ADDENDUM

Public Building Commission of Chicago | Richard J. Daley Center | 50 West Washington Street, Room 200 | Chicago, Illinois 60602 | (312) 744-3090 | pbcchicago.com

ADDENDUM NO.: **01**

PROJECT NAME: **Dore Elementary School New Construction Project**

PROJECT NO.: **05025**

CONTRACT NO.: **C1577**

DATE OF ISSUE: **June 28, 2017**

NOTICE OF CHANGES, MODIFICATIONS, OR CLARIFICATIONS TO CONTRACT DOCUMENTS

The following changes, modifications, or clarifications are hereby incorporated and made an integral part of the Contract Documents. Unless clearly expressed otherwise by this Addendum, all terms and conditions defined in the original Contract Documents shall continue in full force and effect and shall have the same meaning in this Addendum.

ITEM NO. 1: **CHANGE TO KEY DATES**

None.

ITEM NO. 2: **REVISIONS TO BOOK 1 – PBC INSTRUCTIONS TO BIDDERS**

Change 1. On Page 6 of 103 of Book 1 – PBC Instructions to Bidders, **REMOVE** Section II. I in its entirety and **REPLACE WITH** the following:

I. Prevailing Wage Rates

1. Not less than the prevailing rate of wages as determined by the Illinois Department of Labor shall be paid to all laborers, workers and mechanics performing work under this contract. Prevailing wage rates in effect at the time of issuance of these Contract Documents are attached to Book 1 as Exhibit 1. One resource for determining the current prevailing wage rate is the Internet site https://www.illinois.gov/idol maintained by the State of Illinois Department of Labor.

Change 2. **REMOVE** Exhibit 1 Cook County Prevailing Wage for July 2015 in its entirety and **REPLACE WITH** Exhibit 1 Cook County Prevailing Wage Rates – Effective June 5, 2017 in this Addendum #1.

ITEM NO. 3: **REVISIONS TO BOOK 2 – PBC STANDARD TERMS AND CONDITIONS**

None.

(Remainder of Page Intentionally Left Blank)

ITEM NO. 4: REVISIONS TO BOOK 3 – TECHNICAL SPECIFICATIONS

Change 1 **Book 3 – Volume 1** – COVER: **REVISED** PBC Contract number.
Change 2 **Book 3 – Volume 2** – COVER: **REVISED** PBC Contract number.
Change 3 **Book 3 – Appendix** – COVER: **REVISED** PBC Contract number.
Change 4 **Book 3 – Volume 1** – Section 00 01 10 – TABLE OF CONTENTS: **ADDED** section 01 50 10 to TOC.
Change 5 **Book 3 – Volume 1** – **INSERT** Section 01 50 10 – COMMISSION REPRESENTATIVE FIELD OFFICE.
Change 6 **Book 3 – Volume 1** – Section 11 40 00 – FOODSERVICE EQUIPMENT: **REVISED** Part 4, Item #07.
Change 7 **Book 3 – Volume 1** – Section 11 66 23.01 – GYMNASIUM EQUIPMENT – ELEMENTARY SCHOOLS: **REVISED** paragraphs 2.3-B-1, 2.3-B-2, 2.3-C, 2.3-C-3a, and 2.3-E-1. **ADDED** paragraphs 2.3-F and 2.3-G.
Change 8 **Book 3 – Volume 2** – Section 22 11 16 – Domestic Water Piping: **INSERT** paragraph 3.2-E-2
Change 9 **Book 3 – Volume 2** – Section 31 23 17 – EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES: **REVISED** paragraphs 2.1-C-1 and 2.1-C-2.
Change 10 **Book 3 – Volume 2** – Section 32 13 13 – PORTLAND CEMENT CONCRETE PAVING: **REVISED** paragraphs 2.1-A, 2.3-A, 2.5-A, 3.1-A, 3.2-A, 3.2-B, 3.2-C, and 3.8-A

ITEM NO. 5: REVISIONS TO DRAWINGS

General

Change 1 Sheet G0201: **REVISED** Zoning Requirements line 1.01 Zoning District to PD#1363.

Structural

Change 2 **ADDED** Note #26 to Drawing S0102W to read as follows:
26. LIGHT GAGE FRAMING CONTRACTOR SHALL PROVIDE DESIGN CALCULATIONS (SEE SPECIFICATIONS) FOR THE WALLS AND SLOPED ROOF/CEILING FOR ROOMS IMMEDIATELY EAST OF COLUMN LINE 1 BETWEEN LINES B AND E. LATERAL LOAD SHALL BE MINIMUM 10 PSF ON HORIZONTAL PROJECTION. GRAVITY LOADS ON SLOPED ROOF/CEILING SHALL BE 20 PSF DEAD LOAD + 30 PSF LIVE LOAD. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

Architectural

Change 3 **REMOVED** Sheet A0201 dated 06.07.2017 in its entirety and **REPLACED WITH** A0201 dated 06.23.2017
Change 4 **REMOVED** Sheet A0202 dated 06.07.2017 in its entirety and **REPLACED WITH** A0202 dated 06.23.2017.
Change 5 **REMOVED** Sheet A1200 dated 06.07.2017 in its entirety and **REPLACED WITH** A1200 dated 06.23.2017.
Change 6 Sheets A0701E, A0701W, A0702E, A0702W, A0703E, A0703W: **REVISED** RCP Keynote Legend keynotes #13 and #14 to read "NOT USED".

Food Service

Change 7 **REVISED** Sheet FS0001: updated equipment schedule – clarified which party is responsible for furnishing equipment
Change 8 **REVISED** Sheet FS0002: updated equipment schedule – clarified which party is responsible for furnishing equipment
Change 9 **REVISED** Sheet FS0003: updated equipment schedule – clarified which party is responsible for furnishing equipment

Mechanical

Change 10 **REVISED** Sheet M0101W: updated diffuser locations in rooms 115 and 117.

Plumbing

Change 11 **REVISED** Sheet P0100W: Clarified underground vent piping routing near footing.
Change 12 **REVISED** Sheet P0201E: Removed NPCW loop; added accessible DVCA for each HB and NFWH.
Change 13 **REVISED** Sheet P0201W: Removed NPCW loop; added accessible DVCA for each HB and NFWH.
Change 14 **REVISED** Sheet P0202E: Remove NPCW loop, added accessible DCVA for each HB.
Change 15 **REVISED** Sheet P0202W: Remove NPCW loop, added accessible DCVA for each HB.

Change 16 **REVISED** Sheet P0203E: Remove NPCW loop, added accessible DCVA for each HB and NFRH.
Change 17 **REVISED** Sheet P0203W: Remove NPCW loop, added accessible DCVA for each HB and NFRH.
Change 18 **REVISED** Sheet P0401: Remove NPCW loop, added accessible DCVA for each HB and NFWH.
Change 19 **REVISED** Sheet P0402: Remove NPCW loop, added accessible DCVA for each HB and NFWH.
Change 20 **REVISED** Sheet P0504: Remove NPCW loop, added accessible DCVA for each HB and NFWH.
Change 21 **REVISED** Sheet P0505: Remove NPCW loop, added accessible DCVA for each HB and NFWH.
Change 22 **REVISED** Sheet P0601: Clarified size and quantity of DCVA; Clarified RCP pump sizing.

Fire Protection

Change 23 **REVISED** Sheet F0001: Clarified size of FPTC piping; Clarified size of fire pump in Scope of Work narrative
Change 24 **REVISED** Sheet F0101E: Clarified location of inspector test connection and check valves of fire piping to FDC.
Change 25 **REVISED** Sheet F0101W: Clarified location of inspector test connection and check valves of fire piping to FDC.
Change 26 **REVISED** Sheet F0102E: Clarify location of inspector test connection.
Change 27 **REVISED** Sheet F0102W: Clarify location of inspector test connection.
Change 28 **REVISED** Sheet F0103E: Clarified location of inspector test connection.
Change 29 **REVISED** Sheet F0103W: Clarified location of inspector test connection.
Change 30 **REVISED** Sheet F0401: Clarified size of FPTC piping.
Change 31 **REVISED** Sheet F0601: Clarified phase of JP-1 jockey pump.

Electrical

Change 32 **REVISED** Sheet E0602: changed JP-1 HP rating from 1HP to 1.5HP (no changes to feeder or circuit breaker parameters).

ITEM NO. 6: REQUESTS FOR INFORMATION

RFI-1.
Question: **We specialize in building enclosure commissioning and testing services. We actually have worked on a variety of PBC projects in the past most significantly we performed BECx for the Albany Park Branch Library. I am curious to know if the PBC is entertaining BECx (Building Enclosure Commissioning) and would the PBC potentially be issuing a separate BID / RFP for Commissioning Services for these two projects? Not to go into great detail here, but we would be interested in discussing with you / PBC our services and to see if we can support in any manner on these projects.**
Response: **The Commissioning Agent will be procured and managed by CPS. The Contractor will coordinate all activities with the Commissioning Agent to ensure compliance with the Contract Documents.**

RFI-2.
Question: **I am requesting information regarding the Area of Rescue System. Is there a specification?**
Response: **There is no two-way voice communication system serving the areas of refuge in the building design, and therefore there is no such equipment specification for the project.**

RFI-3.
Question: **Is the fence currently surrounding the site meant to be the temporary construction fence for the project?**
Response: **Drawing C1000 indicates removal of fence, posts and post foundations. The temporary fencing must comply with the Contract requirements included in Section 01.14.11.**

RFI-4.
Question: **Will the cost of the Bedford Park Building Permit (Right of Way (ROW) work) be By Owner?**
Response: **The Commission will be responsible for the City of Chicago Department of Buildings permit costs and Department of Buildings storm water review fee only in accordance with Book 2 Standard Terms and Conditions Article 6 of the Contract Documents. Contractor shall be responsible for all other costs including ROW closure permit costs.**

RFI-5.

Question: How will the removal of underground obstructions (existing foundations, rubble, etc.) be handled?

Response: Contractor is to excavate to the depths shown on the Contract Documents. Any obstructions encountered within those limits shall be removed under the base contract.

RFI-6.

Question: Please confirm that the intent is that extra work completed which is listed in the Site Work Allowance Schedule draws from the $450,000 Site Work Allowance. If so, please disregard my previous question regarding underground obstructions.

Response: The Site Work Allowance is intended to address any additional work that may be required that falls below the subgrade elevations shown on the Contract Drawings or in the Contract Specifications to be expended in the sole discretion of the Commission.

RFI-7.

Question: Where is the condensing unit going to be located for this project? If it is on a roof how many stories up will it be?

Response: Condensing unit to be located on roof south of Gymnatorium above Mechanical Room, 1 story up per Drawing A0102.

RFI-8.

Question: A1201E Room #'s 148 and 150 indicate CWT2 full height. A0201 elevation #'s 18 and 20 indicate wainscot height. Please advise the correct tile height.

Response: CWT2 in Boys Toilet rooms and CWT3 in Girls Toilet rooms are to be full-height as indicated on revised sheets A0201 and A0202 issued in this Addendum #1.

RFI-9.

Question: The room finish schedule specifies CT1 at the janitor closet floors, however A1201E indicates these areas are epoxy floors. Please advise.

Response: Janitor room floors to be epoxy.

RFI-10.

Question: We have a question on the specification for wood casework at Dore Elementary, section 12 35 53 page 4 paragraph 2.3A states the design as flush overlay. Standard construction on wood is full overlay, this allows for a 1/6" gap between the adjoining drawers. Flush overlay is used on metal cabinets.

Response: The standard specification calls for "flush overlay" cabinet construction. There is no "full overlay" requirement in the Standard Specifications. The term "flush overlay" is from Architectural Woodwork Standards, in which the term "full overlay" does not exist. The difference between the two is only semantic.

RFI-11.

Question: Solid Surface Material wall panels and window sills are indicated on the drawings. Please provide a Specification for these items.

Response: Refer to issued specifications: Solid Surface window sills are covered in specification section 06 40 23; Solid Surface wall protective panels are covered in specification section 10 26 00.

RFI-12.

Question: There are (2) bid forms for this project:

- "BASE WORK ONLY"
- "BASE + ALTERNATE #1"

However, there is only (1) "Award Criteria Figure Formula" form (BOOK 1: Pages 19 & 20).
Are we to enter the "BASE WORK ONLY" – "TOTAL BASE BID" amount in Line 1?
or - Are we to enter the "BASE + ALTERNATE #1" – "TOTAL BASE BID" amount in Line 1?

Also, there is only (1) "SCHEDULE D" (BOOK 1: Page 29)

Are we to base the "Percent of Total Base Bid" % on "BASE WORK ONLY" – "TOTAL BASE BID" or "BASE + ALTERNATE #1" – "TOTAL BASE BID"?

Response: Per Book 1 (Page 10 of 103) Section III.P Basis of Award Criteria, Bidders are required to submit pricing for Base Work Only and Base Work plus Alternate #1 to be considered responsive. All applicable support documentation (ie Award Criteria, Schedule Cs and/or Schedule Ds, as applicable) must be duplicated and submitted along with each corresponding Bid Form.

RFI-13.

Question: The electrical specifications call for the use of solid wire #10 and smaller. Will you allow stranded wire for #10 and smaller?

Response: Please follow the electrical specifications issued in the Contract Documents.

RFI-14.

Question: Regarding Food Service Equipment - Item #01.1: Is this provided by owner or GC? Specs and drawings are conflicting.

Response: Refer to revised Food Service drawings FS0001, FS0002, FS0003 and Specification 11 40 00 issued in this Addendum #1 for clarification.

RFI-15.

Question: Regarding Food Service Equipment - Item #77: Is this provided by owner or GC? Specs and drawings are conflicting.

Response: Refer to revised Food Service drawings FS0001, FS0002, FS0003 and Specification 11 40 00 issued in this Addendum #1 for clarification.

RFI-16.

Question: Regarding Specification Section 221116-3-3.2E. Aboveground Domestic Water Piping.
#1 Is for Piping 3" and smaller
#2 is for 8" piping
There is no specification for water piping from 3" to 8"
Can Type L Grooved copper be used for water piping 3" and larger? Please advise.

Response: See revised Specification 22 11 16 issued in this Addendum #1.

RFI-17.

Question: Drawing A0225 Elevation 4 Gymansium 254-West –
There is a note pointing at the windows which indicates Interior Window Guards Typical.
There is also Mark G05 Motorized Window Shades pointing at the same windows.
Do these windows get both Window Guards and Motorized Shades?

Response: Yes, windows in Gymnatorium to have both Window Guards and Motorized Shades, per Drawing A0225.

RFI-18.

Question: The roof plan shows the Canopy but does not indicate the type of roofing or show any ribbing in it. Sections through the Canopy indicate PVC Roofing (which there is a spec for) with Mock Standing Seam (which there is no spec for). Please clarify how the "mock" standing seam is achieved.

Response: Roofing is indicated in canopy sections: PVC Roofing with Mock Standing Seam. Refer to specification section 07 54 19, paragraph 2.3.F. "PVC Standing Seam Ribs".

RFI-19.

Question: Please confirm that the Moisture Mitigation Allowance of $500,000 covers all the Floor Preparation work specified in Section 090500.

Response: Contractor responsible for proper floor preparation in accordance with Specification section 09 05 00 and timely installation of flooring in accordance with approved project schedule. The allowance is intended to pay only for moisture mitigation work.

RFI-20.

Question: **Regarding the Manual Roller Shades, WC-1 and WC-2 are listed on the Finish Schedule; however, they are not shown on the Finish Plans. Manual Roller Shades are also listed as mark numbers 13 and 14 on Reflected Ceiling drawings but are not shown in plan view.**

Response: **Manual Roller shades are intentionally not shown on floor plans and finish plans. Refer to Finish Schedule on sheet A1200 for location of roller shades by fabric type. Refer to elevations on Enlarged Plan sheets for location of Manual vs. Motorized roller shades. Keynotes 13 and 14 have been removed from Reflected Ceiling plan legend. See revised Sheet A1200 in this Addendum #1.**

RFI-21.

Question: **Regarding Corner Guards:**

1. Mark CP1 - none are shown on Finish Plans but the comments do say "at all exposed corners u.n.o." Please clarify if this applies only to gypsum walls.

2. Extruded material per Spec. There is no Spec for Corner Guards. The Wall Protection Spec does not refer to Corner Guards. Please provide Spec.

