT TO POWERED DOORS.
E-19	MAINTAIN EXISTING CIRCUIT TO FIRE ALARM ANNUNICATOR PANEL.

RECEPTACLE KEY

TR - INDICATES TAMPER RESISTANT (SAFETY TYPE) RECEPTACLE
GFI - INDICATES GROUND FAULT INTERRUPTER RECEPTACLE
TVSS - INDICATES TRANSIENT VOLT SURGE SUPPRESSOR RECEPTACLE
IG - INDICATES ISOLATED GROUND RECEPTACLE
WP - INDICATES RECEPTACLE WITH WEATHERPROOF BOX/ FLIPCOVER
WPD - INDICATES RECEPTACLE WITH WEATHERPROOF BOX/ CORD AND PLUG COVER
- NUMBER INDICATES PANEL CIRCUIT NUMBER
'-##" - DIMENSION INDICATES HEIGHT TO CENTER OF RECEPTACLE ABOVE FINISH FLOOR (+18" IF NOT SHOWN)
USB - INDICATES USB TYPE RECEPTACLE

NEW WORK KEY

EXISTING
NEW / REVISED
EXISTING EQUIPMENT
NEW / REVISED EQUIPMENT

REFER TO SHEET S001 FOR INFORMATION ON REQUIRED SEISMIC BRACING FOR COMPONENTS. COORDINATE DESIGN AND INSTALLATION OF SEISMIC BRACING WITH THE GENERAL CONTRACTOR.

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Key Plan

Revision	Description	Date
2	ADDENDUM 02	MARCH 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
OVERALL POWER PLANS

Sheet Number
E201

PANEL SCHEDULE: P1

Location: **Mounting:** Surface **Enclosure:** Type 1 **Volts:** 120/208V **Phases:** 3 **Wires:** 4 **A.I.C. Rating:** 10,000 **Mains Type:** MLO **Mains Rating:** 225 A **Total Load:** 24548 VA

A= A/C E=EQUIP H=HEAT K=KITCH L=LIGHTS M= MOTOR R=RECEPT S=SPARE SP=SPACE

CKT NO.	BK A	P		Description	LOAD V.A.		LOAD V.A.	Description		P	BK A	CKT NO.
1	20	1	E	RM 06 DRYER	180		540	RM 06 RCPTS	R	1	20	2
3	20	1	E	RM 06 WASHER	1500		360	RM 04 EWC	R	1	20	4
5	20	1	L	LOWER EM LIGHTS	253		360	RM 04 RCPTS	R	1	20	6
7	20	1	R	RM 01 & 03 RCPTS	1080		900	RM 07 LOCKER RCPTS	E	1	20	8
9	20	1	R	RM 10 RCPTS	360		709	RM 03 - 05 & 07 LIGHTS	L	1	20	10
11	20	1	L	CORRIDOR 01 & 06 LIGHTS	273		900	RM 07 LOCKER RCPTS	E	1	20	12
13	20	1	E	RM 07 LOCKER RCPTS	540		621	RM 07 - 10 LIGHTS	L	1	20	14
15	20	1	E	RM 08 LOCKER RCPTS	720		4452	CUH-4		2	35	16,18
17	20	1	R	RM 11 RCPTS	900		--	--	--	--	--	
19	20	1	R	RM 08 RCPTS	900		900	RM 07 RCPTS	R	1	20	20
21	20	1	R	RM 09 RCPTS	900		900	RM 08 LOCKER RCPTS	E	1	20	22
23	20	1	E	RM 08 LOCKER RCPTS	900		1080	RM 08 LOCKER RCPTS	E	1	20	24
25	20	1	E	RM 07 LOCKER RCPTS	900		1080	RM 07 LOCKER RCPTS	E	1	20	26
27	20	1	E	RM 07 LOCKER RCPTS	900		1080	RM 07 LOCKER RCPTS	E	1	20	28
29	20	1	R	RM 11 EWC	360		--	Spare		1	20	30
31	20	1		Spare	--		--	Spare		1	20	32
33	20	1		Spare	--		--	Spare		1	20	34
35	20	1		Spare	--		--	Spare		1	20	36
37	20	1		Spare	--		--	Spare		1	20	38
39	20	1		Spare	--		--	Spare		1	20	40
41	20	1		Spare	--		--	Spare		1	20	42

*HL = HANDLE LOCK *GFI = GROUND FAULT INTERRUPTER *AFI = ARC FAULT INTERRUPTER *ST = SHUNT TRIP

2

VARIABLE FREQUENCY DRIVE SCHEDULE

UNIT NO.	HP	FULL LOAD AMPS	LOCATION	VOLTS/ PHASE	REMARKS
EF-2	5	16.7	GARAGE EQPT PLATFORM 15	208/3	

NOTES:

1. Provide manufacturer per specifications.
2. For each unit, provide an EMI/RFI filter, AC line reactor (5%), DC link reactor, manual bypass, and built-in circuit breaker.
3. The horsepower rating is for the motor, not the VFD. The VFD shall be rated to carry the full load amps (FLA) of the motor without using the overload rating of VFD.

PANEL SCHEDULE: B

Location: **Mounting:** Surface **Enclosure:** Type 1 **Volts:** 120/208V **Phases:** 3 **Wires:** 4 **A.I.C. Rating:** 22,000 **Mains Type:** MLO **Mains Rating:** 150 A **Total Load:** 41856 VA

A= A/C E=EQUIP H=HEAT K=KITCH L=LIGHTS M= MOTOR R=RECEPT S=SPARE SP=SPACE

CKT NO.	BK A	P		Description	LOAD V.A.		LOAD V.A.	Description		P	BK A	CKT NO.
1	20	1	E	RM 12 MOTORIZED DOORS	1000		1200	RM 04 REF RCPT	R	1	20	2
3	20	1	R	RM 02A AC RCPTS	360		540	RM 04 AB RCPTS	R	1	20	4
5	20	1	R	RM 02A RCPTS	720		900	RM 04 RCPTS	R	1	20	6
7	20	1	R	RM 02 RCPTS	900		88	LOWER EM LIGHTS	L	1	20	8
9	20	1	R	RM 13 RCPTS	1080		180	BAS 1	E	1	20	10
11	20	1	R	EQUIP. PLATFORM SERVICE RCPTS	540		1152	RHB-1,2	H	1	20	12
13	20	1	L	PARKING LIGHTING	777		1656	EF-1	E	1	20	14
15	20	1	E	GT 1	1176		2226	CUH-3	H	2	20	16,18
17	20	1	E	TU 1-4	2515		--	--	--	--	--	
19,21	20	2	E	HRB 1	104		2746	OD-1	E	2	30	20,22
	--	--	--	--	--		--	--	--	--	--	
23,25	30	2	E	OD-2	2746		4000	GEN 1 JACKET HEATER	E	2	30	24,26
	--	--	--	--	--		--	--	--	--	--	
27,29,31	25	3		ERU-1A	3819		180	GEN 1 BATTERY HEATER	E	1	20	28
	--	--	--	--	--		240	RM 02, 02A, 02B & 02C LIGHTS	L	1	20	30
	--	--	--	--	--		38	RM 13 &14 LIGHTS	L	1	20	32
33,35,37	20	3	E	ERU-1B	2701		1208	RM 13 LIGHTS	L	1	20	34
	--	--	--	--	--		360	RM 02C WS-1 & WH-1 RCPTS	R	1	20	36
	--	--	--	--	--		120	CP-1	E	1	20	38
39,41,43	20	3	E	ERU-1C	541		2080	AC-1	E	2	20	40,42
	--	--	--	--	--		--	--	--	--	--	
	--	--	--	--	--		3963	SP-1	E	3	20	44,46,48
45	20	1		Spare	--		--	--	--	--	--	
47	20	1		Spare	--		--	--	--	--	--	
49	20	1		Spare	--		--	Spare		1	20	50
51	20	1		Spare	--		--	Spare		1	20	52
53	20	1		Spare	--		--	Spare		1	20	54