3. Integral with Gypsum - does that mean recessed?

Response:

1. Yes, note states "HEAVY GAUGE DYWALL CORNER CONST., AT ALL EXPOSED CORNERS U.N.O."

2. Refer to Specification section 09 21 16, paragraph 2.1.M High Strength Corners.

3. Face of corner guard to align with face of gypsum. Refer to manufacturer installation requirements.

List of Attachments and Drawings:

(Available at Springer's Online Planroom: https://www.springerblueprint.com/)

This Addendum includes the following attached Specifications and/or Documents:

1. Book 1 – Exhibit 1 Cook County Prevailing Wage Rates – Effective June 5, 2017
2. Book 3 – Volume 1 – COVER
3. Book 3 – Volume 2 – COVER
4. Book 3 – Appendix – COVER
5. Section 00 01 10 – TABLE OF CONTENTS
6. Section 01 50 10 – COMMISSION REPRESENTATIVE FIELD OFFICE
7. Section 11 40 00 – FOODSERVICE EQUIPMENT
8. Section 11 66 23.01 – GYMNASIUM EQUIPMENT – ELEMENTARY SCHOOLS
9. Section 22 11 16 – DOMESTIC WATER PIPING
10. Section 31 23 17 – EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES
11. Section 32 13 13 – PORTLAND CEMENT CONCRETE PAVING

This Addendum includes the following attached Structural Drawings:

12. Sheet S0201W – SECOND FLOOR FRAMING PLAN - WEST

This Addendum includes the following attached Architectural Drawings:

13. Sheet A0201 - ENLARGED TOILET ROOM PLANS
14. Sheet A0202 - ENLARGED TOILET ROOM PLANS
15. Sheet A1200 - ROOM FINISH SCHEDULE & DETAILS

This Addendum includes the following attached Food Service Drawings:

16. Sheet FS0001 – FOODSERVICE EQUIPMENT LAYOUT AND SCHEDULE
17. Sheet FS0002 – FOODSERVICE EQUIPMENT ELECTRIC SPOT PLAN AND SCHEDULE
18. Sheet FS0003 – FOODSERVICE EQUIPMENT MECHANICAL SPOT PLAN AND SCHEDULE

This Addendum includes the following attached Mechanical Sheets:

19. Sheet M0101W – GROUND HVAC DUCTWORK AREA PLAN - WEST

This Addendum includes the following attached Plumbing Sheets:

20. Sheet P0100W – UNDERGROUND PLUMBING PLAN – WEST
21. Sheet P0201E – FIRST FLOOR DOMESTIC WATER PLUMBING PLAN – EAST
22. Sheet P0201W – FIRST FLOOR DOMESTIC WATER PLUMBING PLAN – WEST
23. Sheet P0202E – SECOND FLOOR DOMESTIC WATER PLUMBING PLAN – EAST
24. Sheet P0202W – SECOND FLOOR DOMESTIC WATER PLUMBING PLAN – WEST
25. Sheet P0203E – THIRD FLOOR DOMESTIC WATER PLUMBING PLAN – EAST
26. Sheet P0203W – THIRD FLOOR DOMESTIC WATER PLUMBING PLAN – WEST
27. Sheet P0401 – ENLARGED PLANS
28. Sheet P0402 – ENLARGED PLANS
29. Sheet P0504 – RISER DIAGRAMS
30. Sheet P0505 – RISER DIAGRAMS
31. Sheet P0601 – SCHEDULES

This Addendum includes the following attached Fire Protection Sheets:

32. Sheet F0001 – LEGENDS, SYMBOLS & ABBREVIATIONS
33. Sheet F0101E – FIRST FLOOR FIRE PROTECTION PLAN – EAST
34. Sheet F0101W – FIRST FLOOR FIRE PROTECTION PLAN – WEST
35. Sheet F0102E – SECOND FLOOR FIRE PROTECTOIN PLAN – EAST
36. Sheet F0102W – SECOND FLOOR FIRE PROTECTION PLAN – EAST
37. Sheet F0103E – THIRD FLOOR FIRE PROTECTION PLAN – EAST
38. Sheet F0103W – THIRD FLOOR FIRE PROTECTOIN PLAN – WEST
39. Sheet F401 – ENLARGED PLANS & DETAILS
40. Sheet F0601 – SCHEDULES

END OF ADDENDUM NO. 01

EXHIBIT 1 - COOK COUNTY PREVAILING WAGE RATES - EFFECTIVE JUNE 5, 2017

This schedule contains the prevailing wage rates required to be paid for work performed on or after Monday, June 5, 2017 on public works projects in this County. Pursuant to 820 ILCS 130/4, public bodies in this County that have active public works projects are responsible for notifying all contractors and subcontractors working on those public works projects of the change (if any) to rates that were previously in effect. The failure of a public body to provide such notice does not relieve contractors or subcontractors of their obligations under the Prevailing Wage Act, including the duty to pay the relevant prevailing wage in effect at the time work subject to the Act is performed.

COOK COUNTY PREVAILING WAGE RATES EFFECTIVE JUNE 5, 2017

TradeTitle	Region	Type	Class	Base Wage	Foreman Wage	M-F OT	OSA	OSH	H/W	Pension	Vacation	Training
ASBESTOS ABT-GEN	All	All		40.40	40.95	1.5	1.5	2.0	14.23	11.57	0.00	0.50
ASBESTOS ABT-MEC	All	BLD		37.46	39.96	1.5	1.5	2.0	11.62	11.06	0.00	0.72
BOILERMAKER	All	BLD		47.07	51.30	2.0	2.0	2.0	6.97	18.13	0.00	0.40
BRICK MASON	All	BLD		44.88	48.84	1.5	1.5	2.0	10.25	15.30	0.00	0.85
CARPENTER	All	All		45.35	47.35	1.5	1.5	2.0	11.79	17.60	0.00	0.63
CEMENT MASON	All	All		44.25	46.25	2.0	1.5	2.0	13.65	15.51	0.00	0.65
CERAMIC TILE FNSHER	All	BLD		37.81		1.5	1.5	2.0	10.55	10.12	0.00	0.65
COMM. ELECT.	All	BLD		42.02	44.82	1.5	1.5	2.0	8.88	12.78	0.59	0.75
ELECTRIC PWR EQMT OP	All	All		48.90	53.90	1.5	1.5	2.0	11.41	16.39	0.00	3.10
ELECTRIC PWR GRNDMAN	All	All		38.14	53.90	1.5	1.5	2.0	8.90	12.78	0.00	2.75
ELECTRIC PWR LINEMAN	All	All		48.90	53.90	1.5	1.5	2.0	11.41	16.39	0.00	3.10
ELECTRICIAN	All	All		46.10	49.10	1.5	1.5	2.0	14.33	15.52	0.70	1.00
ELEVATOR CONSTRUCTOR	All	BLD		51.94	58.43	2.0	2.0	2.0	14.43	14.96	4.16	0.90
FENCE ERECTOR	All	All		38.34	40.34	1.5	1.5	2.0	13.15	13.10	0.00	0.40
GLAZIER	All	BLD		41.70	43.20	1.5	2.0	2.0	13.94	18.99	0.00	0.94
HT/FROST INSULATOR	All	BLD		49.95	52.45	1.5	1.5	2.0	11.62	12.26	0.00	0.72

IRON WORKER	All	All		46.20	48.20	2.0	2.0	2.0	13.65	21.52	0.00	0.35
LABORER	All	All		40.20	40.95	1.5	1.5	2.0	14.23	11.57	0.00	0.50
LATHER	All	All		44.35	46.35	1.5	1.5	2.0	13.29	16.39	0.00	0.63
MACHINIST	All	BLD		45.35	47.85	1.5	1.5	2.0	7.26	8.95	1.85	1.30
MARBLE FINISHERS	All	All		33.45	33.45	1.5	1.5	2.0	10.25	14.44	0.00	0.46
MARBLE MASON	All	BLD		44.13	48.54	1.5	1.5	2.0	10.25	14.97	0.00	0.59
MATERIAL TESTER I	All	All		30.20	30.20	1.5	1.5	2.0	14.23	11.57	0.00	0.50
MATERIALS TESTER II	All	All		35.20	35.20	1.5	1.5	2.0	14.23	11.57	0.00	0.50
MILLWRIGHT	All	All		45.35	47.35	1.5	1.5	2.0	11.79	17.60	0.00	0.63
OPERATING ENGINEER	All	BLD	1	49.10	53.10	2.0	2.0	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	BLD	2	47.80	53.10	2.0	2.0	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	BLD	3	45.25	53.10	2.0	2.0	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	BLD	4	43.50	53.10	2.0	2.0	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	BLD	5	52.85	53.10	2.0	2.0	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	BLD	6	50.10	53.10	2.0	2.0	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	BLD	7	52.10	53.10	2.0	2.0	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	FLT	1	54.75	54.75	1.5	1.5	2.0	17.65	12.65	1.90	1.35
OPERATING ENGINEER	All	FLT	2	53.25	54.75	1.5	1.5	2.0	17.65	12.65	1.90	1.35
OPERATING ENGINEER	All	FLT	3	47.40	54.75	1.5	1.5	2.0	17.65	12.65	1.90	1.35
OPERATING ENGINEER	All	FLT	4	39.40	54.75	1.5	1.5	2.0	17.65	12.65	1.90	1.35
OPERATING ENGINEER	All	FLT	5	56.25	54.75	1.5	1.5	2.0	17.65	12.65	1.90	1.35

OPERATING ENGINEER	All	FLT	6	37.00	54.75	1.5	1.5	2.0	17.65	12.65	1.90	1.35
OPERATING ENGINEER	All	HWY	1	47.30	51.30	1.5	1.5	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	HWY	2	46.75	51.30	1.5	1.5	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	HWY	3	44.70	51.30	1.5	1.5	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	HWY	4	43.30	51.30	1.5	1.5	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	HWY	5	42.10	51.30	1.5	1.5	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	HWY	6	50.30	51.30	1.5	1.5	2.0	18.05	13.60	1.90	1.30
OPERATING ENGINEER	All	HWY	7	48.30	51.30	1.5	1.5	2.0	18.05	13.60	1.90	1.30
ORNAMNTL IRON WORKER	All	All		45.75	48.25	2.0	2.0	2.0	13.65	18.99	0.00	0.75
PAINTER	All	All		44.55	49.30	1.5	1.5	1.5	11.50	11.10	0.00	1.27
PAINTER SIGNS	All	BLD		33.92	38.09	1.5	1.5	1.5	2.60	2.71	0.00	0.00
PILEDRIVER	All	All		45.35	47.35	1.5	1.5	2.0	11.79	17.60	0.00	0.63
PIPEFITTER	All	BLD		47.50	50.50	1.5	1.5	2.0	9.55	17.85	0.00	2.07
PLASTERER	All	BLD		42.25	44.79	1.5	1.5	2.0	13.65	9.50	5.00	0.65
PLUMBER	All	BLD		48.25	50.25	1.5	1.5	2.0	14.09	12.65	0.00	1.18
ROOFER	All	BLD		41.70	44.70	1.5	1.5	2.0	8.28	11.59	0.00	0.53
SHEETMETAL WORKER	All	BLD		43.03	46.47	1.5	1.5	2.0	10.73	21.87	0.00	0.75
SIGN HANGER	All	BLD		31.31	33.81	1.5	1.5	2.0	4.85	3.28	0.00	0.00
SPRINKLER FITTER	All	BLD		47.20	49.20	1.5	1.5	2.0	12.25	11.55	0.00	0.55
STEEL ERECTOR	All	All		42.07	44.07	2.0	2.0	2.0	13.45	19.59	0.00	0.35
STONE MASON	All	BLD		44.88	49.37	1.5	1.5	2.0	10.25	15.30	0.00	0.85
TERRAZZO FINISHER	All	BLD		39.54	39.54	1.5	1.5	2.0	10.55	11.79	0.00	0.67
TERRAZZO MASON	All	BLD		43.38	43.38	1.5	1.5	2.0	10.55	13.13	0.00	0.79

TILE MASON	All	BLD		43.84	47.84	1.5	1.5	2.0	10.55	11.40	0.00	0.99
TRAFFIC SAFETY WRKR	All	HWY		33.50	39.50	1.5	1.5	2.0	6.00	7.25	0.00	0.50
TRUCK DRIVER	E	All	1	35.60	36.25	1.5	1.5	2.0	8.56	11.50	0.00	0.15
TRUCK DRIVER	E	All	2	35.85	36.25	1.5	1.5	2.0	8.56	11.50	0.00	0.15
TRUCK DRIVER	E	All	3	36.05	36.25	1.5	1.5	2.0	8.56	11.50	0.00	0.15
TRUCK DRIVER	E	All	4	36.25	36.25	1.5	1.5	2.0	8.56	11.50	0.00	0.15
TRUCK DRIVER	W	All	1	35.98	36.53	1.5	1.5	2.0	8.25	10.14	0.00	0.15
TRUCK DRIVER	W	All	2	36.13	36.53	1.5	1.5	2.0	8.25	10.14	0.00	0.15
TRUCK DRIVER	W	All	3	36.33	36.53	1.5	1.5	2.0	8.25	10.14	0.00	0.15
TRUCK DRIVER	W	All	4	36.53	36.53	1.5	1.5	2.0	8.25	10.14	0.00	0.15
TUCKPOINTER	All	BLD		44.90	45.90	1.5	1.5	2.0	8.30	14.29	0.00	0.48

Explanations

COOK COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable

tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment

used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial, education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara,

sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle

Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under: Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete

Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines: ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane: Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication

Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck

Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing

endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing,

grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

TRAFFIC SAFETY

Work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION - EAST & WEST

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation;

Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted

crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer,

operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

PUBLIC BUILDING COMMISSION OF CHICAGO

BOOK 3
TECHNICAL SPECIFICATIONS – VOLUME 1

PBC Contract No. C1577

DORE (NEW CLEARING) ELEMENTARY SCHOOL
7134 WEST 65th STREET
CHICAGO, IL 60638

NEW CONSTRUCTION
CPS PROJECT #2017-23001-NSC

PUBLIC BUILDING COMMISSION OF CHICAGO

Mayor Rahm Emanuel
Chairman

Carina E. Sanchez
Executive Director

Room 200
Richard J. Daley Center
50 West Washington Street
Chicago, Illinois 60602
312-744-3090
www.pbcchicago.com

ISSUED FOR BID ON 06/07/2017

By
CANNON DESIGN
225 N. MICHIGAN AVE, STE. 1100
CHICAGO, IL 60601

PUBLIC BUILDING COMMISSION OF CHICAGO

BOOK 3
TECHNICAL SPECIFICATIONS – VOLUME 2

PBC Contract No. C1577

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7134 WEST 65th STREET
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PUBLIC BUILDING COMMISSION OF CHICAGO

BOOK 3
TECHNICAL SPECIFICATIONS - APPENDIX

PBC Contract No. C1577

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B. Book 1: Project Information, Instructions to Bidders, and Execution Documents

C. Book 2: Standard Terms and Conditions for Construction Contracts

1.2 COMMISSION REPRESENTATIVE'S FIELD OFFICE

A. Furnish, erect and maintain a clean, weather-tight office at the site of the Work for the duration of the Contract, through final completion, for the sole and exclusive use of the Commission. No on-site Work may commence until the Commission Representative's Field Office required by this Subsection is in place, fully functional and approved by the Commission. The proposed location of the Commission Representative's Field Office and the pedestrian gate for access to the fenced site is indicated on the Drawings.

B. Provide the Commission Representative's Field Office with toilet facility entirely separate from, unconnected to, and not to be shared with the Contractor's Field Office.

C. Provide the Commission Representative's Field Office not less than 400 square feet in area and with a ceiling not less than 7 feet high with a minimum of two private offices and one common area, and one toilet. The two private offices and common area shall be equipped with minimum of (4) 110-120v 20amp 3-prong grounded duplex receptacles each section, equally distributed across (2) power circuits each section. The field office shall be equipped with a minimum of 100-amp electrical service. The field office shall include an interior toilet facility, shall be painted, heated, air-conditioned, lighted, provided with lockable windows with blinds or shades that operate, and doors with cylinder locks and deadbolt locks. Provide appropriate signage on the outside of the trailer indicating PBC Field Office. Enclose the air space beneath the trailer with exterior grade plywood panel siding painted to match office exterior. Provide hinged access doors at utility connection area. Provide stair access with handrails per code requirements.

D. Provide weekly janitorial service for the Commission Representative's Field Office and interior toilet facility.

E. Pay all expenses in connection with the Commission Representative's Field Office, including but not limited to, the installation and high speed internet service, heat, air-conditioning, light, water, sewerage, janitorial services, equipment, pest control, snow removal, set up and take down. HVAC filters shall be replaced every month.

F. Furnish the following equipment and furniture:

1. (2) - 60" x 30" desks with two 2-drawer pedestal file cabinets (one file and one miscellaneous) and 2 non folding chairs with upholstered seat and back.
2. (2) – 2-drawer lateral file cabinets.
3. (1) - layout table with minimum top size of 42" x 60". An adjustable height drafting stool with upholstered seat and back shall be provided.
4. (2) - 8' x 3' folding conference tables and 20 folding chairs.
5. Provide (1) 48" x 72" (min) and (1) 48" x 96" wall mounted dry erase boards.

6. (1) - equipment cabinet with lock of minimum inside dimensions of 72" high x 48" wide x 24" deep with (5) shelves. The walls shall be of steel with a 3/32" minimum thickness with concealed hinges and enclosed lock constructed to prevent entry by force.
7. (1) 1200-watt Microwave oven.
8. (2) - wall mounted mail holders
9. (1) - first aid cabinet fully equipped and maintained on monthly basis.
10. (1) - 5 gallon hot and cold water dispenser with cup dispenser, cups and bottled drinking water supply service.
11. Central heating and air conditioning appropriate to trailer size and construction per ASHRAE 90.1 efficiency requirement.
12. (1) - 6 cubic feet refrigerator with freezer compartment.
13. (1) - plan rack with (12) 42" capacity hanging clamps.
14. (1) - fire extinguisher.
15. Printer: Provide a multifunction color printer (fax, copy, scan and print) the latest version with toner cartridges, paper, and a maintenance service contract for the duration of project.
    a. Canon Color Laser Multifunction Image CLASS C5000-Series or equal (Dual Tray - 8-1/2" x 11" and 11" x 17" format) with scanning capability (PDF format)
    b. Provide required toner cartridges throughout duration of the project.
    c. Provide 24lb 8 ½" x 11" and 11" x 17" format paper throughout duration of project.
16. Network: Provide Local Area Network (LAN) and a Wireless Area Network (WAN) communication and Internet access for Commission computers with all associated equipment, drops, patch cords, power cords, etc., for the duration of the project. Network the printer/scanner to all Commission computers to enable direct printing and scanning to and from any computer.
17. Internet Access: Provide an unlimited Internet access account to achieve a minimum of 50MB per second download speed.

G. The Commission Representative's field office and all furnishing and equipment will remain the property of the Contractor at the completion of the Project.

H. Provide (2) on-site parking spaces adjacent to Commissions Trailer for duration of project.

I. Submit two (2) copies of the site field office layout plan required for approval by the Commission Representative.

1.3 SUBMITTALS

A. Unless provided for elsewhere in the contract documents, prior to any onsite work, the Contractor is to prepare and submit to the Architect for approval the Commission Representative's Site Field Office Location Plan showing field offices and related temporary support facilities. If requested by the Contractor, a preliminary meeting to review site elements and construction operations including trailer and gates location with the Architect and Commission Representative prior to submission of the Plan will be held.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Provide new materials and equipment. Undamaged, previously used materials and equipment in serviceable condition may be used if approved by the Commission Representative. Provide materials suitable for use intended.

PART 3 - EXECUTION

3.1 FIELD OFFICE

A. The proposed location of the Commission Representatives field office and the pedestrian gate for access to the fenced site is indicated on the drawings.

B. Locate and maintain the field office with temporary walkways providing easy and safe access.

C. Maintain support facilities until substantial completion or as directed the Commission Representative.

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SECTION 11 40 00

FOODSERVICE EQUIPMENT

PART 1 - GENERAL

1.1 SCOPE

A. The work referred to in this section consists of furnishing all labor and material required to provide and deliver all equipment hereinafter specified into the building, uncrate, assemble, hang, set in place, level, and completely install, exclusive of final utility connections.

B. Coordinate but do not install (unless specifically directed to do so in the technical specifications) Owner and Vendor-supplied equipment noted on the drawings or in the specifications as NIKEC. Show on roughing in plans the sizes, utilities, and other requirements as furnished in the Specifications, by Owner or appropriate supplier in submittals as if the equipment is contractor furnished.

C. Coordinate and show sizes, utilities, and other requirements as determined by physical inspection for equipment noted as existing to be reused. Include costs for marking, removing, storing, cleaning, redelivering and installing such equipment. All requirements within the project manual apply to reused equipment except warranty as if contractor furnished including but not limited to code compliance and accessories necessary to conform with the new application.

1.2 SUBMITTALS

A. Upon award of Contract, furnish the Architect with reproducible copies of the following drawings, in accordance with the approved project schedule, which shall be made on sheets equal in size and matching the bid set drawing size. Reproduced copies of bid documents will not be accepted for this purpose in any fashion.

1. Equipment specified for fabrication shall be detailed and fully dimensioned to a minimum scale of 3/4" = 1'-0" (1:20) for plan and elevation views and 1-1/2" = 1'-0" (1:10) for sections.
2. Prepare separate electrical and mechanical dimensioned rough-in drawings at 1/4" = 1'-0" (1:50) showing exact point of penetration of floors, walls, and ceilings for all services required to operate the equipment that the Contractor shall furnish, including the requirements for Contractor supplied and installed refrigerant and beverage piping line runs. These drawings shall also show exact locations of final connections to equipment. Indicate floor drains, floor sinks, receptacles, lights, and other special conditions related to the equipment known to the Contractor but provided under other Sections.
3. Dimensioned drawings shall be submitted showing the location and size of all bases, depressions, grease interceptors, special height walls, openings in walls for equipment or operations, and critical dimensions, etc. Drawings shall be drawn to a scale of not less than 1/4" = 1'-0" (1:50).

B. Manufacturers' Data: Upon award of Contract, submit bound copies of Manufacturers' Illustrations and Technical Data to the Architect for review prior to procurement. Items of Standard Manufacture shall be submitted, including items purchased to be built into fabricated equipment. Each illustration

shall be marked to describe accurately the item to be furnished as specified, including voltage, phase, load, accessories, etc.

C. Manufacturers' List: Submit in writing a list of all manufacturers' representatives of the foodservice equipment, such as convection ovens, ranges, etc., and their authorized service agencies' addresses and telephone numbers.

D. Foundation Data: Data and drawings shall be submitted for each item, if any, requiring special foundations, structures, or supports. Such foundations, structures, or supports will be provided and installed by other appropriate trades in accordance with the drawings and specifications which shall be provided by the Contractor and reviewed by the Architect.

E. Operation and Maintenance Manuals: Provide three bound copies of operation, maintenance, and parts manuals for all equipment items of standard manufacture including standard component assemblies built into all custom-fabricated items.

F. Review by the Architect of the drawings and brochures submitted by the Contractor does not waive the responsibility of the Contractor to furnish each item of equipment in complete compliance with the specifications and contract drawings.

G. The number of copies of all submittals shall be as determined by the Architect.

H. Samples: Samples of materials, products, and fabrication methods shall be submitted for review at no additional cost, before proceeding with the work.

1.3 QUALITY ASSURANCE

A. Standard Products: Materials, products, and equipment furnished under this contract shall be the standard items of manufacturers regularly engaged in the production of such materials, products, and equipment and shall be of the manufacturers' latest design that complies with the specifications.

B. Manufacturers' Qualifications: Manufacturers shall be regularly engaged in the production of the items furnished and shall have demonstrated the capability to furnish similar equipment that performs the functions specified or indicated herein.

C. Installation Qualifications: Contractor shall use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work defined in this Section.

D. Coordination of Work: Coordinate work with the respective trades performing preparatory work for installation of equipment under this Contract, including, but not limited to: construction of pits, trenches, receptors; rough-in of supply, waste and vent piping; electrical connections; and field verification of dimensions.

E. Product Options: Drawings indicate foodservice equipment based upon equipment specified herein. All substitutions shall be in compliance with the requirements in Division 1 (or Section I if appropriate.).

F. Conflict: Where written specifications and drawings conflict or appear to conflict, request clarification. Prior to receiving clarification use the greater quality or greater quantity.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver foodservice equipment in containers designed to protect equipment and finish until final installation. Make arrangements to receive equipment at project site at a time and place agreed with the General Contractor. If the site is not ready for delivery, then either delay delivery or arrange to hold in a secure and protected warehouse until delivery can be made to job site.

B. Store foodservice equipment in original containers and in location to provide adequate protection to equipment while not interfering with other construction operations. Coordinate with other trades so that worktables, serving counters and equipment are not used for scaffolding or as workbenches.

C. Handle foodservice equipment carefully to avoid damage to components, enclosures, and finish. Do not install damaged foodservice equipment; replace and return damaged components to equipment manufacturer.

1.5 APPLICABLE CODES AND STANDARDS

A. Except as otherwise indicated, each item of equipment shall comply with the latest current edition of the following standards as applicable to the manufacture, fabrication, and installation of the work in this section. Comply with all Federal, State, and Municipal regulations and notifications which bear on the execution of this work. Call to the attention of the Owner in writing any design conflict with the requirements of the Americans with Disabilities Act (ADA) during Bid Process so resolution can be effected prior to Contract Award.

1. NSF Standards: Comply with applicable National Sanitation Foundation standards and criteria and provide NSF "Seal of Approval" on each manufactured item and on major items of custom-fabricated work.
2. UL / ETL / CSA Standards: For electrical components and assemblies, provide either UL / ETL / CSA listed products or, where no listing service is available, provide a complete index of the components used as selected from the UL / ETL / CSA "Recognized Component Index." For fire extinguishing systems comply with UL 300.
3. ANSI Standards: Comply with applicable ANSI standards for electric-powered and gas-burning equipment; for piping to compressed-gas cylinders; and for plumbing fittings, including vacuum breakers and air gaps, to prevent siphonage in water piping.
4. AGA / CGA: All gas-fired equipment shall be AGA / CGA approved, equipped to operate on the type gas available at the job site, and shall contain 100% automatic safety shut-off devices.
5. NFPA Standards: Comply with NFPA Bulletin 96 for exhaust systems; with NFPA Bulletins 13, 17, 17A and 96 for fire extinguishing systems; and with NFPA 54, National Fuel Gas Code and NFPA 70, National Electrical Code.
6. ASME Code: Comply with ASME boiler code requirements for steam-generating and steam-heated equipment; provide ASME inspection, stamps, and certification of registration with National Board.
7. SMACNA Guidelines: Provide seismic restraints for food service equipment to comply with the Sheet Metal and Air Conditioning Contractors National Association's (SMACNA) "Kitchen Equipment Fabrication Guidelines", appendix 1, "Guidelines for Seismic Restraints of Kitchen Equipment", unless otherwise indicated.

8. ASHRAE: Provide mechanical refrigeration systems complying with the American Society of Heating, Refrigerating and Air Conditioning Engineers' ASHRAE 15, "Safety Code for Mechanical Refrigeration".

1.6 PROJECT CONDITIONS

A. Visit the job site to field check actual wall dimensions and roughing-in and be responsible for furnishing, fabricating, and installing the equipment in accordance with the available space and utility services as they exist on the job site for an accurate fit.

B. Check all door openings, passageways, elevators, etc., to be sure that the equipment can be conveyed to its proper location within the building and, if necessary, check with the Contractor regarding the possibility of holding wall erection, placement of doorjambs, windows, etc., for the purpose of moving the equipment to its proper location. Any removal and rebuilding of walls, partitions, doorjambs, etc., necessary to place the equipment or, if caused by incorrect information on the Contractor's drawings, shall be done at the expense of the Contractor.

C. Physically check the location and utility size of all "rough-ins" at the job site for compatibility with the equipment being installed before finished floors, walls, and/or ceilings are in place.

D. Check electrical characteristics and water, steam, and gas pressure. Provide pressure-regulating valves where required for proper operation of equipment.

1.7 GUARANTIES AND WARRANTIES

A. Self-contained or remote refrigeration systems furnished under this Contract shall be provided with start-up and a one-year service contract providing free service, 24 hours per day, seven days per week, including parts and labor. Hermetic or semi-hermetic compressors shall be covered by the manufacturers' factory warranty for an additional four years. Other equipment provided shall include a one-year warranty covering parts and labor, plus any extended warranties as normally provided by individual manufacturers. Equipment including refrigeration systems both self-contained and remote shall be warrantied by the Contractor on the project for one year as indicated in the preceding sentence. The first day of the first year commences upon the issuance of a certificate of occupancy for each area.

PART 2 – PRODUCTS

2.1 GENERAL

A. The equipment and its component parts shall be new and unused. All items of standard manufactured equipment shall be current models at the time of delivery. Parts subject to wear, breakage, or distortion shall be accessible for adjustment, replacement, and repair.

B. Means shall be provided to ensure adequate lubrication for moving parts. Oil holes, grease fittings, and filler caps shall be accessible without the use of tools.

C. The design of the equipment shall be such as to provide for safe and convenient operation. Covers or other safety devices shall be provided for all items of equipment presenting safety hazards. Such guards or safety devices shall not present substantial interference to the operation of the equipment. Guards shall provide easy access to guarded parts.

D. Trim shall not be an acceptable substitute for accuracy and neatness. When trim is required and accepted by Architect in lieu of rejection of items of equipment, it shall be the Contractor's responsibility to provide same at no additional cost.

E. Unless otherwise specified herein, no material lighter than #20 gauge shall be incorporated into the work. Gauges for sheet iron and sheet steel shall be U.S. Standard Gauges and finished equipment gauge thickness shall not vary more than 5% plus or minus from the thickness indicated below.

GAUGE	THICKNESS	GAUGE	THICKNESS
#10	0.1406" (3.0mm)	#16	0.0625" (1.6mm)
#12	0.1094" (2.5mm)	#18	0.0500" (1.25mm)
#14	0.0781" (2.0mm)	#20	0.0375" (1.0mm)

F. Materials or work described in words which have a well-known and accepted technical or trade meaning shall be held to refer to such accepted meanings.

2.2 MATERIALS

A. Submit a certified copy of the mill analysis of materials if requested by the Architect.

B. Stainless steel sheets shall conform to American Society for Testing and Materials (ASTM) specification A240, Type 304 Condition A, 18-8, having a No. 4 finish. A No. 2B finish shall be acceptable on surfaces of equipment not exposed to view. Sheets shall be uniform throughout in color, finish, and appearance.

C. Stainless steel tubing and pipe shall be Type 304, 18-8, having a No. 4 finish, and shall conform to either ASTM A213 if seamless or ASTM A249 if welded.

D. Rolled shapes shall be of the cold-rolled type conforming to ASTM A36.

E. Galvanized sheet steel shall conform to ASTM A526; where extensive forming to take place, conform to ASTM A527; conform to ASTM A525, coating designation G115, chemical treatment.

F. Galvanized steel sheets shall be cold-rolled, stretcher leveled, bonderized, and rerolled to ensure a smooth surface.

G. Castings shall be corrosion-resisting metal containing not less than 30% nickel. Castings shall be rough ground, polished, and buffed to bright luster and free from pit marks, runs, checks, burrs, and other imperfections. In lieu of corrosion- resisting metal castings, die-stamped or cast 18-8 stainless steel will be acceptable.

H. Millwork materials shall be free from defects impairing strength, durability, or appearance; straight and free from warpage; and of the best grade for their particular function. Wood shall be well seasoned and kiln dried and shall have an average moisture content of 8%, a maximum of 10%, and a minimum of 5%.

1. Plywood and other woodwork of treatable species, where so required by the code, shall be fire-retardant treated to result in a flame spread rating of 25 or less with no evidence of significant progressive combustion when tested for 30 minutes duration under ASTM E84 and shall bear the testing laboratory mark on a surface to be concealed.
2. Concealed softwood or hardwood lumber shall be of poplar, Douglas fir, basswood, red oak, birch, maple, beech, or other stable wood and shall be select or better grade, unselected for color and grain, surfaced four sides, square-edged, and straight. Basswood may be used where fire-retardant treated materials are required.
3. Plywood for transparent finish shall conform to U.S. Product Standard PS-51-71, Type I (fully waterproofed bond), with architectural grade face veneers of species as specified, free of all pin knots, patches, color streaks and spots, sapwood, and other defects. Plywood designated to have plywood cores shall be of either 5 ply or 7 ply construction. Plywood so designated on the drawings and plywood not otherwise shown shall have a particle board core, cross banding of veneers, and face and back veneers. Particle board cores shall have a 45-pound density, except where the fire retardant treatment requires cores of lesser density.
4. Face veneers shall be matched for color and grain to produce balance and continuity of character. Mineral streaks and other discolorations, worm holes, ruptured grain, loose texture, doze, or shake will not be permitted. Face veneer leaves on each surface shall be full-length, book matched, center matched, and sequence matched. Surfaces shall be sequenced and blueprint matched. Veneers not otherwise indicated shall be plain sliced. Backing veneers for concealed surfaces shall be of a species and thickness to balance the pull of the face veneers.
5. Hardwood plywood for painted surfaces shall conform to U.S. Product Standard PS-51-71, Type I, and shall have sound birch, maple, or other approved close grain hardwood faces suitable for a paint finish.
6. Perforated hardboard shall be a tempered hardboard, 1/4" (6 mm) thick, conforming to Federal Specification LLL-B-810B, Type I, SIS, Finish B (primed), Design B (perforated), with ¼" (6 mm) diameter holes spaced on 1" (25 mm) centers both ways.
7. Plastic laminate surfaces shall be laminated with thermosetting decorative sheets of the color, pattern, and style as selected by the Architect. Horizontal surfaces shall be laminated with sheets conforming to Federal Specification L-P-508F, Style D, Type I (general purpose), Grade HP, Class 1, 1/16" (2 mm) thick, satin finish, with rough sanded backs. Vertical surfaces shall be laminated with sheets conforming to Federal Specification L-P-598F, Style D, Type II, (vertical surface), Grade HP, Class 1, non-forming, satin finish, 1/32" (1 mm) thick or heavier. Surfacing for curved surfaces shall be laminated from sheets conforming to Federal Specification L-P-508F, Style D, Type III (post-forming), Grade HP, Class 1, satin finish. Balance sheets for backs in concealed locations shall be either reject material of the same type and thickness as the general purpose grade facing or may be .020" (0.5 mm) thick laminate backing sheets conforming to Federal Specification L-P-00508E, Style ND, Type V (backing sheet), Grade HP.
8. Adhesive for application of plastic laminate to wood substrates of counter tops shall be a phenolic, resorcinol, or melamine adhesive conforming to Federal Specification MMM-A-181C and producing a waterproof bond. Adhesive for applying plastic laminate to vertical surfaces shall be either a waterproof type or a water resistant type such as a modified urea- formaldehyde resin liquid glue conforming to Federal Specification MMM-A-188C. Contact adhesive will not be acceptable.
9. Plywood for laminate assemblies shown or specified with plywood core shall be of the 5 or 7 ply construction with sanded close-grain hardwood face and back veneers, laminated with waterproof glue, in thickness shown, conforming to U.S. Product Standard PS-51-71. Particle

board for plastic laminate assemblies shown or specified with particle board wood core shall conform to U.S. Products Standard CS-236-66, Type 1 or 2, Grade B (45 pound density), Class 2; except where fire-retardant treatment is required, the density shall conform to the treatment requirements.

I. Sealant: ASTM C 920; type S, Grade NS, Class 25, use, NT. Provide elastomeric sealant, NSF certified for end use application indicated. Provide sealant that, when cured and washed, meeting requirements of Food and Drug Administration's 21 CFR, Section 177.2600 for use in areas that come in contact with food. Dow-Corning #780 or General Electric "Silastic" or approved equal in either clear or approved color to match surrounding surfaces and applied in accordance with sealant manufacturers' recommendations for smooth, sealed finish.

J. Tempered Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated surfaces), Type I (transparent), Class 1 (clear), Quality q3 (glazing select). Provide products complying with ANSI Z97.1, manufactured by horizontal (roller hearth) process and ¼" (6 mm) thick, unless otherwise indicated. Provide exposed safety edges, if any, seamed before tempering.

K. Sound Dampening: NSF-certified, nonabsorbent, hard-drying, sound deadening coating. Provide coating compounded for permanent adhesion to metal in 1/8" (3 mm) thickness that does not chop, flake, or blister.

2.3 FINISHES

A. Paint and coatings shall be of an NSF approved type suitable for use in conjunction with foodservice equipment. Such paint or coating shall be durable, non-toxic, non-dusting, non-flaking, and mildew resistant; shall comply with all governing regulations; and shall be applied in accordance with the recommendations of the manufacturer.

B. Exterior, galvanized parts, exposed members of framework, and wrought steel pipe where specified to be painted shall be cleaned, properly primed with rust-inhibiting primer, degreased, and finished with two (2) coats of epoxy-based grey hammertone paint, unless otherwise specified.

C. Stainless steel, where exposed, shall be polished to a #4 commercial finish. Where unexposed, finish shall be #2B. The grain of polishing shall run in the same direction wherever possible. Where surfaces are disturbed by the fabricating process, such surfaces shall be finished to match adjacent undisturbed surfaces.

D. Galvanized shelving shall not be painted.

E. Fabricated equipment shall be spray coated with plastic suitable for protecting the equipment during transport and installation. The coating shall be easily removable and shall be removed after the equipment installation is complete at the work site or, alternatively, when directed by the Architect.

F. Exposed surfaces on brass, bronze, or steel shall be plated with chromium over nickel in accordance with Federal Specifications WW-P-541, Paragraph 9.5 and Table 9.4, unless otherwise specified.

2.4 ELECTRICAL AND MECHANICAL REQUIREMENTS

A. Standard UL / ETL / CSA listed materials, devices, and components shall be selected and installed in accordance with NEMA Standards and recommendations and as required for safe and efficient use and operation of the foodservice equipment without objectionable noise, vibration, and sanitation problems.