*HL = HANDLE LOCK *GFI = GROUND FAULT INTERRUPTER *AFI = ARC FAULT INTERRUPTER *ST = SHUNT TRIP

2

EQUIPMENT SCHEDULE

PLAN MARK	DESCRIPTION	PANEL	VOLTS /PH	HP/ WATTS		FLA	MCA	MAX FUSE/ MOCPD	FEEDER	DISC @ UNIT	REMARKS
AC-1	AIR COMPRESSOR(DRY SYSTEM)	SEE PLANS	208/1	1 1/2	HP	10	13	20	3/4"C-3#12	30/2 NF	
BAS-1	BAS NETWORK CONTROLLER	SEE PLANS	120/1					20	3/4"C-2#12 & 1#12G	SPSW	NOTE 3
CP-1	CIRCULATION PUMP	SEE PLANS	120/1	FRA	HP	1	2	15	3#12	SPSW	
CU-1	CONDENSING UNIT	SEE PLANS	208/3	18000	W	49.0	61.9	70	1 1/4"C-4#4 &1#8G	100/70 AF	
CUH-1	ELEC. CABINENT UNIT HEATER	SEE PLANS	208/1	4000	W	21.4	26.8	35	3/4"C-2#10 & 1#10G	FWE	
CUH-2	ELEC. CABINENT UNIT HEATER	SEE PLANS	208/1	3000	W	16.0	20.0	30	3/4"C-2#10 & 1#10G	FWE	
CUH-3	ELEC. CABINENT UNIT HEATER	SEE PLANS	208/1	2000	W	10.7	13.4	20	3/4"C-2#12 & 1#12G	FWE	
CUH-4	ELEC. CABINENT UNIT HEATER	SEE PLANS	208/1	4000	W	21.4	26.8	35	3/4"C-2#10 & 1#10G	FWE	
EDH-1	ELEC. DUCT HEATER	SEE PLANS	208/3	12500	W	34.7	43.4	50	3/4"C-3#6 & 1#10G	FWE	
EF-1	EXAUST FAN	SEE PLANS	120/1	3/4	HP	13.8	17.3	20	3/4"C-2#12 & 1#12G	FWE	
EF-2	EXAUST FAN	SEE PLANS	208/3	5	HP	16.7	20.9	40	3/4"C-3#12 & 1#12G	VFD	
EL-1	EXISTING ELEVATOR	SEE PLANS	208/3					70	3#4 & 1#8G	ETR	NOTE 4
ERU-1A	ENERGY RECOVERY UNIT	SEE PLANS	208/3	3	HP	10.6	13.3	25	3/4"C-3#12 & 1#12G	FWE	
ERU-1B	ENERGY RECOVERY UNIT	SEE PLANS	208/3	2	HP	7.5	9.4	20	3/4"C-3#12 & 1#12G	FWE	
ERU-1C	ENERGY RECOVERY UNIT	SEE PLANS	208/3	1/3	HP	1.5	1.9	15	3/4"C-3#12 & 1#12G	FWE	
GT-1	MOTORIZED GATE	SEE PLANS	120/1	1/2	HP	9.8	12.3	20	3/4"C-2#10 & 1#10G	NEMA 3R NF 30A	NOTE 1,2
HRB-1	HEAT RECOVERY BOX	SEE PLANS	208/1	100	W	0.3	0.4	20	3/4"C-2#12 & 1#12G	TPSW	
HRB-2	HEAT RECOVERY BOX	SEE PLANS	208/1	100	W	0.5	0.6	20	3/4"C-2#12 & 1#12G	TPSW	
HRB-3	HEAT RECOVERY BOX	SEE PLANS	208/1	100	W	0.3	0.4	20	3/4"C-2#12 & 1#12G	TPSW	
KEF-1	KITCHEN EXAUST FAN	SEE PLANS	120/1	1/2	HP	9.8	12.3	20	3/4"C-2#12 & 1#12G	FWE	
KEH-1	KITCHEN EXHAUST HOOD	SEE PLANS	120/1	500	W	4.2	5.3	20	3/4"C-2#12 & 1#12G	SPSW	NOTE 3
OD-1	OVERHEAD DOOR	SEE PLANS	208/1	2	HP	13.2	16.5	30	3/4"C-2#10 & 1#10G	FWE	NOTE 1
OD-2	OVERHEAD DOOR	SEE PLANS	208/1	2	HP	13.2	16.5	30	3/4"C-2#10 & 1#10G	FWE	NOTE 1
RHB-1	RADIANT HEAT BURNER	SEE PLANS	120/1	600	W	4.8	6.0	20	3/4"C-2#12 & 1#12G	PLUG	
RHB-2	RADIANT HEAT BURNER	SEE PLANS	120/1	600	W	4.8	6.0	20	3/4"C-2#12 & 1#12G	PLUG	
SP-1	SUMP PUMP	SEE PLANS	208/3	3	HP	11.0	14.0	20	3/4"C-3#12 & 1#12G	FWE	
TU-1	VRF TERMINAL UNIT	SEE PLANS	208/1	800	W	3.9	4.9	20	3/4"C-2#12 & 1#12G	TPSW	
TU-2	VRF TERMINAL UNIT	SEE PLANS	208/1	800	W	3.9	4.9	20	3/4"C-2#12 & 1#12G	TPSW	
TU-3	VRF TERMINAL UNIT	SEE PLANS	208/1	50	W	0.3	0.4	20	3/4"C-2#12 & 1#12G	TPSW	
TU-4	VRF TERMINAL UNIT	SEE PLANS	208/1	50	W	3.9	4.9	20	3/4"C-2#12 & 1#12G	TPSW	
TU-5	VRF TERMINAL UNIT	SEE PLANS	208/1	800	W	3.9	4.9	20	3/4"C-2#12 & 1#12G	TPSW	
TU-6	VRF TERMINAL UNIT	SEE PLANS	208/1	800	W	3.9	4.9	20	3/4"C-2#12 & 1#12G	TPSW	
TU-7	VRF TERMINAL UNIT	SEE PLANS	208/1	800	W	1.4	1.8	20	3/4"C-2#12 & 1#12G	TPSW	
TU-8	VRF TERMINAL UNIT	SEE PLANS	208/1	300	W	0.6	0.8	20	3/4"C-2#12 & 1#12G	TPSW	
TU-9	VRF TERMINAL UNIT	SEE PLANS	208/1	134	W	0.6	0.8	20	3/4"C-2#12 & 1#12G	TPSW	
TU-10	VRF TERMINAL UNIT	SEE PLANS	208/1	134	W	1.3	1.6	20	3/4"C-2#12 & 1#12G	TPSW	
TU-11	VRF TERMINAL UNIT	SEE PLANS	208/1	250	W	1.4	1.8	20	3/4"C-2#12 & 1#12G	TPSW	
TU-12	VRF TERMINAL UNIT	SEE PLANS	208/1	300	W	1.4	1.8	20	3/4"C-2#12 & 1#12G	TPSW	
TU-13	VRF TERMINAL UNIT	SEE PLANS	208/1	300	W	0.6	0.8	20	3/4"C-2#12 & 1#12G	TPSW	
TU-14	VRF TERMINAL UNIT	SEE PLANS	208/1	134	W	0.6	0.8	20	3/4"C-2#12 & 1#12G	TPSW	
TU-15	VRF TERMINAL UNIT	SEE PLANS	208/1	134	W	0.6	0.8	20	3/4"C-2#12 & 1#12G	TPSW	
WH-1	WATER HEATER	SEE PLANS	120/1			2.0	3.0	20	3/4"C-3#12	RECPT.	
WS-1	WATER SOFTENER	SEE PLANS	120/1			2.0	3.0	20	3/4"C-3#12	RECPT.	