1. Provide recognized commercial grade signals, "on-off" pushbuttons or switches, and other speed and temperature controls as required for operation of each item, complete with pilot lights and permanent engraved, plastic laminate signs and graphics identifying each item. Provide stainless steel cover plates at controls and signals.
2. Each item requiring electrical power shall be equipped with either a terminal box for permanent connection or with cord and plug for interruptible connection, as indicated. Provide NEMA standard grounding type plugs, where used.
3. Furnish foodservice equipment completely wired internally using wire and conduit suitable for a wet location, including a separate grounding wire. Provide electrical outlets and receptacles required to be mounted on or in fabricated equipment and interconnect to a suitable terminal box (subpanel, starter, or disconnect switch if so specified) with all wires neatly tagged showing item number, voltage characteristics, and load information.
4. Receptacles for all wall- and floor-mounted outlets will be provided to be used for plug-in equipment with characteristics as noted on the drawings. Provide Hubbell three-wire or four-wire grounding-type connectors and neoprene cords installed on each item of plug-in equipment to match receptacles provided.
5. Electrically heated equipment shall be internally wired to a thermostatic control and an "on-off" red neon light indicator, which shall be mounted in a terminal box on a removable stainless steel access panel.
6. Only rigid steel zinc-coated conduit shall be used, painted to match adjacent surfaces where exposed. Wiring shall be run concealed wherever possible.
7. Provide on, or for, each motor-driven appliance or electrical heating or control unit, a suitable control switch or starter of the proper type and rating.
8. Appliances shall be furnished complete with motors, driving mechanism, starters, and controllers, including but not limited to, master switches, timers, cut-outs, reversing mechanism, and other electrical equipment if and as applicable. Wiring and connection diagrams shall be furnished with electrically operated machines and for electrically wired fabricated equipment.
9. Appliances shall be of rigid construction, free from objectionable vibration. Quietness of operation of all foodservice equipment is a requirement. Remove or repair any equipment producing objectionable noise and/or vibration as directed by the Architect.
10. Motors shall be of the drip-proof, splash-proof, or totally enclosed type, having a continuous duty cycle and ball bearings, except small timing motors which may have sleeve bearings. Motors shall have windings impregnated to resist moisture. Motors located where subject to deposits of dust, lint, or other similar matter from the machine on which installed shall be of the totally enclosed type. Motors shall have ample power to operate the machines for which designated under full load operating conditions without exceeding their nameplate ratings. Horsepower requirements on driven equipment shall be determined by the manufacturer based on normal operation at maximum capacity. The nominal rated motor horsepower shall be not less than the horsepower required for normal operation of the equipment at maximum capacity. Insulation shall be NEMA Class B, or better.
11. Cover plates shall be furnished and installed for all electrical outlets, receptacles, switches, etc., to match the material and finish of the equipment to which they will be fastened.

12. Switches, controls, etc., shall be conspicuously labeled as to use with plastic nameplates secured to the adjacent surface as previously specified in Article 2.01-C. Submit a sample for approval if requested by Architect.
13. Where specified for custom fabricated equipment, provide compartment with electrical sub-panel which shall be pre-wired in conduit concealed in cabinet body construction and connected to all electrical components built into or set upon the counter. Electrical sub-panel shall be UL / ETL / CSA listed, 3-phase, 4-wire circuit breaker type with a ground buss main breaker and individual breakers for each serviced load. Buss shall be copper and the circuit breakers shall be the molded case, bolt-on type with thermomagnetic quick-make, quick-break trip. Multi-pole circuit breakers shall have an internal trip bar. The circuit breakers shall have an interrupting capacity of 10,000 amperes at 120 volts and there shall be a separate breaker for each connected load. Each breaker shall be sized for 125% of the connected load and a minimum of two (2) extra, single pole, 20 amp circuit breakers shall be provided. The loads shall be connected through the breakers in a phased sequence to balance the load on each phase.

B. Water inlets shall be located above the positive water level wherever possible to prevent siphoning of liquids into the water supply system. Wherever conditions shall require a submerged inlet, a suitable type of check valve (except in jurisdictions where check valves are prohibited) and vacuum breaker shall be provided with the fixture to prevent siphoning. Where exposed, piping and fittings shall be chrome-plated. Where vacuum breaker piping is through equipment, provide chrome -plated escutcheon plates to cover holes.

1. Provide and install indirect waste lines from equipment which will discharge into floor drains or safe wastes, chrome-plated where exposed. Extend to a point at least 1" (25 mm) (or as required by local or state code) above the rim of the floor drain, cut bottom on 45-degree angle and secure in position.
2. Horizontal piping lines shall be run at the highest possible elevation and not less than 6" (150 mm) above the floor, through equipment where possible.
3. No exposed piping in or around fixtures or in other conspicuous places shall show tool marks or more than one thread at the fitting.
4. Steam operating valves on or in fabricated and purchased foodservice equipment shall be provided with composition hand wheels, which shall remain reasonably cool in service.
5. Provide suitable gas and liquid pressure-reducing valves for equipment with such components that might reasonably be expected to be affected over a period of time by adverse pressure conditions, including but not limited to dishwashers, booster heaters, coffee urns, ranges, steam boilers, etc.

C. Provide and install complete refrigeration systems--charged, started, and operating properly-including, but not limited to:

compressors, condensers, racks, coils, vibration eliminators, sight glasses (moisture indicating type), expansion valves, filters, oil separators, thermostats, defrost time clocks, all controls and control wiring, liquid line driers, piping, and refrigeration grade copper tubing with all sweat joints using Safety-Silv No. 1200 or approved equal silver solder (with as few joints as possible)

1. Where specifications call for pre-piped lines (i.e., from a fixture to a valve compartment, etc.), provide such work in strict conformance with other sections of the specifications which set forth standards for this type of work or in conformity with the requirements of the ASHRAE Standards or local authorities, whichever is the greater.

2. Mechanically refrigerated cold pans shall have a normally closed liquid line electric solenoid valve installed before the expansion valve and wired to a silent-type toggle switch complete with an "on-off" red neon light indicator and both mounted in a terminal box on a removable access panel. This switch shall be fed by a separate control circuit and shall not to be wired into the compressor circuit so that it shall stop the flow of refrigerant to the cold pan and not turn off the compressor. The compressor shall then pump down and turn off through the action of the pressure control.
3. Each refrigeration item specification is written to provide minimum specifications and scope of work. Refrigeration equipment shall be designed and installed to maintain the following general temperatures unless otherwise specified.

a. Walk-In Refrigerators	1.7°C / 35°F
b. Walk-In Freezers	-23.3°C / -10°F
c. Reach-In Refrigerators	1.7°C / 35°F
d. Reach-In Freezers	-23.3°C / -10°F
e. Undercounter Refrigerators	1.7°C / 35°F
f. Undercounter Freezers	-23.3°C / -10°F
g. Cold Pan	-17.8°C / 0°F
h. Work Rooms	10°C / 50°F

4. Provide electrical and refrigeration components needed by the completed system and complete all refrigeration and control connections of and to said components.
5. Provide evaporator coil defrost system on all walk-in refrigerator and freezer rooms where the refrigeration systems are designed to operate at room temperature of less than 35°F (1.7°C).
6. Verify the requirements of and provide any or all additional refrigeration specialty(s) or component(s) required or recommended by the manufacturer for proper operation under the specific operating conditions and location of each system specified.
7. Verify and provide manufacturer's certification (or certification by manufacturer's authorized agent) that the equipment selection hereinafter specified for each refrigeration system is properly sized and shall meet the operating requirements set forth for each system regarding maintaining specified operating temperature, hours of compressor running time, and system pressures and velocities as recommended by the equipment manufacturer(s).
8. During check-out and initial operation, verify that:

    a. Controls are properly adjusted.
    b. Condensers are equipped with an overload protector.
    c. A competent service mechanic is on site during the first eight (8) hours of operation.
    d. Switches, starters, and controls are identified as to function.

9. Unless otherwise specified, furnish thermometers for walk-in units mounted above the exterior entrance door with suitable length armored capillary tubes to allow the sensing bulbs to be installed in the incoming air stream to the blower coil with runs fastened to the walk-in walls to prevent it from damage. This identical requirement applies to alarm systems when specified.

2.5 PRODUCT SPECIFICATIONS

A. Refer to Part 4 for complete itemized product specifications.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Begin installing the equipment at the time the building is ready to receive the equipment and in accordance with the schedule.

B. Provide a competent foreman or supervisor for erection of equipment and to coordinate with other trades regarding connections, installation, and inspection. Coordinate delivery schedule to ensure adequate openings in the building to receive the equipment.

C. Install refrigeration work in an approved manner, using first quality fittings, controls, valves, etc. Refrigeration items shall be started up, tested, adjusted, and turned over to the Architect in first-class condition and left operating in accordance with the manufacturer's specifications.

D. Set equipment that rests on masonry bases level onto a bed of silicone rubber sealant.

E. Seal equipment that butts to a wall or against other equipment with silicone rubber sealant. Set trim strips or other items requiring fasteners in a bed of silicone rubber sealant and fastened with suitable stainless steel fasteners 48" (1200mm) or less on centers. , surfaces shall be thoroughly clean and degrease all surfaces prior to the application of sealant.

F. Install and interconnect electrical controls, switches, or other units which are separately furnished for field installation in or on equipment provided, unless otherwise specified.

G. Install and wire refrigeration systems in strict conformance with the manufacturers' instructions and recommendations. Ensure that all refrigeration condensing units are ventilated properly and are accessible for repair, maintenance, and inspection.

H. Hang evaporator coils per the manufacturer's recommendation at the locations as shown on the drawings. Mount units such that the drain pans are pitched to the drain lines. Hang the coils using nylon or other approved non-conductive, non-corrosive fasteners Furnish #12 gauge galvanized steel fish plates of suitable size and shape on the exterior ceiling of the walk-in to spread the weight of the coils adequately. Connect coils to the condensing unit and install to constitute a complete working system capable of maintaining the interior temperatures specified regardless of the heavy usage the walk-in units may receive.

I. Furnish and install a copper or PVC drainline painted silver from each coil outlet to a point 1" (25mm) above the floor drain. Trap drainlines immediately above the floor drain. Provide continuous electrified heater tape for freezer drainlines, coordinate electrical requirements and wiring with electrical division. Insulate drainline after installation.

J. Refrigeration tubing shall be the Type L, ACR hard drawn degreased, sealed copper and shall be installed with horizontal runs sloped 1" per 20 feet (1:240) toward the condensing units. Refrigerant piping shall be properly supported by adjustable hangers spaced and adjusted to the drop

required. Where vertical runs of more than 5' (1500mm) occur in the suction line, trap the risers at the bottom. Install piping so that refrigerant or oil cannot drain back into the coils from the suction line.

K. Insulate suction and refrigerant lines with minimum 1/2" (13mm) Armstrong armaflex or equal cellular type insulation. Provide metal pipe sleeves where piping passes through a wall, ceiling, or floor. Fill space around the tubing with mastic insulating compound. Install a permanent suction line filter in each compressor suction line with pressure fitting ahead of the filter to facilitate checking of pressure drop through the filter. Fully insulate and seal penetrations through walk-in cooler or freezer structures to be vapor tight to prevent condensation within any light fixtures, switch boxes, junction boxes, or any other fittings. Fully seal refrigeration and drain lines and provide escutcheon plates.

L. Furnish and completely install a thermostat to control the refrigeration temperatures for each individual compartment.

M. Mount the condensing units on a welded steel rack containing all accessories and components necessary to form a complete condensing unit package. Provide each condensing unit with a factory mounted, pre-wired control panel/disconnect switch complete with circuit breakers, contactors, and time clocks as required.

N. Furnish the refrigeration systems with a one-year refrigeration service contract, covering all parts and labor, with service available seven days per week, 24-hours per day. Provide an option for continuation of the service contract after the first year.. Warrant the refrigeration system for one year and provide the compressors with the manufacturer's extended five-year warranty.

O. Furnish four (4) copies of complete remote refrigeration system control wiring and piping diagrams. Frame one (1) copy in Plexiglas and mount at compressor location or inside the refrigeration system enclosure as appropriate.

P. Coordinate the equipment work with the respective work of other Sections so that electrical and mechanical components built into the equipment will conform and/or adapt to the type, materials, and characteristics of the building components.

Q. Install heated and motor-driven equipment so as to operate efficiently. Provide additional vents, guards, deflectors, and other accessories as needed at no additional cost. Note such additions or modifications on the shop drawings and bring to Architect's attention by special accompanying letter.

3.2 FABRICATION

A. Items of fabricated equipment shall be fabricated in the same factory and shall be similar in construction details, materials, methods, and appearance to similar types of items so fabricated under this contract.

B. Each fabricated item of equipment shall include necessary reinforcing, bracing, and welding with the proper number and spacing of uprights and cross members for strength. Wherever standard sheet sizes will permit, the tops of all tables, shelves, exterior panels of cabinet type fixtures, and doors and drainboards shall be constructed of a single sheet of metal. Except where required to be removable, flat surfaces shall be secured to vertical and horizontal bracing members by welding or other

approved means to eliminate buckle, warp, rattle, and wobble. Equipment not braced in a rigid manner and which is subject to rattle and wobble shall be unacceptable, and the Contractor shall add additional bracing in an approved manner to achieve acceptance.

C. Suitable pipe slots shall be provided on fabricated equipment to accommodate service and utility lines and mechanical connections. These slots shall be of proper size and shall be neatly made with turned up edges around to eliminate cutting or defacing of equipment on the job. Cabinet bases shall be provided with an inner panel duct at the ends or rear of the cabinet allowing adequate space to conceal vertical piping. Such work, when performed at the job site, shall be of the same quality as similar work performed in the shop.

D. Exposed surfaces shall be free from bolt and screw heads. When bolts are required, they shall be of the concealed type and be of similar composition as the metal to which they are applied. Where bolt or screw threads on the interior of fixtures are visible or may come into contact with hands or wiping cloths, they shall be capped with a stainless steel acorn nut and stainless steel lock washer.

E. Where screw threads are not visible or readily accessible, they shall be assembled with stainless steel lock washers and nuts. Wherever bolts or screws are welded to the underside of trim or tops, the reverse side of the weld shall be finished uniformly with the adjoining surfaces. Depressions at these points shall not be acceptable.

F. Rivets shall not be permitted in any location.

G. Welding shall be the heliarc method with welding rod of the same composition as the sheets or parts welded. Welds shall be complete, strong, and ductile with excess metal ground off and joints finished smooth to match adjoining surfaces. Welds shall be free of mechanical imperfections such as gas holes, pits, cracks, etc., and shall be continuously welded so that the fixtures shall appear as one piece construction. Butt welds made by spot solder and finished by grinding shall not be acceptable.

1. Spot welds shall have a maximum spacing of 3" (75mm). Tack welds shall be of at least 1/4" (6mm) length of welding material at a maximum space of 4" (100mm) from center to center. Weld spacing at the ends of the channel battens shall not exceed 2" (50mm) centers.
2. In no case shall soldering be accepted.
3. Fixtures shall be shop fabricated of one piece and shipped to the job completely assembled wherever possible. Equipment too large to transport or enter the building as one piece shall be constructed so that the field joints can be welded at the job site.
4. Exposed joints shall be ground flush with adjoining material and finished to harmonize therewith. Whenever material has been depressed by a welding operation, such depression shall be suitably hammered and peened flush with the adjoining surface and, if necessary, again ground to eliminate low spots. In all cases, the grain of rough grinding shall be removed by successive fine polishing operations.
5. Unexposed welded joints on undershelves of tables or counters in stainless steel construction shall be suitably coated at the factory with an approved metallic-based paint.
6. After galvanized steel members have been welded, welds and areas where galvanizing has been damaged shall have a zinc dust coating applied in conformance with U.S. Government Military Specification Number MIL-P-26915.

H. Butt joints and contact joints, wherever they occur, shall be close fitting and shall not require filler. Wherever break bends occur, they shall be free of undue extrudence and shall not be flaky, scaly, or cracked in appearance; where such breaks do mar the uniform surface appearance of the material, such marks shall be removed by suitable grinding, polishing, and finishing. Wherever sheared edges occur, they shall be free of burrs, fins, and irregular projections and be finished to obviate danger of cutting or laceration when the hand is drawn over them. In no case shall overlapping materials be acceptable where miters or bullnosed corners occur.

I. The grain of polishing shall run in the same direction on horizontal and on vertical surfaces of each item of fabricated equipment except in the case where the finish of the horizontal sections of each shall terminate in a mitered edge. Where sinks and adjacent drainboards are equipped with backsplash, the grain of polishing shall be consistent in direction throughout the length of the backsplash and sink compartment.

J. Component parts, whether fabricated by the Contractor or purchased for building into the fabricated equipment, shall conform to the following.

K. Bolts, screws, nuts, and washers shall be of steel, except where brass or stainless steel is fastened, in which case they shall be of brass or stainless steel, respectively. Where dissimilar metals are fastened, bolts, screws, nuts, and washers shall be of the higher grade metal. The spacing and extent of bolts and screws shall be such as to ensure suitable fastening and prevent buckling of the metals fastened.

3.3 CLEAN-UP

A. At completion of the installation, clean up, lubricate, and adjust where necessary items of equipment provided and turn them over in first-class condition.

1. Where stainless steel surfaces are disturbed by the installation or fabricating process, such surface shall be finished to match adjoining undisturbed surfaces.
2. At the completion of the installation work, stainless steel shall be gone over with a portable polishing machine and buffed to perfect surfaces. Painted surfaces shall be carefully gone over and retouched as required.

3.4 START-UP AND TESTING AND COMMISSIONING

A. Startup Services: Engage factory-authorized service representatives to perform startup services and to demonstrate and train Owner's maintenance personnel as specified below.

1. Coordinate food service equipment startup with service-utility testing, balancing, and adjustments. Do not operate steam lines before they have been cleaned and sanitized.
2. Remove protective coverings and clean and sanitize equipment, both inside and out, and relamp equipment with integral lighting. Where applicable, comply with manufacturer's written cleaning instructions.
3. Test each equipment item for proper operation. Repair or replace equipment that is defective in operation, including units that operate below required capacity or that operate with excessive noise or vibration.
4. Test refrigeration equipment's ability to maintain specified operating temperature under heavy-use conditions. Repair or replace equipment that does not maintain specified operating temperature.

5. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
6. Test motors and rotating equipment for proper rotation and lubricate moving parts according to manufacturer's written instructions.
7. Test water, drain, gas, steam, oil, refrigerant, and liquid-carrying components for leaks. Repair or replace leaking components.
8. Train Owner's maintenance personnel on procedures and schedules related to startup and shutdown, troubleshooting, servicing, and preventive maintenance for each food service equipment item.
9. Review data in the operation and maintenance manuals. Refer to Division 1 Section "Contract Closeout."
10. Review data in the operation and maintenance manuals. Refer to Division 1 Section "Operation and Maintenance Data."
11. Schedule training with Owner, through Architect, with at least 7 days' advance notice.

3.5 SEISMIC RESTRAINTS

A. Install equipment in these contract documents according to the "SMACNA Guidelines for Seismic Restraint of Kitchen Equipment" in any State, province, or jurisdiction that has legislated this requirement as necessary for acceptance. This shall include:

1. Identifying these items on his submittal drawings, Plans, Elevations, and Sections.
2. Showing required SMACNA methods of restraint on his submittal drawings.
3. Referencing the appropriate detail(s).
4. Obtain regulatory approval for all seismic engineering details.

B. If no SMACNA detail exists for a particular situation, prepare and obtain approval for a special attachment detail:

1. Detail must be prepared by an engineer licensed by the State having jurisdiction over the project and accompanied by the supporting calculations used in the design.
2. Verify that the restraint design is appropriate to the building's structural conditions and the surfaces to which the equipment will be secured.