KEY:

CMS = COMB. MOTOR STARTER
DDC = DIRECT DIGITAL CONTROL
FLA = FULL LOAD AMPS
FRA = FRACTIONAL HP
FWE = FURNISHED W/ EQUIP
MCA = MIN CKT. AMP
NF = NON-FUSED
SPSW = SINGLE POLE SWITCH
SSY = BUSSMAN FUSES/SWITCH UNIT
WP = WEATHERPROOF
WS = WITHIN SITE
VFD = VAR. FREQ. DRIVE
TPSW = TWO POLE SWITCH

NOTES:

1. INSTALL ALL CONTROL STATIONS, DISCONNECT SWITCHES, SAFETY DEVICES, ETC.
2. CIRCUIT OVERSIZED FOR VOLTAGE DROP.
3. PROVIDE MOTOR RATED TOGGLE SWITCH
4. EXTEND EXISTING CONDUIT TO NEW SOURCE PANEL. REPLACE ALL CIRCUIT WIRING WITH NEW.

PANEL SCHEDULE: A

Location: **Mounting:** Recessed **Enclosure:** Type 1 **Volts:** 120/208V **Phases:** 3 **Wires:** 4 **A.I.C. Rating:** 22,000 **Mains Type:** MB **Mains Rating:** 150 A **Total Load:** 46649 VA

A= A/C E=EQUIP H=HEAT K=KITCH L=LIGHTS M= MOTOR R=RECEPT S=SPARE SP=SPACE

CKT NO.	BK A	P		Description	LOAD V.A.		LOAD V.A.	Description		P	BK A	CKT NO.
1	20	1	R	RM 108 FLOOR RCPTS	360		720	RM 108 N RCPTS	R	1	20	2
3	20	1	R	RM 108 FLOOR RCPTS	360		900	RM 108 S RCPTS	R	1	20	4
5	20	1	R	RM 122 RCPTS	720		360	RM 108 AB RCPTS	R	1	20	6
7	20	1	R	RM 121 RCPTS	540		540	RM 103, 123 & 124 RCPTS	R	1	20	8
9	20	1	R	RM 120 ISLAND RCPTS	540		360	RM 100, 101 & S1 RCPTS	R	1	20	10
11	20	1	R	RM 120 COUNTER RCPTS	720		2066	TU 5-9	E	2	20	12,14
13	20	1	R	LOBBY EWC	360		--	--	--	--	--	
15	20	1	E	KEH 1 & KEF 1	1680		200	HRB-2 & HRB-3	E	2	20	16,18
17,19	30	2	E	CUH-2	3328		--	--	--	--	--	
	--	--	--	--	--		4452	CUH-1	H	2	35	20,22
21,23	20	2	E	TU 7-14	1135		--	--	--	--	--	
	--	--	--	--	--		720	RM 111 RCPTS	R	1	20	24
25	20	1	R	RM 104 AB RCPTS	540		720	RM 112 RCPTS	R	1	20	26
27	20	1	R	RM 104 RCPTS	540		720	RM 113 RCPTS	R	1	20	28
29	20	1	L	MAIN EM LIGHTS	180		900	RM 114 RCPTS	R	1	20	30
31	20	1	L	MAIN FLOOR NL	98		720	RM 115 RCPTS	R	1	20	32
33	20	1	L	FACADE LIGHTS	420		1080	RM 116 RCPTS	R	1	20	34
35	20	1	L	RM 104-106,109-115 LIGHTS	785		720	RM 117 RCPTS	R	1	20	36
37	20	1	L	RM 101, 102, 107, 108 & 124 LIGHTS	940		540	RM 117 RCPTS	R	1	20	38
39	20	1	L	RM 103, 116, 117, 119, 120-123 LIGHTS	966		1400	RM 120 COPIER	R	1	20	40
41	20	1	R	RM 120 REF RCPT	1200		360	RM 109 & 110 RCPTS	R	1	20	42
43	20	1	R	KEF 1 RCPT	504		360	RM 105 & 106 RCPTS	R	1	20	44
45	20	1	R	RM 107 RCPTS	360		1500	RM 120 DISHWASHER RCPT	R	1	20	46
47	20	1	R	EXTERIOR RCPTS	900		1500	RM 120 MICROWAVE RCPT	R	1	20	48
49	20	1	R	RM 104 A/V RACK	1800		180	Gas Range	R	1	20	50
51,53	40	2	R	ELECTRIC RANGE	6656		--	Spare		1	20	52
	--	--	--	--	--		--	Spare		1	20	54
55	20	1		Spare	--		--	Spare		1	20	56
57	20	1		Spare	--		--	Spare		1	20	58
59	20	1		Spare	--		--	Spare		1	20	60
61	--	--	--	Space	--		--	Space	--	--	--	62
63	--	--	--	Space	--		--	Space	--	--	--	64
65	--	--	--	Space	--		--	Space	--	--	--	66
67	--	--	--	Space	--		--	Space	--	--	--	68
69	--	--	--	Space	--		--	Space	--	--	--	70
71	--	--	--	Space	--		--	Space	--	--	--	72

*HL = HANDLE LOCK *GFI = GROUND FAULT INTERRUPTER *AFI = ARC FAULT INTERRUPTER *ST = SHUNT TRIP

2

Dist. Board: MDP-A

Location: **Mounting:** Surface **Enclosure:** Type 1 **Volts:** 120/208V **Phases:** 3 **Wires:** 4 **A.I.C. Rating:** 22,000 **Mains Type:** **Mains Rating:** 400 A **Total Load:** 165615 VA

A=A/C E=EQUIP H=HEAT K=KITCH L= LIGHTS M=MOTOR R=RECEPT S= SPARE SP=SPACE

CKT	BKR...	P		Description	Load Amps
1	150 A	3	E	PANEL A	129 A
2	150 A	3	E	PANEL B	116 A
3	150 A	3	E	EXISTING PANEL	68 A
4	70 A	3	E	CU 1	49 A
5	70 A	3	E	EL 1	44 A
6	40 A	3	M	EF 2	17 A
7	50 A	3	E	EDH 1	35 A
8	50 A	3	E	ELEV	0 A
9	70 A	1		SPARE	--
10	150 A	1		SPARE	--
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

HL= HANDLE LOCK IESCR=INTERGRATED ELECTRICAL SHORT CIRCUIT RATING P=POLES

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Key Plan

Revision	Description	Date
2	ADDENDUM 02	MARCH 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
ELECTRICAL POWER SCHEDULES

Sheet Number
E510

LIGHT FIXTURE SCHEDULE

PLAN MARK	MANUFACTURERS AND MODEL NUMBERS	DESCRIPTION	LED DETAILS		DRIVER			INPUT WATTS	VOLTS	FIXTURE MOUNTING	NOTES
			COLOR (K)	LUMEN OUTPUT	QTY.	TYPE	DIM MIN.				
LA	AXIS TB2DILED 400U 400D 80 35 SOI SOD S(L) AP UNV DP 1 OR EQUAL BY MARK, PRUDENTIAL, LUX	SUSPENDED LINEAR	3500	400 UP,500 DOWN LUMENS/FT	1	0-10	1%	7.5W/FT	120/777	SUSPENDED 8'6"	NOTE 2
LB	AXIS BRLED 500 80 35 FL S(L) W UNV DP 1 OR EQUAL BY MARK, PRUDENTIAL, LUX	RECESSED LINEAR	3500	500 LUMENS/FT	1	0-10	1%	4.7W/FT	120/277	RECESSED	NOTE 3
LC	LITHONIA UFIT 4000LM SEF MVOLT GZ10 35K 80CRI OR EQUAL BY WILLIAMS, DAY-BRITE, COLUMBIA, METALUX	HIGH/LOW BAY	4000	6,248	1	0-10	10%	43	120/277	SUSPENDED	NOTE 5
LD	AXIS GPRLED EX 500 80 35 RG2 W UNV DP 1 OR EQUAL BY MARK, PRUDENTIAL, LUX	RECESSED PERIMITER	3500	500 LUMENS/FT	1	0-10	1%	4.2W/FT	120/277	RECESSED	NOTE 3
LE	AXIS GPRLED EX 300 80 35 RG2 W UNV DP 1 OR EQUAL BY MARK, PRUDENTIAL, LUX	RECESSED PERIMITER	3500	300 LUMENS/FT	1	0-10	1%	2.5W/FT	120/277	RECESSED	NOTE 3
LF	AXIS BRLED 750 80 35 FL S(L) W UNV DP 1 DF OR EQUAL BY MARK, PRUDENTIAL, LUX	RECESSED LINEAR	3500	500 LUMENS/FT	1	0-10	1%	7.5W/FT	120/277	RECESSED	NOTE 3
LG	LITHONIA CLX L48 4000LM SEF FDL MVOLT GZ10 35K 80CRI WH OR EQUAL BY METALLUX, CREE	4' LED STRIP FIXTURE	3500	4,000	1	0-10	10%	30	120/277	SUSPENDED 8'-0"	NOTE 2
LH	JUNO IC1LED G4 14LM 35K 90CRI MVOLT ZT1 17SQ WWH OR EQUAL BY HALO, LIGHTOLIER, WILLIAMS	RECESSED DOWNLIGHT	3500	1,400	1	0-10	1%	17	120/277	RECESSED	
LJ	JUNO IC1LED G4 14LM 35K 90CRI MVOLT ZT10 17SQ WWH OR EQUAL BY HALO, LIGHTOLIER, WILLIAMS	RECESSED DOWNLIGHT	3500	1,400	1	0-10	10%	17	120/277	RECESSED	
LK	JUNO IC1LED G4 14LM 35K 90CRI MVOLT ZT10 12SQ WWH OR EQUAL BY HALO, LIGHTOLIER, WILLIAMS	RECESSED SHOWER LIGHT	3500	1,400	1	0-10	10%	17	120/277	RECESSED	
LL	LITHONIA DSX1 LED P4 30K BLC MVOLT SPA NLTAIR2 PIRHN DNAXD POLE SSS 20' 5C DM19AS VD TP UL DNAXD OR EQUAL BY COOPER OR PRE-APPROVED EQUAL	POLE MOUNTED	3000	11,000	1	0-10	10%	125	120/277	POLE	NOTE 4
LM	LITHONIA (2) DSX1 LED P6 30K T5M MVOLT SPA NLTAIR2 PIRHN DNAXD POLE SSS 20' 5C DM28AS VD TP UL DNAXD OR EQUAL BY COOPER OR PRE-APPROVED EQUAL	POLE MOUNTED	3000	39,000	2	0-10	10%	326	120/277	POLE	NOTE 4
LN	LITHONIA DSXW1 LED 20C 1000 30 TFTM MVOLT PIR1FC3V DNAXD OR EQUAL BY COOPER OR PRE-APPROVED EQUAL	WALL MOUNTED	3000	7,700	1	0-10	10%	73	120/277	WALL 13'-0"	NOTE 4
LO	LITHONIA UFIT 8000LM SEF MVOLT GZ10 35K 80CRI OR EQUAL BY WILLIAMS, DAY-BRITE, COLUMBIA, METALUX	HIGH/LOW BAY	4000	9,970	1	0-10	10%	74	120/277	SUSPENDED	NOTE 5
LP	WAVE WW (BENCH LENGTH) 24V XFMR-24-60 * OR SIMILAR BY OMNI LIGHT OR PRE-APPROVED EQUAL	BENCH LIGHT	2700	137 LUMENS/FT	1	0-10	10%	3.4W/FT	120	BENCH	NOTE 7
LQ	ACULUX iNIT35QAR 12LM 30K 80CRI 35D EZ1 MVOLT ICAT NT35QA CD WHSF WSOL OR EQUAL BY COOPER OR PRE-APPROVED EQUAL	FAÇADE LIGHT	3000	1,224	1	0-10	1%	12	120/277	RECESSED	NOTE 6
LR	AXIS TB2SLED 500 80 35 SO 4 W UNV DP 1 S B(#) OR EQUAL BY MARK, PRUDENTIAL, LUX	SURFACE LINEAR	3500	500 LUMENS/FT	1	0-10	1%	4.7W/FT	120/277	SURFACE	
LS	AXIS BRLED 500 80 35 FL S(L) W UNV DP 1 B(#) OR EQUAL BY MARK, PRUDENTIAL, LUX	RECESSED LINEAR	3500	500 LUMENS/FT	1	0-10	1%	4.7W/FT	120/277	RECESSED	NOTE 3
LT	JUNO IC1LED G4 14LM 35K 90CRI MVOLT ZT10 17SQ WWH - BATTERY PACK OR EQUAL BY HALO, LIGHTOLIER, WILLIAMS	RECESSED DOWNLIGHT	3500	1,400	1	0-10	10%	17	120/277	RECESSED	NOTE 8
LU	AXIS CCH SL 700 80 35 CL(#) W UNV DP 1 C OR EQUAL BY COOPER, SIGNIFY, WILLIAMS	COVE LIGHT	3500	700 LUMENTS/FT	1	0-10	10%	7.9W/FT	120/277	COVE	NOTE 9
LV	LUMINIS SC355 L1L10 R40 120 MST K27 VS OR PRE-APPROVED EQUAL	EXTERIOR SPOT	2700	924	1	0-10	10%	13	120	POLE	NOTE 10
LW	LITHONIA DSXB 12C 530 30K ASY MVOLT DNAXD OR EQUAL BY COOPER OR PRE-APPROVED EQUAL	EXTERIOR BOLLARD	3000	1700	1	0-10	10%	22	120/277	BOLLARD	NOTE 4
XA	LITHONIA LQM S W 3 R 120/277 EL N OR EQUAL BY SURE LITES, WILLIAMS	EXIT SIGN	NA	NA	NA	NA	NA	1	120-277	VARIES SEE PLANS	NOTE 1
XB	LITHONIA ELM6L UVOLT LTP SDRT OR EQUAL BY ISOLITE, EMERGI-LITE, MULE LIGHTING	EMERGENCY WALLPACK	NA	1,100	NA	NA	NA	22	120-277		