PART 4 - ITEMIZED PRODUCT SPECIFICATIONS

ITEM #1 PLASTIC SHELVING UNIT-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Cambro
Model: ESU Elements Series
Camshelving Elements Starter Unit, width x Length per plan x 72"H, 5 shelf, includes: four posts, 2 sets of post connectors, traverses
Five (5) tier; four (4) vented shelves plus one (1) solid bottom shelf, speckled gray, NSF

ITEM #01.1 DUNNAGE RACK-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Cambro
Model: DRS
S-Series Dunnage Rack, slotted top, 3000 lb. load capacity, 21"W x Length per Plan x 12"H, polyethylene, one-piece, seamless double wall construction, 4" square legs, speckled gray, NSF

ITEM # 06 WALL / SPLASH MOUNT FAUCET – G.C. PROVIDED & INSTALLED
Manufacturer: Fisher or equal by T&S or Chicago Faucet
Model: 13269
Faucet, backsplash mount, 8" c/c, 12" long swing spout, 1/2" inlets
Shipped loose to plumber to install on site

ITEM # 06.2 WALL / SPLASH MOUNT FAUCET– G.C. PROVIDED & INSTALLED
Manufacturer: Fisher or equal by T&S or Chicago Faucet
Model: 13218
Faucet, backsplash mount, 8" c/c, 16" long swing spout, 1/2" inlets
Shipped loose to plumber to install on site

ITEM # 07 LEVER WASTE- G.C. PROVIDED & INSTALLED ~~OWNER/VENDOR PROVIDED & INSTALLED~~
Manufacturer: Fisher
Model: 22322
DrainKing Waste Valve, flat strainer, overflow body, 14 x 16 tube & elbow, 12 GPM drain rate, cast red brass body
Shipped loose to plumber to install on site

ITEM # 08 MOBILE WORK TABLE-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide
Model: T3072SE
Work Table, open base, 72"W x 30"D, 14/300 series stainless steel top, square edge on front & back, Uni-Lok® gusset system, adjustable 18/300 series stainless steel undershelf with marine edge, (4) stainless steel legs, NSF
Square edge table, front and/or rear, per table
All welded construction, legs, undershelf & top
Table Casters, 5"Diameter, set of (4), (2) swivel & (2) braked, 250 lb weight capacity per caster, poly cart washable with polymer tread, NSF
Include (1) one Edlund model 1S Can Opener, manual, #1 with stainless steel base

ITEM # 09 RACK, ROLL-IN-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Eagle Group or equal by Advance Tabco, or New Age
Model: 4338
Lifetime Series Roll-In Refrigerator, universal, 21-1/2" x 26" x 64"H, heavy duty, (18) 18" x 26", (17) 12" x 20", (36) 13" x 18" or (36) 14" x 18" pan capacity, slides on 3" centers, fully welded aluminum construction, (4) 5" x 1-3/8" non-marking swivel plate casters, NSF

ITEM # 19.1 CONVECTION OVEN-DOUBLE STACKED-OWNER/VENDOR PROVIDED & INSTALLED

Manufacturer: Vulcan

Model: VC44GD

Convection Oven, gas, double-deck, standard depth, solid state controls, electronic spark igniters, 60 minute timer, 8" high legs, stainless steel front, top and sides, stainless steel doors with windows, 50,000 BTU each section, NSF, CSA Star, CSA Flame, ENERGY STAR®

Natural Gas

Casters, set of (4) in lieu of standard legs

Dormont Blue Hose™ Moveable Gas Connector Hose Assembly, 3/4" inside dia., 60" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 2 Swivel MAX®, coiled restraining cable with hardware, 140,000 BTU/hr minimum flow capacity

ITEM # 23 HAND SINK-OWNER/VENDOR PROVIDED & INSTALLED

Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide

Model: HSA-10-1FK

Hand Sink, wall mount, 13-1/2" wide x 9-3/4" front-to-back x 6-3/4" deep bowl, 304 stainless steel construction, splash mounted faucet, single knee pedal, skirt, basket drain, deep-drawn seamless design-positive drain, inverted "V" edge, NSF

Model 326015 Temperature mixing valve

Left & right side splashes

P-Trap, nickel-plated

Faucet and drain shipped loose to plumber to install on site

Paper Towel and Soap Dispensers

ITEM # 23.1 HAND SINK-ADA-OWNER/VENDOR PROVIDED & INSTALLED

Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide

Model: HSAP-14-ADA-FW

Hand Sink, wall mount, 14" wide x 16" front-to-back x 5" deep bowl, 16/304 stainless steel construction, splash mount gooseneck faucet with wrist handles & mixer valve, marine edge on front 7 sides, 1/2" NPS water inlet, chrome-plated P-trap, wrist handles, soap dispenser, basket drain, skirt assembly & paper towel dispenser, PHYSICALLY CHALLENGED, NSF

Left & right side splashes

Faucet and drain shipped loose to plumber to install on site

ITEM # 30 SHELVING, WALL-MOUNTED– G.C. PROVIDED & INSTALLED

Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide

Model: WS1296-14/3

Shelf, wall mount, 96"W x 12"D, rolled frontedge, 1-1/2" upturn on rear & ends, includes stainless steel mounting brackets stud welded to shelf, 14/304 stainless steel construction, NSF

Shelf mounted 60” AFF

ITEM # 34 WORK TABLE W/ SINK– G.C. PROVIDED & INSTALLED

Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide

Model: T3096STE-BS

Work Table, open base, 96"W x 30"D, 14/304 stainless steel top with 6" backsplash and sides turned down 90 degrees, square front edge, square turndown ends, heavy gauge stainless steel 1-1/4" O.D. side & rear crossrails, (6) 1-5/8" O.D. legs, 1" adjustable stainless steel bullet feet, Uni-Lok® system, NSF

Square edge table, front and/or rear, per table
Fabricated sink welded in place, 16" x 20" x 14" bowl
Stainless steel bullet feet
All welded construction, legs, undershelf & top
Right end side splash
Side splash enclosed if exposed

ITEM # 35 SHELVING, WALL-MOUNTED– G.C. PROVIDED & INSTALLED

Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide

Model: WS1272-14/3

Shelf, wall mount, 72"W x 12"D, rolled frontedge, 1-1/2" upturn on rear & ends, includes stainless steel mounting brackets stud welded to shelf, 14/304 stainless steel construction,NSF

Mount at 60” AFF

ITEM # 47.1 HEATED CABINET, MOBILE-OWNER/VENDOR PROVIDED & INSTALLED

Manufacturer: Vulcan

Model: VBP15

Holding/Transport Cabinet, Institutional Series, mobile, capacity (15) 18" x 26" x 1" or (30) 12" x 20" x 2-1/2" pans, includes (10) pair of adjustable tray slides 1-1/2" OC, forced air blower, side mounted push handles, recessed control panel, dial thermometer ambient to 190° F, 20 gauge stainless steel interior and exterior, ENERGY STAR®

ITEM # 51 THREE (3) COMPARTMENT SINK-OWNER/VENDOR PROVIDED & INSTALLED

Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide

Model: FN2860-3-24-14/3

Sink, three compartment, stainless steel, with 24" left & right-hand drainboards, 28" front-to-back x 20"W compartment, 14"D, with 10"H splash, stainless steel open frame base, boxed crossrails, 2 set of faucet holes, 14/304 stainless steel, NSF

Turndown backsplash
14/304
Individual fabricated sink bowls welded in place-14/304
All welded construction
Side splash when located next to wall

ITEM # 68 SHELVING, WALL-MOUNTED– G.C. PROVIDED & INSTALLED
Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide
Model: WS12120-14/3
Shelf, wall mount, 120"W x 12"D, rolled frontedge, 1-1/2" upturn on rear & ends, includes stainless steel mounting brackets stud welded to shelf, 14/304 stainless steel construction,NSF
Coordinate mounting height of wall shelf with EcoLab provided equipment

ITEM # 77 TRASH CAN-OWNER/VENDOR PROVIDED & INSTALLED
NIKEC - This is not in the kitchen equipment contract and is shown here for informational purposes only. General Contractor to confirm all required utilities are provided.

ITEM # 84 EXHAUST HOOD TYPE II 10'-0" x 5'-0" – G.C. PROVIDED & INSTALLED.
Manufacturer: Captive Aire
Model: VHB
Stainless steel matching enclosure panels from the top of the Hood to the finished ceiling to be furnished by KEC. (Verify ceiling height with plan.)

KEC shall provide 20 gauge stainless steel wall sheathing to extend from the top of the floor base where so installed. Sheathing shall be maximum practical size and trimmed with Component Hardware joining and end strips. Pre-cut holes for utilities to minimize field cutting. All holes to be trimmed with chrome-plated escutcheon plates. Finish to match exhaust hood.

Reference foodservice drawing FS-5 for additional details

ITEM # 106 CASH REGISTER/POS SYSTEM-BY FOODSERVICE OPERATOR-OWNER/VENDOR PROVIDED & INSTALLED
NIKEC - This is not in the kitchen equipment contract and is shown here for informational purposes only. General Contractor to confirm all required utilities are provided.

ITEM # 110 REACH-IN REFRIGERATOR– G.C. PROVIDED & INSTALLED
Manufacturer: True
Model: TS-49-HC
Refrigerator, Reach-in, two-section, (2) stainless steel doors, stainless steel front/sides, stainless steel interior, (6) gray PVC coated wire shelves, interior lighting, 4" castors, R290 Hydrocarbon refrigerant, 1/2 HP, cULus, UL EPH Classified, CE, MADE IN USA
Doors hinged per plan
Casters, swivel, with brakes (5" diameter rubber tires) set of 4 (6" height)
Two (2) extra shelves per section, epoxy coated, plated steel with clips

ITEM # 112 REACH-IN FREEZER– G.C. PROVIDED & INSTALLED
Manufacturer: True
Model: TS-49F-HC
Freezer, Reach-in, two-section, -10°F, (2) stainless steel doors, stainless steel front/sides, stainless steel interior, (6) gray PVC coated wire shelves, interior lighting, 4" castors, R290 Hydrocarbon refrigerant, 1 HP, cULus, CE, UL EPH Classified, MADE IN USA
Door hinged per plan
Casters, swivel, with brakes (5" diameter rubber tires) set of 4 (6" height)
Two (2) extra shelves per section, epoxy coated, plated steel with clips

ITEM # 163 WORK TABLE W/ SINK– G.C. PROVIDED & INSTALLED
Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide
Model: T3072STE-BS

Work Table, open base, 72"W x 30"D, 14/304 stainless steel top with 6" backsplash and sides turned down 90 degrees, square front edge, square turndown ends, heavy gauge stainless steel 1-1/4" O.D. side & rear crossrails, (4) 1-5/8" O.D. legs, 1" adjustable stainless steel bullet feet, Uni-Lok® system, NSF

Square edge table, front and/or rear, per table
Fabricated sink welded in place, 16" x 20" x 14" bowl
Stainless steel bullet feet
All welded construction, legs, undershelf & top
Right and left side splashes

ITEM # 190 WALK-IN COOLER/FREEZER– G.C. PROVIDED & INSTALLED
Manufacturer: Nor-Lake or equal by Kolpak, Bally, Imperial, Thermo-Kool, or ThermalRite
Model: Custom

Per plan x 8'-6"H
4" urethane insulation, minimum value R-25.
NSF & UL approved construction
Interior vertical panels finished with stucco embossed .040 aluminum
Floorless unit- Coordinate the recessed insulated slab with G.C.
Interior ceiling panels to be smooth white aluminum finish
Unexposed exterior vertical and ceiling panels to be stucco embossed galvanized
Exposed and exterior vertical panels to be stucco embossed .040 aluminum

Doors- 36"W x 76" high; three hinges; Provide a vinyl curtain
48"H 1/8" thick aluminum tread plate inside and out; 14" x 24" observation window. Provide inside safety release.
Provide Modularm 75LC for each door for light and alarm control, recessed into panel.
Automatic door closer
1/8" thick aluminum tread plate for 48" high wainscoting exposed exterior.
Provide Two (2) 4'-0" LED light fixture per compartment to meet health department and 2009 standards with efficacy of no less than 40 lumens per watt.
Matching trim strips and enclosure panels as required to adjacent walls and ceiling.
Provide complete refrigeration system. Provide on-demand defrost on freezer system.
Unit shall meet or exceed all 2009 Federal mandates.

ITEM # 190.1 EVAPORATOR COIL-COOLER– G.C. PROVIDED & INSTALLED
Included with item #190.

ITEM # 190.2 COMPRESSOR -COOLER– G.C. PROVIDED & INSTALLED
Included with item #190.

ITEM # 190.3 EVAPORATOR COIL-FREEZER– G.C. PROVIDED & INSTALLED
Included with item #190.

ITEM # 190.4 COMPRESSOR -FREEZER– G.C. PROVIDED & INSTALLED
Included with item #190.

ITEM # 195 LEVER WASTE– G.C. PROVIDED & INSTALLED
Manufacturer: Fisher or equal by T&S or Chicago Faucet
Model: 22209

DrainKing Waste Valve, with flat strainer, 12 GPM drain rate, dual teflon seals, stainless steel ball, cast red brass body

Shipped loose to plumber to install onsite

ITEM # 210 STEAMER – DOUBLE STACKED-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Groen
Model: XS-208-14-3

Convection Steamer, boilerless, electric, countertop, (6) 12" x 20" pan capacity, external heating element, fan in cooking chamber, no water or drain line required, stainless steel interior & exterior, , NSF, UL listed, ENERGY STAR®

Provide water connection
Left hand door hinge
Model 170944 Stand, 27" w x 32.5" D, with bullet feet, for double stacked
Model Z098611 Casters, set of (4), (2) locking

ITEM # 236 MILK COOLER -OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: True Food Service Equipment
Model: TMC-49-S-SS-HC

Mobile Milk Cooler, FORCED-AIR, (12) crates, stainless steel drop front/hold-open flip-up lids, lock, 33-38°F, stainless exterior, stainless steel interior & floor, (3) heavy duty floor racks, digital thermometer, 4" castors, R290 Hydrocarbon refrigerant, 1/5 HP, 9' cord, , cULus, UL EPH Classified, MADE IN USA

ITEM # 298 HOT FOOD COUNTER -OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Duke Manufacturing
Model: TEHF-60SS

Thurmaduke™ Hot Food Unit, mobile, electric, 60"W x 32"D x 34"H, 14ga stainless steel top, (4) stainless steel heat wells, drains, copper manifolds, (1) valve, thermostats, dish shelf, 20ga stainless steel body & undershelf, 5" swivel casters (2 with brakes), 10 ft cord with plug, J hook electric cord holder, cULus, UL EPH CLASSIFIED

Solid stainless steel trayslide, 16ga stainless steel, (2) rubbing tracks, on (2) stainless steel fixed brackets. Tray slide height 32” AFF
Located on customer’s side
For stainless steel hinged bracket in lieu of standard bracket, each bracket
Internal locking device
#TS454-60 Single Deck Food Shield, 59" long, full service style, 1/4" glass guard with stainless steel edging & stainless steel fold down brackets for easy cleaning, 14ga stainless steel single shelf, 12-1/2"W on 1" square stainless steel tube posts & 1/4" acrylic end guards

ITEM # 298.1 BUFFET/CAFETERIA, FLAT TOP-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Duke Manufacturing
Model: TST-46SS

Thurmaduke™ Solid Top Unit, mobile utility counter, 46"W x 32"D x 34"H, 14ga stainless steel top, 20ga stainless steel body & undershelves, 5" dia. gray poly swivel casters (2 with brakes), NSF

Solid stainless steel trayslide, 16ga stainless steel, (2) rubbing tracks, on (2) stainless steel fixed brackets. Tray slide height 32" AFF
Located on customer's side
For stainless steel hinged bracket in lieu of standard bracket, each bracket
Internal locking device

ITEM # 298.2 BUFFET/CAFETERIA, COLD FOOD STATION-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Duke Manufacturing
Model: TCM-60SS-N7

Thurmaduke™ Cold Food Unit, mobile, 60"W x 32"D x 34"H, 14ga stainless steel top, NSF 7 stainless steel mech. cold pan, 8" deep, 56-1/2" x 21-3/4" liner, 1" drain line & valve, 20ga stainless steel body & undershelf, 5" dia. swivel casters (2 with brakes), 10' cord & plug, J hook electric cord holder, cULus, UL EPH CLASSIFIED, 1/4 HP compressor

Solid stainless steel trayslide, 16ga stainless steel, (2) rubbing tracks, on (2) stainless steel fixed brackets. Tray slide height 32" AFF
Located on customer's side
For stainless steel hinged bracket in lieu of standard bracket, each bracket
Internal locking device
#956-460-4D double-deck serving shelves with glass protector panels, 18ga 300 series stainless shelves, 10-1/2"wide, 20"high lower, 32-1/2"high upper, 58-1/2"long, 3/4" square stainless tube posts, 1/4" thick glass panel & 1/4" acrylic end guards

ITEM # 298.3 BUFFET/CAFETERIA, CASHIER STATION-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Duke Manufacturing
Model: TCS-30SS

Thurmaduke™ Cashier Stand, mobile, 30"L, 32"W, 34"H, 16ga stainless top, 20ga stainless steel body & partial undershelf, stainless steel tube foot rest, 5" dia. gray poly swivel casters (2 with brakes), NSF

with drawer, stainless steel face & frame, 24.375" x 20" x 3-1/2" deep stainless steel liner, roller slides, & black pull handle (TCS-DR)
Cylinder lock & keys (TCS-LK)
Internal locking device
Solid stainless steel trayslide, 16ga stainless steel, (2) rubbing tracks, on (2) stainless steel fixed brackets, mounted 34"H, NSF

Reference foodservice drawings for location of trays slide

ITEM # 298.4 TRASH COUNTER W/SINK– G.C. PROVIDED & INSTALLED
Manufacturer: Eagle Group or equal by Advance Tabco, Aero, Universal Stainless, IEI, or Nationwide
Model: CUSTOM

Trash counter, 34" high x length per plan, x 30" deep, 14/300 ga. Stainless steel top, 40" x 20" x 12" deep sink bowl with lever waste and back splash mounted faucet, 8" o.c. with wrist blades & 12" spout, 12" x 12" square trash cutouts with 16/300 stainless steel trash chute per plan, 18/300 ga. Stainless steel cabinet base, hinged doors with handle & locks to allow trash cans to roll-in

and out, intermediate adjustable shelving wherever possible. 18/300 stainless steel kickplate, mount kickplate to hinged door at openings, 6” x 2” backsplash and side splashes, NSF

ITEM # 323 CAN RACK-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Lakeside
Model: 458
Can Storage & Dispensing Rack, mobile, stainless steel top, capacity (72) #10 or (96) #5 cans, gravity feed system, stainless steel construction, 5" casters (2) fixed & (2) swivel,

ITEM # 449 ROLL-THRU REFRIGERATOR– G.C. PROVIDED & INSTALLED
Manufacturer: True
Model: STA1RRI-1S
SPEC SERIES® Roll-in Refrigerator, one-section, stainless steel front & sides, (1) stainless steel door with lock, cam-lift hinges, digital temperature control, aluminum interior, incandescent interior lighting, stainless steel ramp, 1/3 HP, cULus, UL EPH Classified, MADE IN USA
Hinged per plan

ITEM # 451 ROLL-THRU HEATED CABINET– G.C. PROVIDED & INSTALLED
Manufacturer: True
Model: STA1HRI-1S
SPEC SERIES® Heated Roll-in, one-section, stainless steel front & sides, (1) stainless steel door with lock, cam-lift hinges, color-coded temperature display, aluminum interior, interior lighting, stainless steel ramp, 2.0KW, cULus, UL EPH Classified, MADE IN USA Hinged per plan

ITEM # 452 UTILITY CART-OWNER/VENDOR PROVIDED & INSTALLED
Manufacturer: Lakeside
Model: 953
Tough Transport® Utility Cart, 2-tier, 48"W x 25-3/4"D x 37-3/8"H, stainless steel construction, open base U-frame with angled stainless steel, 24" x 42" 14-gauge shelves with reinforced edges, 21" shelf clearance, 1" O.D. tube push handle with bumpers, (2) 6" bumpers riveted to front legs, 1000 lb. capacity, (2) 5" reinforced swivel plate casters & (2) 8" fixed casters with non-marking polyurethane wheels, NSF

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SECTION 11 66 23.01

GYMNASIUM EQUIPMENT - ELEMENTARY SCHOOLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes basketball, volleyball, and wall-mounted exercise equipment.