KEY:

3W =Three Wire Dimming
0-10 =0-10V Dimmed
DA =Digital Addressable
ND =Non-Dimmed
SD =Step Dimmed
DMX =DMX Enabled

GENERAL NOTES:

a. REFER TO SPECIFICATION 265000 FOR ADDITIONAL REQUIREMENTS.
b. PROVIDE A MINIMUM 5 YEAR WARRANTY ON ALL LED PRODUCTS 20W AND GREATER.
c. EQUIVALENT MANUFACTURERS LISTED SHALL MEET PERFORMANCE REQUIREMENTS OF BASE FIXTURE SPECIFIED. EQUIVALENTS SHALL NOT CONSUME MORE THAN 10% IN WATTAGE OR BE LESS THAN 5% LUMENS.
d. COORDINATE WITH ARCHITECTURAL CEILING PLANS FOR CEILING TYPES PRIOR TO SUMBITTAL PROCESS, VERIFY PLANNED CEILING TYPES COORDINATE WITH SPECIFIED FIXTURES.
e. COORDINATE FIXTURES LOCATED IN NON-ACCESSIBLE CEILINGS ARE ACCESSIBLE FROM BELOW THROUGH THE FIXTURE, PRIOR TO SUBMITTAL PROCESS.
f. COORDINATE DRIVER TYPE WITH THE LIGHTING CONTROL SYSTEM, PRIOR TO SUBMITTAL PROCESS.
g. COORDINATE MOUTING HEIGHTS OF ALL EXTERIOR AND INTERIOR FIXTURES WITH ARCHITECTURAL PLANS.

SPECIFIC NOTES:

1. SEE PLANS FOR MOUNTING ORIENTATIONS, CHEVRON ARROWS, AND FACE OPTIONS. FINAL FINISH SELECTION IS TO BE DETERMINED DURING SUBMITTALS.
2. PROVIDE LENGTHS AS SHOWN ON PLANS. PROVIDE ADJUSTABLE AIRCRAFT CABLE WITH STRAIGHT CORD FEEDS. COORDINATE WITH ARCHITECTURAL PLANS FOR CEILING TYPE(S) PRIOR TO ORDERING HANGING HARDWARE. EACH ROW OF FIXTURES SHALL HAVE ONLY ONE FEED POINT WITH CIRCUIT RUN BEING FED THROUGH FIXTURE HOUSING.
3. PROVIDE DRYWALL FLANGE OR T-BAR MOUNTING AS REQUIRED BY CEILING TYPE.
4. LL,LM,LN,LW MUST BE SAME FAMILY OF FIXTURES WITH MATCHING APPEARANCE AND MATERIALS.
5. MINIMAL SUSPENSION LENGTH. MOUNT TO BOTTOM OF STRUCTURE.
6. MOUNT IN EXISTING EAVES.
7. INCLUDE ADDITIONAL ACCESSORIES, LINE CORDS, END CAPS, MOUNTING CLIPS, CHANNELS, ETC. AS NECESSARY.
8. PROVIDE BATTERY PACK DRIVER (BODINE BSL20HV OR EQUAL). MOUNT INTERIOR TO BUILDING JUST INSIDE ADJACENT DOOR. PROVIDE ACCESS AS NECESSARY.
9. PROVIDE CUSTOM LENGTH AS NECESSARY TO LIGHT ENTIRE COVE.
10. COORDINATE MOUNTING WITH FLAG POLE BY DIVISION 1 INCLUDING DRILL PATTERN, HAND HOLES AND HALYARD OPERATION. MOUNT 5" FROM TOP OF POLE.

ACTIVATION BOX SCHEDULE

PLAN MARK	DESCRIPTION	MANUFACTURER	FLOOR/WALL TYPE	MODEL NOS.			POWER		LOW VOLTAGE				SCHEMATIC DETAIL	NOTES
				BOX	COVER	FINISH	RECEPT QTY.	CONDUIT	QTY. OF OPENINGS	MOUNTING PLATE QTY.	MOUNTING PLATE QTY.	CONDUIT		
AB-1	Wall Box (3-Gang)	FSR	Gyp/Steel Stud	PWB-100	---	White	1	3/4"	2	1 DATA	NA	(1) 1",(1)1-1/4"		1, 2, 3
AB-2	Open Office Poke-Thru (2-gang)	Wiremold	Carpet on Concrete	6ATC2PAA	---	Aluminium	2	3/4"	1	2 DATA	NA	(1) 1"		1, 2, 3

2

NOTES:

1. General Items
a. Provide all necessary components required for a complete installation.
b. Provide blank cover plates for all un-used openings.
c. Refer to Technology drawings to verify number of cables and data jacks required as well as conduit sizes and quantity.
d. Confirm cover plate types and finishes with architect.
2. Provide NEMA 5-20R receptacle(s).
3. Provide with divider to separate line voltage from low voltage.

LIGHTING CONTROL SEQUENCE OF OPERATION

OPERATION SEQUENCE	SCHEMATIC DETAIL	LIGHT LEVEL SET POINT	TIME DELAY	LIGHTING SEQUENCE			HVAC SEQUENCE	NOTES
				TRIGGER ON	DAY LIGHT CONTROLS	TRIGGER OFF		
1	N/A	-	-	CONSTANT ON	N/A	CONSTANT ON	-	FIXTURE IS WIRED TO UNSWITCHED CIRCUIT, FIXTURE IS ALWAYS ENERGIZED.
2	N/A	-	ADJUSTABLE - SET TO 20 MINUTES	AUTO ON VIA OCCUPANCY SENSOR DETECTION	N/A	AUTO OFF AFTER ADJUSTABLE TIME DELAY	-	AUTO-ON BY OCCUPANCY SENSOR. AUTO-OFF BY OCCUPANCY SENSOR.
3	N/A	-	ADJUSTABLE - SET TO 20 MINUTES	MANUAL ON VIA TIME SWITCH	N/A	AUTO OFF AFTER LISTED TIME DELAY	-	MANUAL ON BY WALL SWITCH, AUTO OFF BY WALL SWITCH.
4	N/A	35FC	ADJUSTABLE - SET TO 20 MINUTES	AUTO ON 50% VIA OCCUPANCY SENSOR DETECTION, MANUAL ON 100% VIA DIMMER SWITCH	DAY LIGHT TRACK DIMMING	MANUAL OR AUTO OFF AFTER LISTED TIME DELAY	-	AUTO-ON 50% BY OCCUPANCY SENSOR, MANUAL 100% ON BY WALL SWITCH, AUTO OFF BY OCCUPANCY SENSOR, DAYLIGHT TRACK DIMMING BY PHOTO SENSOR OR MANUAL OFF BY WALL SWITCH. MANUAL OFF REQUIRES MANUAL ON TO RESUME AUTO-ON OPERATION.
5	N/A	35FC	ADJUSTABLE - SET TO 20 MINUTES	MANUAL ON VIA DIMMER SWITCH	DAY LIGHT TRACK DIMMING	MANUAL OR AUTO OFF AFTER LISTED TIME DELAY	-	MANUAL ON BY WALL SWITCH, AUTO OFF BY OCCUPANCY SENSOR, DAY LIGHT TRACK DIMMING BY PHOTO SENSOR OR MANUAL OFF BY WALL SWITCH.
6	N/A	-	ADJUSTABLE - SET TO 20 MINUTES	MANUAL ON VIA DIMMER SWITCH	N/A	MANUAL OR AUTO OFF AFTER LISTED TIME DELAY	-	MANUAL ON BY WALL SWITCH, AUTO OFF BY OCCUPANCY SENSOR OR MANUAL OFF BY WALL SWITCH.
7	N/A	-	ADJUSTABLE - SET TO 20 MINUTES	AUTO ON 50% VIA OCCUPANCY SENSOR DETECTION, MANUAL ON 100% VIA DIMMER SWITCH	N/A	MANUAL OR AUTO OFF AFTER LISTED TIME DELAY	-	AUTO-ON 50% BY OCCUPANCY SENSOR, MANUAL 100% ON BY WALL SWITCH, AUTO OFF BY OCCUPANCY SENSOR OR MANUAL OFF BY WALL SWITCH. MANUAL OFF REQUIRES MANUAL ON TO RESUME AUTO-ON OPERATION.
8	N/A	-	-	RELAY	ASTRONOMICAL CLOCK CONTROL	RELAY	-	BUILDING FAÇADE LIGHTS ON DUSK TO 12AM & 6AM TO DAWN. BUILDING FAÇADE LIGHTS OFF 12AM-6AM.
9	N/A	-	-	MANUAL ON VIA SWITCH	N/A	MANUAL OFF VIA SWITCH	-	
10	N/A	-	-	INTERNAL RELAY	INTEGRAL LIGHTING CONTROL	INTERNAL RELAY	-	PARKING LOT LIGHTS ON AND DIM DUSK TO DAWN WITH MOTION SENSING OVERRIDE TO FULL BRIGHT.
11	N/A	-	-	RELAY	ASTRONOMICAL CLOCK CONTROL	RELAY	-	BUILDING ENTRANCE/EGRESS LIGHTS ON DUSK TO DAWN.
12	N/A	-	-	INTERNAL RELAY	INTEGRAL LIGHTING CONTROL	INTERNAL RELAY	-	AUTO-ON BY OCCUPANCY SENSOR DUSK TO DAWN OPERATION.

NOTES:

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DESIGN ENGINEERS
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MADISON, WI 53719
P. 608.424.8815

Key Plan

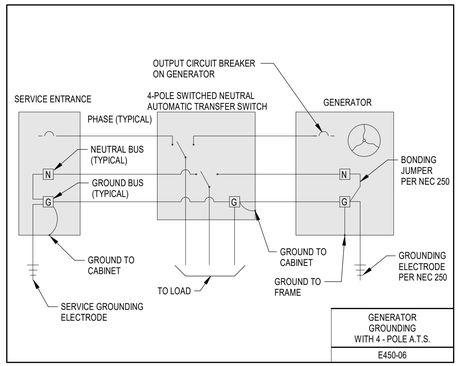
Revision	Description	Date
2	ADDENDUM 02	MARCH 9, 2021

OPN Project No.
20628000

Sheet Issue Date
CONSTRUCTION DRAWINGS **February 2, 2021**

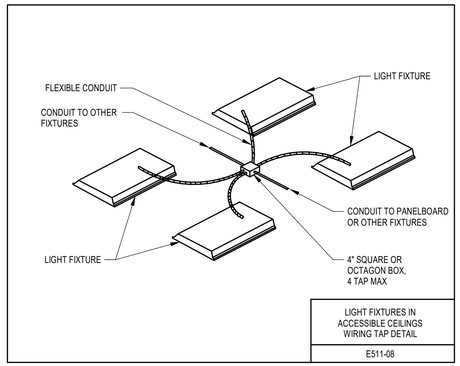
Sheet Name
ELECTRICAL LIGHTING SCHEDULES AND CONTROLS

Sheet Number
E520



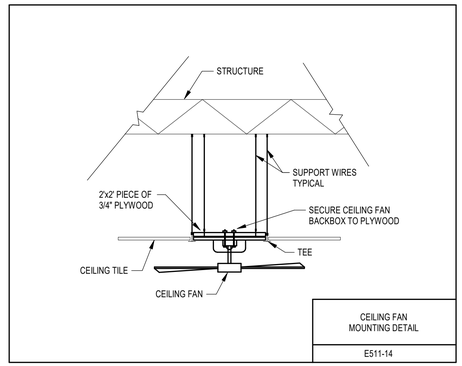
GENERATOR GROUNDING WITH 4 - POLE A.T.S.