1.2 SUBMITTALS

A. Product Data: Submit complete printed data for each product. Include construction details, material descriptions, dimensions of individual components and profiles, features, and finishes. Include details of anchors, hardware, and fastenings. If applicable, include assembly, disassembly, and storage instructions.

1. Pads: Submit full line color swatches of fabrics for selections by Architect.
2. Gymnasium Equipment Operators: Include operating instructions.

B. Shop Drawings: Submit complete fabrication and installation drawings. Show location and extent of fully assembled gymnasium equipment. Show location and extent of disassembled equipment and components and transport and storage accessories. Include elevations, sections, and details not shown in Product Data. Show method of field assembly, connections, installation details, mountings, floor inserts, attachments to other Work, operational clearances, and relationship to adjoining work.

1. Blocking and Reinforcement: Show locations of blocking and reinforcement required for support of gymnasium equipment.
2. Setting Drawings: For cast-in floor insert sleeves for post standards.
3. Verify capacity of members and connections to support loads and verify loads, point reactions, and locations for attachment of gymnasium equipment to structure with those indicated on Drawings.

C. Maintenance Data: For gymnasium equipment and gymnasium equipment operator to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer employing workers trained and approved by manufacturer.

B. Source Limitations: Obtain each type of gymnasium equipment through one source from a single manufacturer.

C. Standards: Provide gymnasium equipment complying with or exceeding requirements of Illinois High School Athletic Association.

1.4 PROJECT CONDITIONS

A. Environmental Limitations: Do not install gymnasium equipment until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Verify position and elevation of floor inserts and layout for gymnasium equipment. Verify dimensions by field measurements.

1. Verify locations of electrical devices and outlets where pads are to be installed.

1.5 COORDINATION

A. Coordinate installation of floor inserts with structural floors and finish flooring installation and with court layout and game lines and markers on finish flooring.

B. Coordinate layout and installation of overhead-supported gymnasium equipment and suspension system components with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. AALCO.
2. AAI.
3. Draper.
4. Jaypro.
5. Porter.
6. Professional Sports Systems.

2.2 MATERIALS, GENERAL

A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; mill finish or decorative, baked-enamel, powder-coat finish.

1. Extruded Bars, Profiles, and Tubes: ASTM B 221/B 221M.
2. Cast Aluminum: ASTM B 179.

B. Steel: Comply with the following:

1. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M, hot-dip galvanized.
2. Steel Pipe: Standard-weight steel pipe complying with ASTM A 53.
3. Cold-Formed Steel Tubing: ASTM A 500, Grade A, unless another grade is required by structural loads.
4. Malleable-Iron Castings: ASTM A 47 (ASTM A 47M), grade required by structural loads.
5. Support Cable: 1/4 inch (6 mm) diameter, 7x19 galvanized steel aircraft cable with a breaking strength of 7000 lb (3175 kg). Provide fittings complying with cable manufacturer's written recommendations for size, number, and method of installation.
6. Support Chain: Proof coil chain, complying with ASTM A 413/A 413M, Grade 30, size and diameter as required by structural loads; plated or painted. Provide fittings complying with chain manufacturer's written recommendations for size, number, and method of installation.

C. Equipment Mounting Pads: Wood, transparent or neutral color painted finish, size, and quantity as required to mount gymnasium equipment according to manufacturer's written recommendations.

D. Anchors, Fasteners, Fittings and Hardware: Manufacturer's standard corrosion-resistant or non-corrodible units; concealed tamperproof, vandal and theft resistant. Provide as required for gymnasium equipment assembly, mounting, and secure attachment.

E. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107 with minimum strength recommended in writing by gymnasium equipment manufacturer.

2.3 BASKETBALL EQUIPMENT

A. General: Provide equipment complying with requirements in INSAA Basketball Rule Book." Protruding fasteners or exposed bolt heads on front face of backboards are not permitted.

B. Extent:

1. Main Court: Two (2) single mast, overhead supported, electric powered forward folding, front braced, safety device, rectangular glass backboard, adjustable goal; all as specified.
2. Cross Courts: Four (4) single mast, overhead supported, electric powered forward folding, front braced, safety device, rectangular glass backboard, adjustable goal; all as specified.

C. Overhead-Supported Backstop: Complete assembly spanning height indicated on Drawings, including primary and secondary superstructure support framing to building structure, pipe and cable bracing, adjustable hangers, clamps, cables, chains, pulleys, fittings, hardware, and fasteners. Adjust manufacturer standard installation/components to maintain clearance and operation without conflict with other systems (HVAC, lighting, fire-suppression, etc.).

1. Framing: Steel pipe, tubing, and shapes. Design framing to minimize vibration during play.
    a. Center Mast: Welded construction with side sway bracing of pipe.
    b. Finish: Manufacturer's standard factory-applied, baked powder-coating finish complying with finish manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness; black.
2. Folding Type: Provide manufacturer's standard assembly for forward-folding, front-braced backstop, with hardware and fittings to permit folding.
3. Goal Height Adjuster: Adjustable from 8 feet to 10 feet (2.4 m to 3 m) with crank mechanism, locking in any position within adjustment range, with visible height scale and finish matching framing.
    a. Operation: Electric powered motor operated by keyed switch.

D. Backstop/Backboard Safety Device: Designed to limit free fall if support cable, support chain, pulleys, fittings, winch, or related components fail; with mechanical automatic reset; 6000-lb (2722-kg) load capacity; one per folding backstop.

E. Winch: Hoist, consisting of heavy-duty, fully enclosed worm gear, brake, cable drum, cable, and fittings, for mounting on wall with equipment mounting pad; designed to move and hold backstop in any raised or lowered position.

1. Operation: Electric powered motor operated by keyed switch.

F. Backstop/Backboard Safety Device: Designed to limit free fall if support cable, support chain, pulleys, fittings, winch, or related components fail; with mechanical automatic reset; 6000-lb (2722-kg) load capacity; one per folding backstop.

G. Winch: Hoist, consisting of heavy-duty, fully enclosed worm gear, brake, cable drum, cable, and fittings, for mounting on wall with equipment mounting pad; designed to move and hold backstop in any raised or lowered position.

~~F.~~1. Operation: Electric powered motor operated by keyed switch.

~~G.~~H. Basketball Backboard: Provide predrilled holes or preset inserts for mounting goals.

1. Description: Rectangular, 72 inches by 48 inches (1800 mm by 1200 mm) width by height, with rounded corners, fabricated from the following:

   a. Fiberglass: Not less than 1-1/2 inch (38 mm) thick composite backboard consisting of not less than two 3/16 inch (5 mm) thick, molded fiberglass panels laminated together over faces and edges encapsulating a 3/4 inch (19 mm) honeycomb core, reinforced at goal and backboard mountings, or wood panel product core; with threaded inserts or embedded anchors for mounting backboard corners to backstop support framing at standard mounting centers.

   b. Glass: Not less than 1/2 inch (12 mm) thick, transparent tempered glass. Provide glass with impact-absorbing, resilient rubber or PVC gasket around perimeter in a fully welded brushed-natural-finish, extruded-aluminum frame, with steel subframe, reinforcement, and bracing, including center-strut frame reinforcement, and with mounting slots for mounting backboard frame to backstop support framing.

      1) Direct Mount: Designed for mounting backboard frame to center mast of backstop framing to maximize relief of stresses on backboard frame and glass.

2. Target Area and Border Markings – Glass Back Backboards: Permanently etched in white color, marked in pattern and stripe width according to referenced rules.
3. Target Area and Border Markings – Other Turn Glass Backboards: Marked in pattern, stripe width, and color according to referenced rules.
4. Finish Fiberglass Backboards: Manufacturer's standard factory-applied, white background.

~~H.~~I. Goal Mounting Assembly: Compatible with goal, backboard, and support framing, with hole pattern for goal attachment.

1. Direct Mount: Designed for mounting goal directly and independently to center mast of backstop support framing so no force, transmitted by ring, is directly applied to backboard and rigidity and stability of goal are maximized.

~~I.~~J. Basketball Goals: Complete with flanges, braces, attachment plate, and evenly spaced loops welded around underside of ring.

1. Single-Rim Basket Ring Competition Goal: Materials, dimensions, and fabrication complying with referenced rules.
2. Type: Movable, breakaway design with manufacturer's standard breakaway mechanism and rebound characteristics identical to those of fixed, non-movable ring.
3. Net Attachment: No-tie loops for attaching net to rim without tying.
4. Finish: Manufacturer's standard factory-applied, baked powder-coating finish complying with finish manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness; orange.

~~J.~~K. Basketball Nets: 12 loop mesh net, between 15 inches and 18 inches (400 mm to 450 mm) long, sized to fit rim diameter, and as follows:

1. Cord: Anti-whip, made from white nylon cord not less than 120 gm nor more than 144 gm thread.

~~K.~~ L. Safety Pads: Provide safety pads, complying with NFHS, designed for backboard thickness indicated and extending continuously along bottom and up sides of backboard and over goal mounting and backboard supports as required by referenced rules

1. Safety Pad Attachment: Manufacturer's standard.
2. Color: As selected by Architect from manufacturer's full range.

2.4 VOLLEYBALL EQUIPMENT

A. Floor Insert: Solid-brass floor plate; and steel pipe sleeve, concealed by floor plate, with capped bottom end, 3-1/2" ID, not less than 9 inches (230 mm) long with anchors designed for securing floor insert to floor substrate.

1. Floor Plate: Manufacturer's standard hinged access cover, designed to be flush with adjacent flooring. Provide two tools for unlocking access covers.

2.5 WALL-MOUNTED EXERCISE EQUIPMENT

A. General: Provide wall-mounted equipment with equipment mounting pads.

B. Stall Bar: Wall mounted in a continuous row; each section with not less than 16 rungs.

1. Size: Each section 96 inches (2400 mm) high by 36 inches (910 mm) wide.
2. Side Rails: Formed-steel tube uprights not less than 1-1/2 by 5 inches (38 by 125 mm) with capped ends; nominal sheet thickness not less than 0.0598 inch (1.52 mm).
3. Rungs: Not less than 1-3/8 inch (35 mm) diameter, round rungs made from maple firmly fixed to side rails to prevent rotating or other movement. Provide equipment with top rung extended 6 inches (150 mm) beyond other rungs.
4. Extension Arm: Provide equipment with an extension arm and an additional rung extended 20 inches (500 mm) beyond bottom and intermediate rungs.
5. Number of Sections: As indicated on Drawings, modular sections, complete with intermediate uprights without rung holes at finished ends.

C. Metal Finish: Manufacturer's standard factory-applied, baked powder-coating finish, complying with finish manufacturer's written instructions for surface preparation including pretreatment, application, baking, minimum dry film thickness, and color.

D. Wood Finish: Manufacturer's standard transparent or opaque-painted finish.

2.6 SAFETY PADS

A. Pad Covers: Provide safety pad fabric covers fabricated from puncture- and tear-resistant, not less than 14 oz. (397 g) PVC-coated polyester or nylon-reinforced PVC fabric treated with fungicide for mildew resistance, with the fire-test-response characteristics indicated, lined with fire-retardant liner.

1. Flame-Resistance Ratings: Passes NFPA 701 and City of Chicago Regulations.

B. Wall Safety Pads: Padded wall wainscot panels designed to be attached in a continuous row; each panel section consisting of fill laminated to backer board with visible surfaces fully covered by seamless fabric cover, free from sag and wrinkles and firmly attached to back of backer board.

1. Backer Board: Not less than 3/8 inch (9.5 mm) thick fire-retardant-treated plywood per AWPA C27, Interior Type A.
2. Fill: Multiple-impact-resistant foam not less than 2 inch (50 mm) thick polyurethane, 3.5 lb (1.6 kg) density.

3. Size: Each panel section, 24 inches (600 mm) wide by not less than 60 inches (1520 mm) long unless otherwise indicated or required.
4. Installation Method: Concealed mounting Z-clips.
    a. Provide wrapped openings where required to accommodate and provide access to electrical outlets and devices.
5. Fabric Cover Colors: As selected by Architect from manufacturer's full range for two colors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for play court layout, alignment of mounting substrates, installation tolerances, operational clearances, and other conditions affecting performance.

1. Verify critical dimensions.
2. Examine supporting structure.
3. Examine wall assemblies, where reinforced to receive anchors and fasteners, to verify that locations of concealed reinforcements have been clearly marked for installers. Locate reinforcements and mark locations if not already done.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Comply with manufacturer's written installation instructions and competition rules indicated for each type of gymnasium equipment. Complete equipment field assembly, where required.

B. Unless otherwise indicated, install gymnasium equipment after other finishing operations, including painting, have been completed.

C. Permanently Placed Gymnasium Equipment and Components: Rigid, level, plumb, square, and true; anchored securely to supporting structure; positioned at locations and elevations indicated on Shop Drawings; in proper relation to adjacent construction; and aligned with court layout.

1. Floor Insert Location: Coordinate location with application of game lines and markers.
2. Floor Insert Elevation: Coordinate installed heights of floor insert with installation and field finishing of finish flooring and type of floor plate.
3. Operating Gymnasium Equipment: Verify clearances for movable components of gymnasium equipment throughout entire range of operation and for access to operating components.

D. Floor Insert Setting: Grout sleeve for post standards in oversized, recessed voids in concrete slabs and footings. Clean holes of debris. Position sleeve and fill void around sleeves with grout, mixed and placed to comply with grout manufacturer's written instructions. Protect portion of sleeve above subfloor from splatter. Verify that sleeves are set plumb, aligned, and at correct height and spacing; hold in position during placement and finishing operations until grout is sufficiently cured. Set insert so top surface of completed unit is flush with finished flooring surface.

E. Safety Pads: Mount with bottom edge at 4 inches (100 mm) above finished floor.

F. Anchoring to In-Place Construction: Use anchors and fasteners where necessary for securing built-in and permanently placed gymnasium equipment to structural support and for properly transferring load to in-place construction.

3.3 ADJUSTING

A. Adjust movable components of gymnasium equipment to operate safely, smoothly, easily, and quietly, free from binding, warp, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and moving parts.

3.4 CLEANING AND PROTECTION

A. After completing gymnasium equipment installation, inspect components. Remove spots, dirt, and debris and touch up damaged shop-applied finishes according to manufacturer's written instructions.

B. Provide final protection and maintain conditions acceptable to manufacturer and Installer that ensure gymnasium equipment is without damage or deterioration at time of Substantial Completion.

C. Replace gymnasium equipment and finishes that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain gymnasium equipment.

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SECTION 22 11 16

DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes domestic water piping inside the building.

1.2 SUBMITTALS

A. Product Data: For pipe, tube, fittings, and couplings.

B. Water Samples: Specified in PART 3 "Cleaning" Article.

C. Field quality-control test reports.

1.3 QUALITY ASSURANCE

A. Piping materials shall bear label, stamp, or other markings of specified testing agency.

B. Comply with NSF 61, "Drinking Water System Components - Health Effects; Sections 1 through 9," for potable domestic water piping and components.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and prevent entrance of dirt, debris, and moisture.

B. Protect stored pipes and tubes from moisture and dirt. Elevate above grade. Do not exceed structural capacity of floor, if stored inside.

C. Protect flanges, fittings, and piping specialties from moisture and dirt..

1.5 WARRANTY

A. Provide manufacturer’s standard 1-year warranty for materials and labor, commencing on date of substantial completion.

1.6 PERFORMANCE REQUIREMENTS

A. Provide components and installation capable of producing domestic water piping systems with 125 psig (860 kPa), unless otherwise indicated.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A. Refer to PART 3 "Pipe and Fitting Applications" Article for applications of pipe, tube, fitting, and joining materials.

B. Transition Couplings for Aboveground Pressure Piping: Coupling or other manufactured fitting the same size as, with pressure rating at least equal to and ends compatible with, piping to be joined.

2.2 COPPER TUBE AND FITTINGS

A. Soft Copper Tube: ASTM B 88, Types K and L (ASTM B 88M, Types A and B), water tube, annealed temper.

1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings if indicated.
2. Bronze Flanges: ASME B16.24, Class 150, with solder-joint ends. Furnish Class 300 flanges if required to match piping.
3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.

B. Hard Copper Tube: ASTM B 88, Types K and L (ASTM B 88M,), water tube, drawn temper.

1. Copper Pressure Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings if indicated.
2. Bronze Flanges: ASME B16.24, Class 150, with solder-joint ends. Furnish Class 300 flanges if required to match piping.
3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.

C. Ductile-Iron Pipe: AWWA C151, 250-psig minimum pressure rating with mechanical-joint bell, plain spigot end, and AWWA C104 cement-mortar lining.

1. Include AWWA C111 ductile-iron gland, rubber gasket, and steel bolts with mechanical-joint pipe.
2. Ductile-Iron, Flexible Expansion Joints: Compound fitting with combination of flanged and mechanical-joint ends conforming to AWWA C110 or AWWA C153. Include 2 gasketed ball-joint sections, 1 or more gasketed sleeve sections, 250-psig minimum working-pressure rating, and AWWA C550 epoxy interior coating. Assemble components for offset and expansion indicated. Include AWWA C111 ductile-iron glands, rubber gaskets, and steel bolts.