E450-06



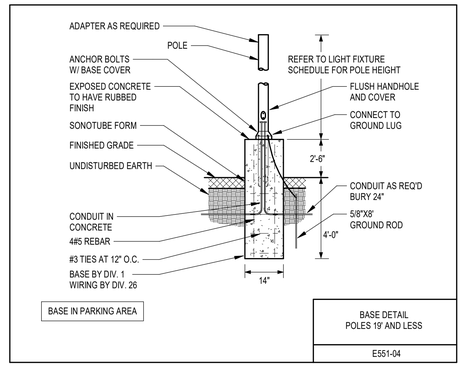
LIGHT FIXTURES IN ACCESSIBLE CEILINGS WIRING TAP DETAIL

E511-08



CEILING FAN MOUNTING DETAIL

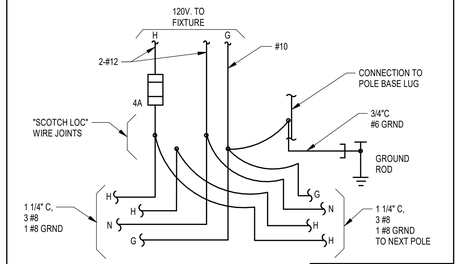
E511-14



BASE IN PARKING AREA

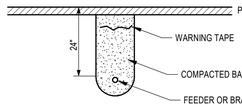
BASE DETAIL POLES 19' AND LESS

E551-04



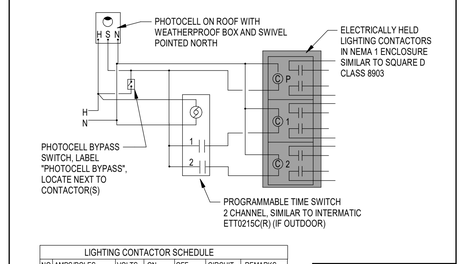
SCHEMATIC WIRING DIAGRAM POLE BASE

E551-06



CONDUIT TRENCH DETAIL

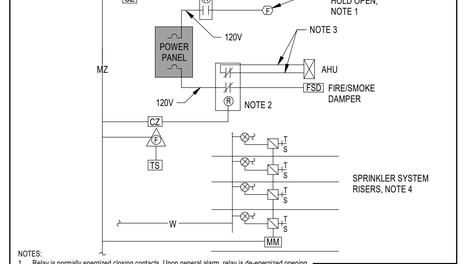
E551-07



LIGHTING CONTACTOR SCHEDULE						
NO	AMPS/POLES	VOLTS	ON	OFF	CIRCUIT	REMARKS
P			PHOTO	PHOTO		
1			PHOTO			
2			PHOTO			

EXTERIOR LIGHTING CONTROL SCHEMATIC

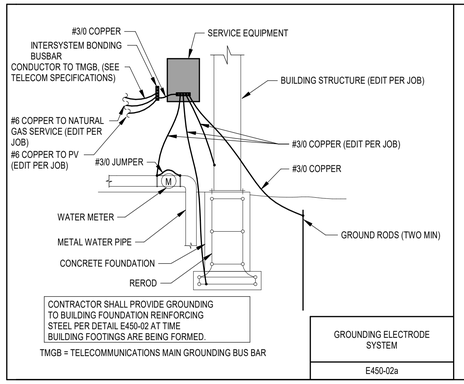
E930-03



NOTES:
1. Relay is normally energized closing contacts. Upon general alarm, relay is de-energized opening contacts and doors close.
2. Relay is normally de-energized with mechanical devices wired through normally closed contacts. Upon designated duct detector going into alarm, the relay is energized opening contacts and shutting down the AHU and closing FSD's.
3. Provide 120 volt control wiring (3#14 THHN) between controller and fan shutdown relay.
4. For sprinkler system risers, connect all tamper switches vertically to one monitor module per riser.

TYPICAL FIRE ALARM WIRING DIAGRAM

E721-14

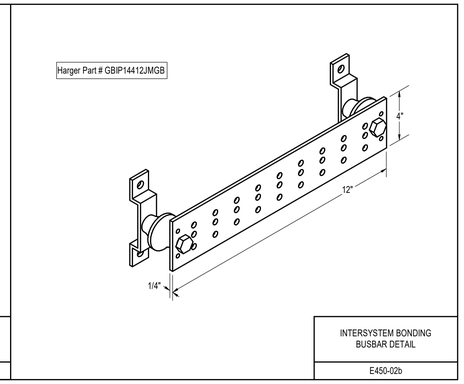


CONTRACTOR SHALL PROVIDE GROUNDING TO BUILDING FOUNDATION REINFORCING STEEL PER DETAIL E450-02 AT TIME BUILDING FOOTINGS ARE BEING FORMED.

TMGB = TELECOMMUNICATIONS MAIN GROUNDING BUS BAR

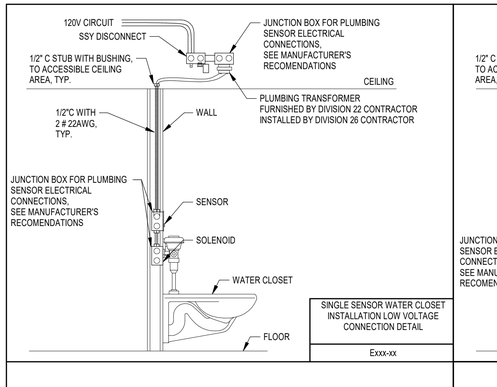
GROUNDING ELECTRODE SYSTEM

E450-02a



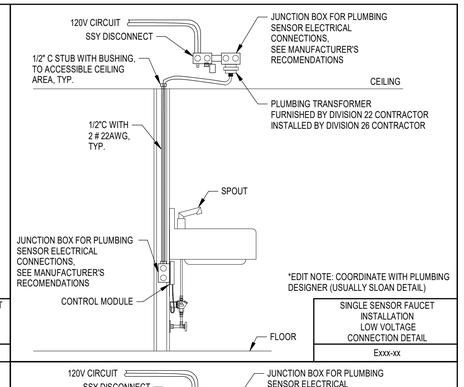
INTERSYSTEM BONDING BUSBAR DETAIL

E450-02b



SINGLE SENSOR WATER CLOSET INSTALLATION LOW VOLTAGE CONNECTION DETAIL

Exxx-xx



*EDIT NOTE: COORDINATE WITH PLUMBING DESIGNER (USUALLY SLOAN DETAIL)

SINGLE SENSOR FAUCET INSTALLATION LOW VOLTAGE CONNECTION DETAIL

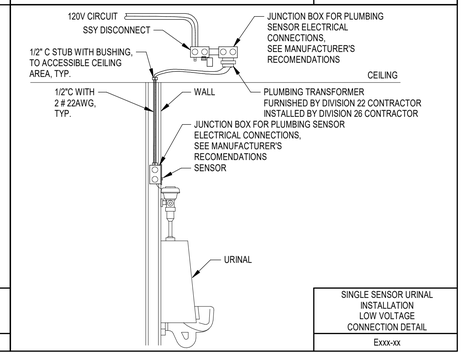
Exxx-xx

LOW VOLTAGE PLUMBING CONNECTION NOTES:

1. ELECTRICAL CONTRACTOR SHALL MAKE ALL TERMINATIONS TO PLUMBING TRANSFORMER AND SENSORS.
2. COORDINATE ROUGH IN LOCATIONS OF ALL ELECTRICAL BOXES WITH DIVISION 22 CONTRACTOR.
3. COORDINATE LOCATION OF 1/2"C STUB FOR SINK/FAUCET TO ENSURE CLEAN INSTALLATION. ALL WIRES SHALL BE CONCEALED BEHIND SINK.
4. ALL CONDUITS SHALL BE CONCEALED IN PERMANENT WALL CONTRUCTION AND STUBBED TO AN ACCESSIBLE LOCATION.

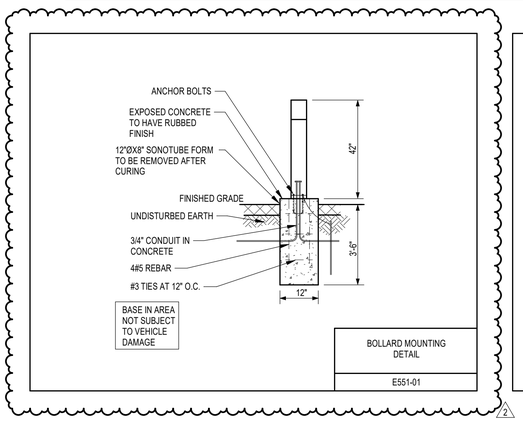
LOW VOLTAGE CONNECTION DETAIL NOTES

Exxx-xx



SINGLE SENSOR URINAL INSTALLATION LOW VOLTAGE CONNECTION DETAIL

Exxx-xx

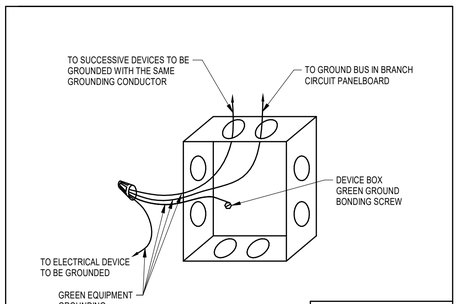


BASE IN AREA NOT SUBJECT TO VEHICLE DAMAGE

BOLLARD MOUNTING DETAIL

E551-01

2



GROUNDING CONDUCTOR CONNECTION IN DEVICE BOX

E450-04

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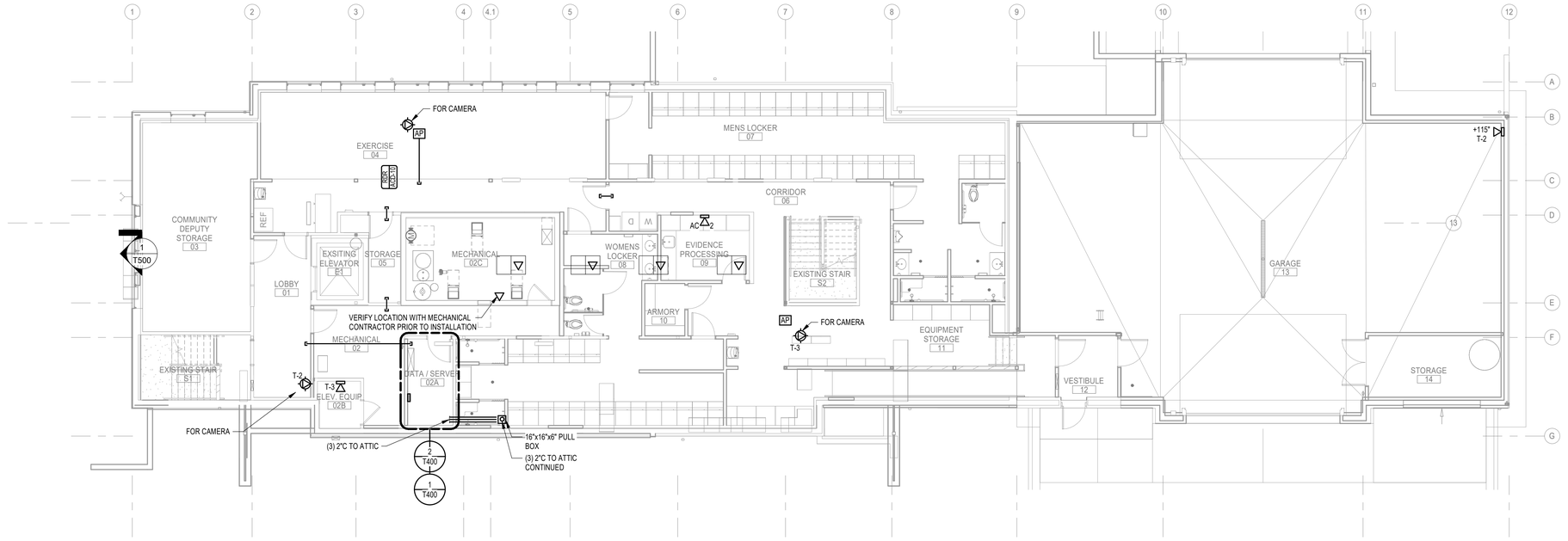
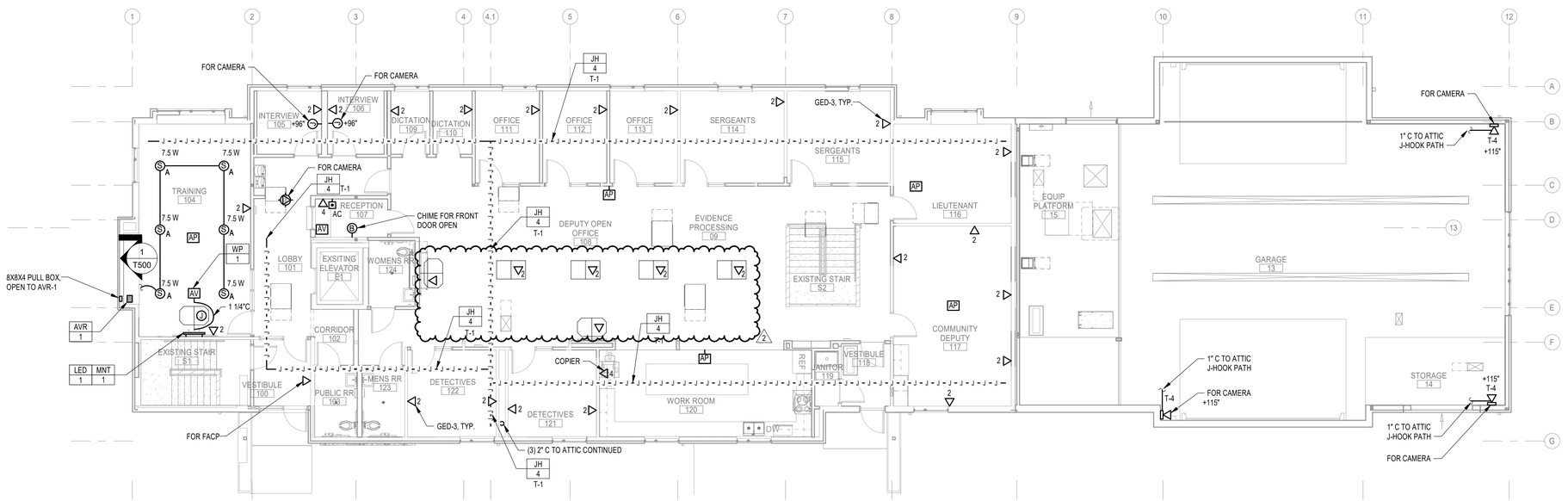
CONSTRUCTION DRAWINGS **February 2, 2021**

Sheet Name
ELECTRICAL DETAILS

Sheet Number
E532



1 TECHNOLOGY PLAN - LOWER LEVEL
1/8" = 1'-0"



2 TECHNOLOGY PLAN - MAIN LEVEL
1/8" = 1'-0"

KEYED NOTES

T-1	J-HOOK'S SHALL BE 4" IN SIZE. THE J-HOOK PATHWAY NOTED ON THE MAIN LEVEL OF SHEET T-101 SHALL BE INSTALLED IN THE ATTIC FOR CABLE DISTRIBUTION.
T-2	DIV.26 CONTRACTOR SHALL PROVIDE A CONDUIT PATHWAY TO ATTIC FOR LOW VOLTAGE CABLING.
T-3	DIV.26 CONTRACTOR SHALL PROVIDE A TYPICAL LOW VOLTAGE ROUGH-IN BOX AND CONDUIT BACK TO THE TELECOM ROOM. DO NOT EXCEED MAXIMUM ALLOWABLE BENDS IN CONDUIT PER TIA/BICSI STANDARDS.
T-4	CONTRACTOR SHALL INSTALL DATA OUTLET AND (LCOM) WITHIN (WP1) ENCLOSURE AT THE NOTED ELEVATION. SEE WP1 LAYOUT DETAIL FOR FURTHER INSTRUCTIONS.

NEW WORK KEY

- EXISTING
- NEW / REVISED
- EXISTING EQUIPMENT
- NEW / REVISED EQUIPMENT

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Sheet Name
OVERALL TECHNOLOGY PLANS

Sheet Number
T101