2.3 VALVES

A. Bronze and cast-iron, general-duty valves are specified in Division 23 Section "Valves."

B. Balancing and drain valves are specified in Division 23 Section "Domestic Water Piping Specialties."

PART 3 - EXECUTION

3.1 EXCAVATION

A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earthwork."

3.2 PIPE AND FITTING APPLICATIONS

A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below, unless otherwise indicated.

B. Flanges may be used on aboveground piping, unless otherwise indicated.

C. Under-Ground, Water-Service Piping on Service Side of Water Meter: Underground, Service Entrance Piping: Do not use flanges or valves underground. Use the following:

1. NPS 2 (DN 50) and Smaller: Soft copper tube, Type K (Type A); copper pressure fittings; and soldered joints.

2. 3- to 8-Inch NPS: Ductile-iron pipe and fittings, and mechanical joints.

D. Domestic Water Piping on Service Side of Water Meter inside the Building: Use the following piping materials for each size range:

1. NPS 4 and smaller (DN 100 to DN 150): Hard copper tube, Type K; copper pressure fittings; and soldered joints.

E. Aboveground Domestic Water Piping: Use the following piping materials for each size range:

1. NPS 3 and smaller (DN 75 and smaller): Hard copper tube, Type L, copper pressure fittings; and soldered joints.
2. NPS 4 to NPS 6 (DN 100 to DN 150): Steel pipe; gray-iron, threaded fittings; and threaded joints.
~~1.~~ 3. NPS 8 (DN 200): Ductile iron pipe, mechanical joints.

3.3 VALVE APPLICATIONS

A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:

1. Shutoff Duty: Use bronze ball valves for piping NPS 2-1/2 (DN 65) and smaller. Use cast-iron butterfly or gate valves with flanged ends for piping NPS 3 (DN 75) and larger.
2. Throttling Duty: Use bronze ball or globe valves for piping NPS 2 (DN 50) and smaller. Use cast-iron butterfly valves with flanged ends for piping NPS 2-1/2 (DN 65) and larger.
3. Hot-Water-Piping, Balancing Duty: Calibrated balancing valves.
4. Drain Duty: Hose-end drain valves.

B. Install shutoff valve close to water main on each branch and riser serving plumbing fixtures or equipment, on each water supply to equipment, and on each water supply to plumbing fixtures that do not have supply stops. Use ball valves for piping NPS 2-1/2 (DN 65) and smaller. Use butterfly or gate valves for piping NPS 3 (DN 75) and larger.

C. Install drain valves for equipment at base of each water riser, at low points in horizontal piping, and where required to drain water piping.

1. Install hose-end drain valves at low points in water mains, risers, and branches.
2. Install stop-and-waste drain valves where indicated.

D. Install calibrated balancing valves in each hot-water circulation return branch, in the hot water return main where branches join together and on discharge side of each pump and circulator. Set calibrated balancing valves partly open to restrict but not stop flow. Calibrated balancing valves are specified in Division 23 Section "Domestic Water Piping Specialties."

3.4 PIPING INSTALLATION

A. Basic piping installation requirements are specified in Division 23 Section "Basic HVAC Materials and Methods."

B. Install under-building-slab copper tubing according to CDA's "Copper Tube Handbook."

C. Install cast-iron sleeve with water stop and mechanical sleeve seal at each service pipe penetration through foundation wall. Select number of interlocking rubber links required to make installation watertight. Sleeves and mechanical sleeve seals are specified in Division 23 Section "Basic HVAC Materials and Methods."

D. Install shutoff valve, hose-end drain valve, strainer, pressure gage, and test tee with valve, inside the building at each domestic water service entrance. Pressure gages are specified in Division 23 Section "Meters and Gages for HVAC Piping," and drain valves and strainers are specified in Division 23 Section "Domestic Water Piping Specialties."

E. Install domestic water piping level without pitch and plumb.

F. Rough-in domestic water piping for water-meter installation according to utility company's requirements.

3.5 JOINT CONSTRUCTION

A. Basic piping joint construction requirements are specified in Division 23 Section "Basic HVAC Materials and Methods."

B. Soldered Joints: Use ASTM B 813, water-flushable, lead-free flux; ASTM B 32, lead-free-alloy solder; and ASTM B 828 procedure, unless otherwise indicated.

C. Grooved Joints: Assemble joints with grooved-end-pipe or grooved-end-tube coupling housing, gasket, lubricant, and bolts according to coupling and fitting manufacturer's written instructions.

3.6 WATER METER INSTALLATION

A. Rough-in water piping for water meter installation according to City of Chicago Department of Water requirements. Water meters shall be purchased from Department of Water Management.

3.7 HANGER AND SUPPORT INSTALLATION

A. Pipe hanger and support devices are specified in Division 23 Section "Hangers and Supports for Piping and Equipment." Install the following:

1. Vertical Piping: MSS Type 8 or Type 42, clamps.
2. Individual, Straight, Horizontal Piping Runs: According to the following:
    a. 100 Feet (30 m) and Less: MSS Type 1, adjustable, steel clevis hangers.
    b. Longer Than 100 Feet (30 m): MSS Type 43, adjustable roller hangers.
    c. Longer Than 100 Feet (30 m): MSS Type 49, spring cushion rolls, if indicated.
3. Multiple, Straight, Horizontal Piping Runs 100 Feet (30 m) or Longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze.
4. Base of Vertical Piping: MSS Type 52, spring hangers.

B. Install supports according to Division 23 Section "Hangers and Supports for Piping and Equipment."

C. Support vertical piping and tubing at base and at each floor.

D. Rod diameter may be reduced 1 size for double-rod hangers, to a minimum of 3/8 inch (10 mm).

E. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:

1. NPS 3/4 (DN 20) and Smaller: 60 inches (1500 mm) with 3/8-inch (10-mm) rod.
2. NPS 1 and NPS 1-1/4 (DN 25 and DN 32): 72 inches (1800 mm) with 3/8-inch (10-mm) rod.
3. NPS 1-1/2 and NPS 2 (DN 40 and DN 50): 96 inches (2400 mm) with 3/8-inch (10-mm) rod.
4. NPS 2-1/2 (DN 65): 108 inches (2700 mm) with 1/2-inch (13-mm) rod.
5. NPS 3 to NPS 5 (DN 80 to DN 125): 10 feet (3 m) with 1/2-inch (13-mm) rod.

6. NPS 6 (DN 150): 10 feet (3 m) with 5/8-inch (16-mm) rod.
7. NPS 8 (DN 200): 10 feet (3 m) with 3/4-inch (19-mm) rod.

F. Install supports for vertical copper tubing every 10 feet (3 m).

3.8 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to equipment and machines to allow service and maintenance.

C. Connect domestic water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials.

D. Connect domestic water piping to water-service piping with shutoff valve, and extend and connect to the following:

1. Booster Pumps: Cold-water suction and discharge piping.
2. Water Heaters: Cold-water supply and hot-water outlet piping in sizes indicated, but not smaller than sizes of water heater connections.
3. Plumbing Fixtures: Cold- and hot-water supply piping in sizes indicated, but not smaller than required by plumbing code. Refer to Division 23 Section "Plumbing Fixtures."
4. Equipment: Cold- and hot-water supply piping as indicated, but not smaller than equipment connections. Provide shutoff valve and union for each connection. Use flanges instead of unions for NPS 2-1/2 (DN 65) and larger.

3.9 FIELD QUALITY CONTROL

A. Inspect domestic water piping as follows:

1. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction.
2. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:
    a. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
    b. Final Inspection: Arrange final inspection for authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.
3. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.
4. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

B. Test domestic water piping as follows:

1. Fill domestic water piping. Check components to determine that they are not air bound and that piping is full of water.
2. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
3. Leave new, altered, extended, or replaced domestic water piping uncovered and unconcealed until it has been tested and approved. Expose work that was covered or concealed before it was tested.

4. Cap and subject piping to static water pressure of 50 psig (345 kPa) above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired.
5. Repair leaks and defects with new materials and retest piping or portion thereof until satisfactory results are obtained.
6. Prepare reports for tests and required corrective action.

3.10 CLEANING AND ADJUSTING

A. Clean and disinfect potable and non-potable domestic water piping as follows:

1. Purge new piping and parts of existing domestic water piping that have been altered, extended, or repaired before using.
2. Use purging and disinfecting procedures prescribed by authorities having jurisdiction or, if methods are not prescribed, procedures described in either AWWA C651 or AWWA C652 or as described below:
    a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
    b. Fill and isolate system according to either of the following:
        1) Fill system or part thereof with water/chlorine solution with at least 50 ppm (50 mg/L) of chlorine. Isolate with valves and allow to stand for 24 hours.
        2) Fill system or part thereof with water/chlorine solution with at least 200 ppm (200 mg/L) of chlorine. Isolate and allow to stand for three hours.
    c. Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.
    d. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat procedures if biological examination shows contamination.

B. Prepare and submit reports of purging and disinfecting activities.

C. Clean interior of domestic water piping system. Remove dirt and debris as work progresses.

D. Perform the following adjustments before operation:

1. Close drain valves, hydrants, and hose bibbs.
2. Open shutoff valves to fully open position.
3. Open throttling valves to proper setting.
4. Adjust balancing valves in hot-water-circulation return piping to provide adequate flow.
    a. Manually adjust ball-type balancing valves in hot-water-circulation return piping to provide flow of hot water in each branch.
    b. Adjust calibrated balancing valves to flows indicated.
5. Remove plugs used during testing of piping and plugs used for temporary sealing of piping during installation.
6. Remove and clean strainer screens. Close drain valves and replace drain plugs.
7. Remove filter cartridges from housings and verify that cartridges are as specified for application where used and are clean and ready for use.
8. Check plumbing specialties and verify proper settings, adjustments, and operation.

3.11 CONTRACTOR STARTUP AND REPORTING

A. Fill water piping. Check components to determine that they are not air bound and that piping is full of water.

B. Perform the following steps before putting into operation:

1. Close drain valves, hydrants, and hose bibbs.
2. Open shutoff valves to fully open position.
3. Open throttling valves to proper setting.
4. Remove plugs used during testing of piping and plugs used for temporary sealing of piping during installation.
5. Remove and clean strainer screens. Close drain valves and replace drain plugs.
6. Remove filter cartridges from housings and verify that cartridges are as specified for application where used and that cartridges are clean and ready for use

C. Check plumbing equipment and verify proper settings, adjustments, and operation. Do not operate water heaters before filling with water.

D. Check plumbing specialties and verify proper settings, adjustments, and operation.

E. Energize pumps and verify proper operation.

END OF SECTION

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SECTION 31 23 17

EXCAVATING, BACKFILLING, AND COMPACTING FOR UTILITIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following:

1. Excavation for - trenches for water, sanitary sewer, site drainage, and storm sewer lines to public utility.
2. Compacted bed and compacted fill over utilities to subgrade elevations.
3. Compaction.

1.2 SUBMITTALS

A. Submit samples in accordance with General Conditions of contract and Division 01 Sections.

B. Submit 10 lb. sample of each type of fill to testing agency, in separate airtight containers.

C. LEED Submittals:

1. Product Data for Credit MR 5: For products and materials that comply with requirements for regional materials, documentation indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

1.3 TESTS

A. Tests and analysis of fill materials will be performed in accord with ASTM D1557, and with General Conditions and testing required by Division 31 Section 31 23 23 "Acceptance of Backfill, Top Soil & CU Structural Soil" for acceptability as fill material.

1.4 REFERENCES

A. ASTM C136, - Sieve Analysis of Fine and Coarse Aggregates.

B. ASTM D1556, - Density of Soil in place by Sand-Cone Method.

C. ASTM D1557, - Tests for Moisture-Density Relationship of Soils and Soil-Aggregate Mixtures Using 10 lb. Rammer and 18 inch Drop.

D. 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters and Appendix B., Section 742, Table A.; Tiered Approach To Corrective Action Objectives (Taco): 35 Ill .Adm. Code 742.

E. Illinois Department of Transportation (IDOT):

1. IDOT 2016 Specifications for Road and Bridge Construction (SSRBC) including all addenda.

1.5 PROTECTION

A. Protect excavations by shoring, bracing, sheet piling, underpinning or REother methods or prevent cave-in or loose soil from falling into excavation.

B. Underpin adjacent structures which may be damaged by excavation work, including service utilities and pipe chases.

C. Notify Architect immediately of unexpected subsurface conditions. Confirm notification in writing. Discontinue work until Architect issues written notification to resume work.

D. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.

E. Grade excavation tip perimeter to prevent surface water runoff into excavation.

PART 2 - PRODUCTS

2.1 MATERIALS

A. In accordance with the soil report the Owner's testing agency representative shall determine if the excavated material is suitable for backfill. The suitable trench excavated material shall be used for trench backfill.

B. Provide all backfill materials from off site in accordance with Division 31 Section "Acceptance of Backfill, Top Soil & CU Structural Soil."

C. Granular Fill Type A:

1. Material for granular fill shall be FA-6 in compliance with IDOT 2016 SSRBC~~, Article 703.1 and 703.5~~ and with Division 31 Section "Acceptance of Backfill, Top Soil & CU Structural Soil." The material shall be graded from coarse to fine and shall conform to the following gradations:

a.

Sieve Size	Percent Passing
No. 4	84-100
No. 100	0-40
No. 200	0-12

2. Bedding Material: Material for bedding shall be CA-11 in compliance with IDOT 2016 SSRBC, ~~Article 704.01 and 703.5~~ and with Division 31 Section "Acceptance of Backfill, Top Soil & CU Structural Soil" and shall conform to the following gradations:

a.

Sieve Size	Percent Passing
1 inch	100
3/4 inch	84-100
1/2 inch	30-60

D. Fill Material Type D: Fill material shall be cohesive soil obtained from on-site required excavations and approved by the Owner testing agency representative as suitable backfill material in accordance with ASTM D 2487, Uniform Soils Classification System 1 and 703.5 and with Division 31 Section 31 23 23 "Acceptance of Backfill, Top Soil & CU Structural Soil." It shall be used to backfill excavations where the excavated material is unsuitable for backfill.

E. Fill Material Type E: Fill under landscaped areas shall be free from alkali, salt shall not exceed Appendix B, Section 742,Table A; Tiered Approach to Corrective Action objectives (Taco); Ill Adm .Code 742 values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters and shall be obtained from on-site required excavations when conforming to the specifications. This fill shall be approved by the Owner's testing agency representative as suitable material in accordance with section 31 23 23.

F. Fill Material Type X: Off-site borrow material shall comply to soil types GP, GW, SC and CL in accordance with ASTM D 2487, Uniform Soils Classification System and with Division 31 Section 31 23 23 "Acceptance of Backfill, Top Soil & CU Structural Soil." It shall be used where needed under structural slabs, roads, pavement and landscaped areas.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify stockpiled fill to be reused as approved in writing by Architect.

B. Verify foundation perimeter drainage installation has been inspected and approved in writing by Architect.

C. Verify and confirm in writing that areas to be backfilled are free of debris, snow, ice or water, and surfaces are not frozen.

3.2 PREPARATION

A. Identify specified lines, levels, contours and data..

B. Compact subgrade surfaces to density specified for backfill materials.

3.3 EXCAVATION

A. Cut trenches wide enough to enable utility installation and allow inspection.

B. Hand trim excavation and leave free of loose matter. Hand trim for bell and spigot pipe joints.

C. Excavation shall not interfere with normal 45 degree bearing splay of foundations.

D. Sides, walls or faces of all trenches shall be sloped and maintained in a safe manner and in the required condition until completion of backfilling. Excavations shall be braced or sloped in compliance to the latest Occupational Safety and Health Administration (OSHA) requirements or as instructed by the testing agency on-site representative.

E. Locate and retain reusable excavated materials away from the edge of excavation.

3.4 BACKFILLING

A. Support pipes, and conduits during placement and compaction of bedding fill.

B. Backfill trenches to contours and elevations shown. Backfill systematically, as early as possible to allow maximum time for natural settlement. Do not backfill over porous, wet or spongy subgrade surfaces.

C. Place compact fill materials in continuous layers as specified in Division 31 Section "Earthwork."

D. Use a placement method that will not disturb or damage utilities in trenches, perimeter drainage.

E. Maintain optimum moisture content of backfill materials, determined by laboratory analysis, to obtain specified compaction density.

3.5 FILL TYPES AND COMPACTION

A. Compact all fill and backfill to specified values based on Modified Proctor Test in accordance with Division 31 Section "Earthwork."

3.6 QUALITY CONTROL

A. Quality Control Testing During Construction: An independent inspection and testing agency employed by the Owner shall inspect and approve each subgrade and fill layer before further backfill and fill work is performed.

1. The inspection and testing agency shall perform laboratory density tests in accordance with ASTM D 1557.
2. Field density tests shall be in accordance with ASTM D1556 or ASTM D2167 as appropriate.
3. Field density tests may be performed by the nuclear method in accordance with ASTM D 6938. The calibration curves shall be periodically checked and adjusted to correlate to tests performed using ASTM D 1556. Calibration of nuclear density testing device shall be in accordance with ASTM D7759.
4. If field tests are performed using nuclear methods, the inspection and testing agency shall make calibration checks on both density and moisture gauges at beginning of work, on each different type of material encountered, and at intervals as specified by the equipment manufacturer.
5. If, in the opinion of the Owner testing agency representative, based on the inspection and testing agency reports and inspections, subgrade or fills have not been placed to specified density, the Contractor shall perform additional compaction and retesting until specified density has been achieved. The Contractor shall pay for all retesting work.
6. The Contractor shall assist the inspection and testing agency by providing access to the excavation and fill areas, and by removing loose materials from compacted soil layers prior to testing.

3.7 REMOVAL AND DISPOSAL

A. Remove surplus backfill materials and materials unsuitable for backfill from the site per Section 31 23 18.13 “Contaminated Soil, General Construction & Demolition Debris Disposal” or

Section 31 23 18.11 "Clean Construction or Demolition Debris and Uncontaminated Soil Disposal", as applicable.

END OF SECTION

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SECTION 32 13 13

PORTLAND CEMENT CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes Portland cement concrete paving, including sandblast finish concrete, required to complete the project.

1.2 SUBMITTALS

A. Laboratory Test Reports: Submit 2 copies of laboratory test reports to concrete materials and mix design tests.

B. Delivery Tickets: Submit copies of delivery tickets for each load of concrete delivered to the site.

C. Product Data: Submit copies of manufacturer's specifications with application and installation instructions for proprietary materials and items upon request.

D. Sandblasted Finish Sample: Sandblasted Finish Sample: Finish a formed surface of concrete work-in-place of not less than 18" x 18" for landscape architect review and acceptance. Sample finish area is to be performed on a surface which will be concealed at project completion, as determined by owner's representative. If finish sample is rejected, create new sample finish areas for subsequent reviews until finish is deemed acceptable by landscape architect. Accepted sample shall be used as the standard for the aesthetic quality of the surface finish of architectural concrete in the project.

E. LEED Submittals:

1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating costs for each product having recycled content.
2. Product Data for Credit MR 5: For products and materials that comply with requirements for regional materials, documentation indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

1.3 QUALITY ASSURANCE

A. Perform work in accord with IDOT Standard Specifications for Road and Bridge Construction (SSRBC) 2016 and City of Chicago requirements.

B. Obtain materials from same source throughout.

C. Regulatory Requirements:

1. Illinois Steel Products Procurement Act as amended (Illinois Revised Statues, Ch. 48, par. 1901 et. seq.).
2. City of Chicago.

D. Mock-Up:

1. Samples Panel:

   a. General Contractor: Before installing any exterior concrete paving, provide a sample paving panel for a typical concrete walk inclusive of a handicapped curb ramp.
   b. Paving is to show the proposed color, surface finish of both the walk and textured ramp surface, reinforcement, control and expansion joints, sealant and workmanship.
   c. Panel size shall be a minimum of 5' -0" wide x 15' -0" long in the presence of the Architect prior to the installation of these materials on the site.
   d. Erect the panel in a location acceptable to the Architect and in the presence of the Architect prior to the installation of these materials on the site.
   e. Do not start concrete site work until the Architect has given written approval of all components of the sample panel.
   f. This sample panel will be used as a standard of comparison for all site concrete constructed of same materials.

2. Samples Panel (Sandblasted)

   a. General Contractor: Before installing any Architectural Finish concrete paving, provide a sample paving panel for the Architect to review.
   b. Cast panel mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship for each type of concrete.
   c. Panel size shall be a minimum of 5’-0” wide x 15’-0” long in the presence of the Architect prior to the installation of these materials on the site.
   d. Erect the panel in a location acceptable to the landscape architect and in the presence of the landscape architect prior to the installation of these materials on the site.
   e. Do not start concrete site work until the landscape architect has given written approval of all components of the sample panel.
   f. This sample panel will be used as a standard of comparison for all site concrete constructed of the same materials.

E. Concrete Testing Service:

1. The Owner will employ a separate testing laboratory to perform initial field quality control testing.
2. Materials and installed Work may require testing and retesting at any time during the progress of the Work. Allow free access to material stockpiles and facilities at all times. Retesting of rejected materials and installed Work shall be done at the Contractor’s expense.
3. Three concrete test cylinders shall be taken for every 75 or less cu. yds. of each class of concrete placed each day.

4. One additional test cylinder shall be taken during cold weather and be cured on site under same conditions as concrete it represents.
5. One slump test shall be taken for each set of test cylinders taken.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

A. Comply with IDOT Specification, Article ~~803.04~~ 1103.05.

2.2 REINFORCEMENT

A. Reinforcing steel: ASTM A 615: Grade 60, epoxy coated.

B. Welded steel wire fabric: Plain type, ASTM A 185; rolls; epoxy coated.

C. Tie wire: Annealed steel, minimum 16 gauge size.

D. Dowels: ASTM A 615; Grade 40, plain steel, epoxy coated.

2.3 ACCESSORIES

A. Curing compound: Comply with IDOT Specification, Article ~~718.04~~ 1020.13. Also see Part 3.09 Curing.

B. Liquid surface sealer. ASTM D 3405.

C. Preformed joint filler: ASTM D 1751.

2.4 ADMIXTURES

A. Air entrainment admixture: Comply with ASTM C 260.

B. Chemical admixture: Comply with ASTM C 94.

2.5 CONCRETE MIX

A. Mix concrete in accordance with IDOT 2016, ~~Article 408.04, 408.08 and 504.07~~ Section 1020. ~~for Class X Concrete~~. Also mix in accordance with Part 3.03.

B. Provide concrete for paving of the following characteristics:

1. Compressive strength:

a. At 7 days: 2450 psi.
b. At 28 days: 3500 psi.

C. Use accelerating admixtures in cold weather only with Architect prior written approval. Use of admixtures will not relax cold weather placement requirements.

D. Add air entraining agent to concrete mix for concrete work subject to freeze/thaw cycling and exposed to exterior.

2.6 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

B. Joint Sealant: Joint sealer shall be self-leveling cold-poured joint sealer with performance complying with the following products or equal:

1. Sikaflex-2C NS TG
2. BASF sonolastic SL2
3. Tremco THC-900/901

Sealant color shall match the color of concrete. Sealant color shall be selected by the landscape architect from the manufacturer's available colors.

PART 3 - EXECUTION

3.1 SUBGRADE PREPARATION

A. Prepare in accordance with IDOT2016, Section ~~213 and~~ 301.

1. Proof roll areas under drives and parking areas.

B. Provide additional fill for soft spots and hollows.

C. Level and Compact subgrade, to receive granular base for concrete work, to 95% Modified Proctor Density.

3.2 CONCRETE PLACING

A. Place all paving concrete in accordance with IDOT 2016, Section ~~408~~ 420.

B. Place concrete for sidewalks in accordance with IDOT 2016, Section ~~624~~ 420.

C. Cure concrete in accordance with IDOT 2016, Section ~~625, and 718.04~~ 1020.13.

3.3 INSPECTION

A. The Testing Laboratory shall verify that the compacted base is ready to support paving and imposed loads.

B. Verify gradients and elevations of base are correct.

C. Start of installation constitutes acceptance of existing conditions.

3.4 PREPARATION

A. Moisten base to minimize absorption of water from fresh concrete.

B. Notify Architect minimum 24 hours before start of concreting operations.

3.5 FORMING

A. Place and secure forms to correct location, dimensions and profile.

B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.

C. Place joint fillers vertical in position, in straight lines. Secure to formwork during concrete placement.

3.6 REINFORCEMENT

A. Place reinforcement at mid-height of slabs-on-grade.

B. Interrupt reinforcement at contraction and expansion joints.

C. Place reinforcement to achieve slab and curb alignment as detailed.

D. Provide dowelled joints at interruptions of concrete with one end of dowel set in capped sleeve to allow longitudinal movement.

3.7 FORMED JOINTS

A. Place expansion, control and contraction joints as shown on the drawings. Align curb, gutter and sidewalk joints.

B. All expansion joints in concrete paving, sidewalk paving, and curb shall be sealed per IDOT SSRBC.

C. Place joint filler between paving components and building (s) or other appurtenances. Recess top of filler 1/2 inch for sealer placement.

D. Provide scored, joints at 5 feet intervals of sidewalk except where otherwise shown.

3.8 CURING

A. Curing and protection shall be as outlined in IDOT SSRBC 2016 ~~Sections 625 and 718.04~~. Color lithochrome color wax matching the colored concrete as manufactured by L.M. Schofield Company or approved equal, and applied in accordance with the manufacturer's written instructions; or white pigmented curing compound as outlined in IDOT SSRBC 2016 ~~Section 718.04.a~~ are the preferred curing methods. White-opaque polyethylene film shall not be accepted as a curing method.

3.9 FINISHING

A. Area paving: Light broom, radiused and trowel joint edges, wood float.

B. Sidewalk paving: Light broom, radiused and trowel joints edges, wood float.

C. Curbs and gutters: Light broom.

D. Handicap curb ramps: Provide detectable warning consisting of raised truncated domes with a diameter of nominal .9in. (23mm) a height of nominal .2 in. (5mm) and a center to center spacing of nominal 2.35 in. (60mm) and shall contrast visually with adjoining surfaces. The detectable warning shall comply with the Americans with Disabilities Accessibility Guidelines (ADAAG) and the pattern to be continuous throughout the ramp width and side flares at each location.

E. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's current printed instructions.

3.10 FINISHING - SANDBLASTING

A. Blasting Operations and Requirements

1. Repair and patch tie holes and defective areas. Remove fins and other projections.

2. Apply sandblasted finish to all surfaces of architectural concrete to view in finished project.

3. Perform sandblasting at least 72 hours after placement of concrete and compressive strength of concrete exceeds 2000 psi. Coordinate with formwork construction, concrete placement schedule, and formwork removal to ensure that surfaces to be blast finished are blasted at the same age for uniform results.

4. Determine type of nozzle, nozzle pressure, and blasting techniques required to achieve specified finish.

5. Abrasive blast corners and edge of patterns carefully, using back-up boards, to maintain uniform corner or edge line.

B. Depth of cut: Use an abrasive grit of proper type and gradation to expose aggregate and surrounding matrix surface to achieve specified finish as follows;

1. Brush Sand Blast Finish: Remove cement matrix to minimally expose face of fine aggregate; no reveal.

2. Light Sand Blast Finish: Expose fine aggregate with minimal exposure of coarse aggregate, maximum 1/16” reveal.

3. Medium Sand Blast Finish: Expose coarse aggregate with a minimum 3/16” and maximum 1/4” reveal.

C. Surface Continuity: Perform sand blast finishing in as continuous an operation as possible, utilizing the same work crew to maintain continuity of finish on each surface or area of work.

D. Construction Joints: Use technique acceptable to Engineer to achieve uniform treatment of construction joints.

E. Protection and Repair:

1. Protect adjacent materials and finishes from dust, dirt, and other surface or physical damage during abrasive blast finishing operations. Provide protection as required and remove from site at completion of the work.

2. At the landscape architect's option, repair or replace other work damaged by finishing operations.

F. Clean-Up: Maintain control of concrete chips, dust and debris in each area of the work. Clean up and remove such material at the completion of each day of operation. Prevent migration of airborne materials by use of tarpaulins, wind breaks and similar containing devices.

3.11 PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessive hot or cold temperatures and mechanical injury. Maintain protection until accepted.

3.12 FIELD QUALITY CONTROL

A. Maintain record of placed concrete items. Record date, location of pour, quantity, air temperature and test samples taken.

B. Initial Testing: The Owner will employ a separate testing laboratory to perform field quality control testing.

C. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate the specified concrete strengths and other characteristics have not been attained in the structure, as directed by the Architect. The Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

D. Formed Concrete Dimensional Tolerances:

1. Formed concrete having any dimension smaller or greater than required, and outside the specified tolerance limits, will be considered deficient in strength and subject to additional testing as herein specified.
2. Formed concrete having any dimension greater than required will be rejected if the appearance or function of the structure is adversely affected, or if the larger dimensions interfere with other construction. Repair, or remove and replace rejected concrete as required to meet the construction conditions. When permitted, accomplish the removal of excessive material in a manner to maintain the strength of the section without affecting function and appearance.

E. Defective Work: Concrete work which does not conform to the specified requirements, including strength, tolerances, and finishes, shall be corrected at the Contractor's expense, without extension of time therefore. The Contractor shall also be responsible for the cost of corrections to any other work affected by or resulting from corrections to the concrete work.

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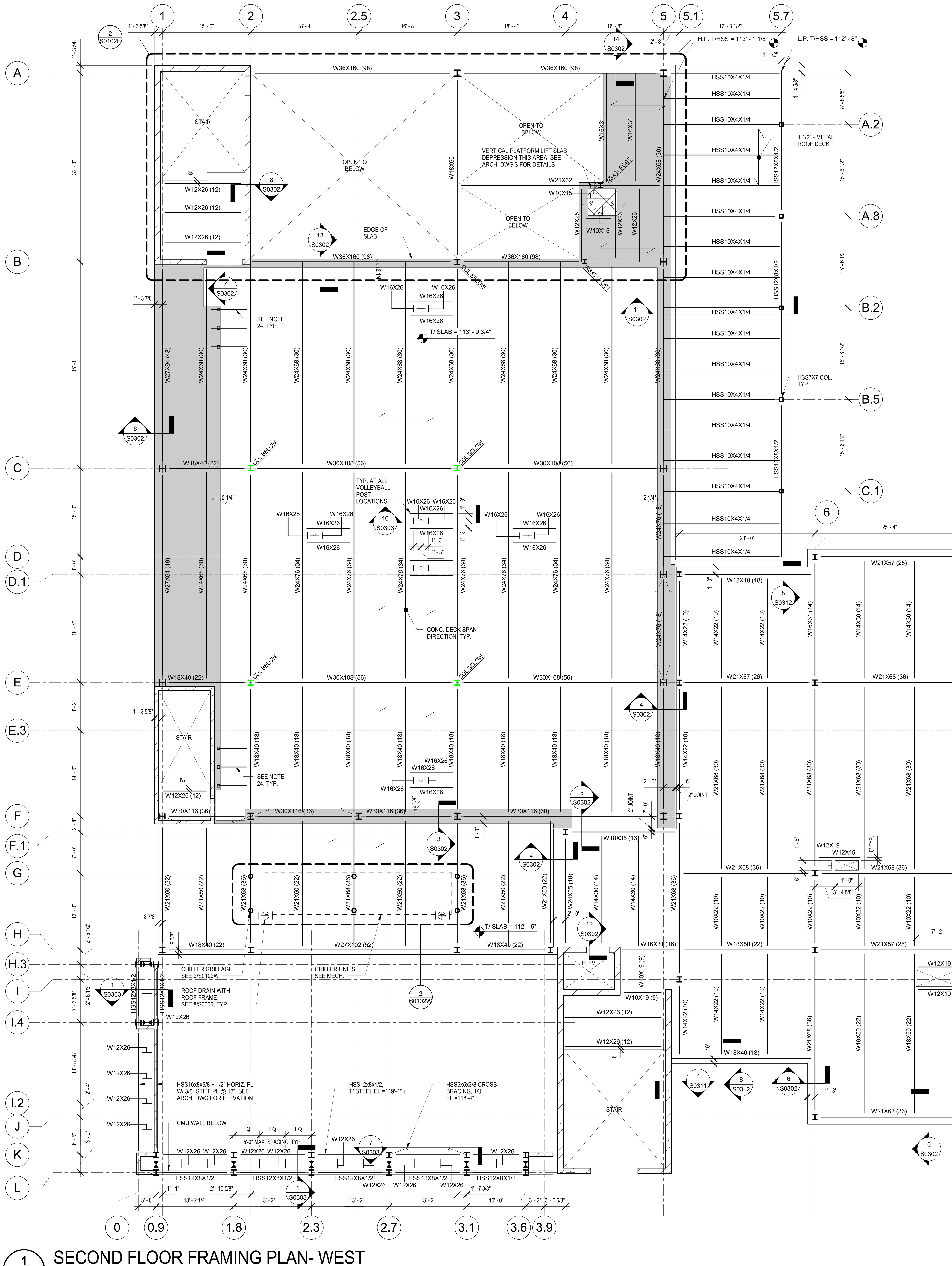
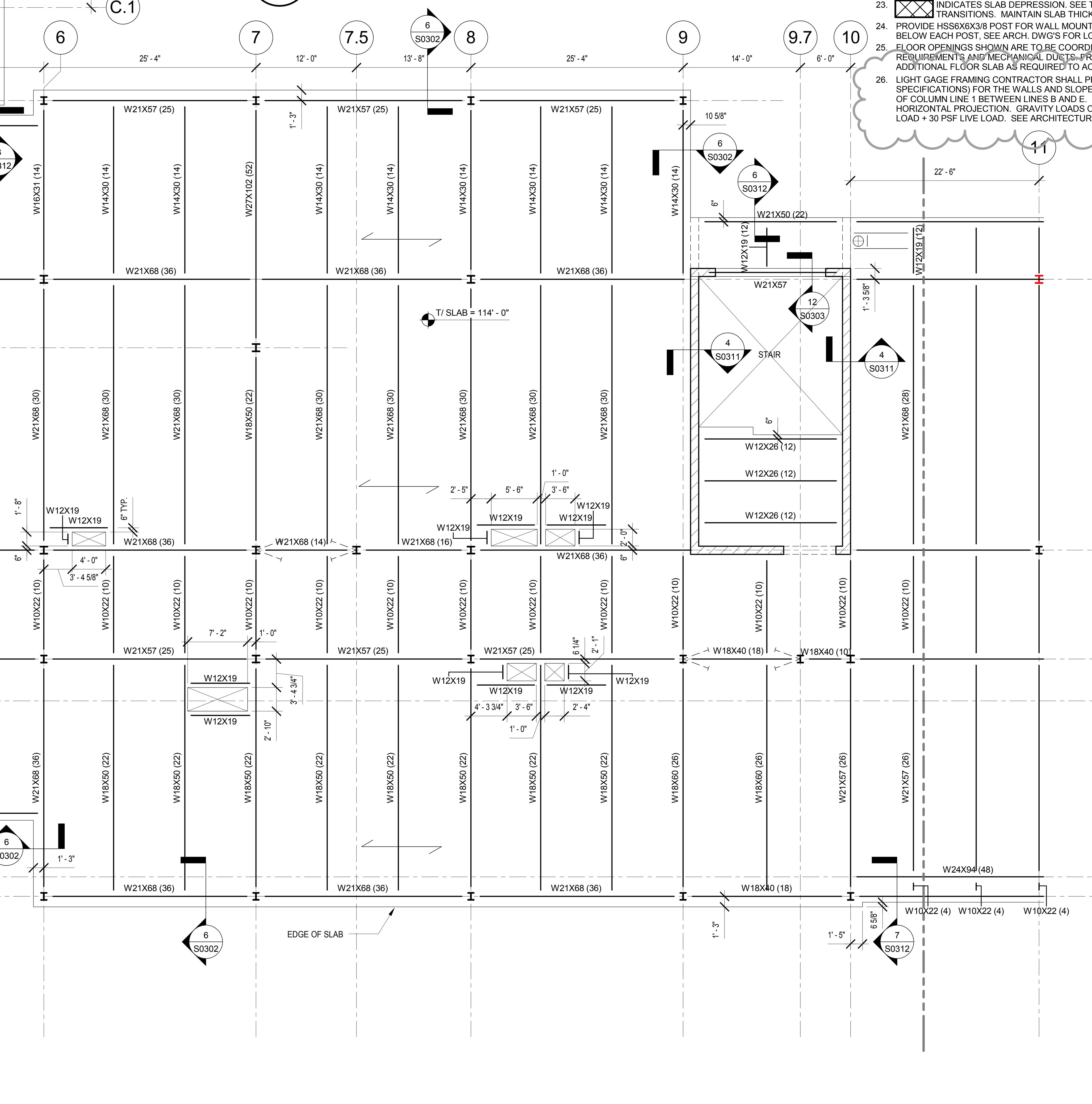
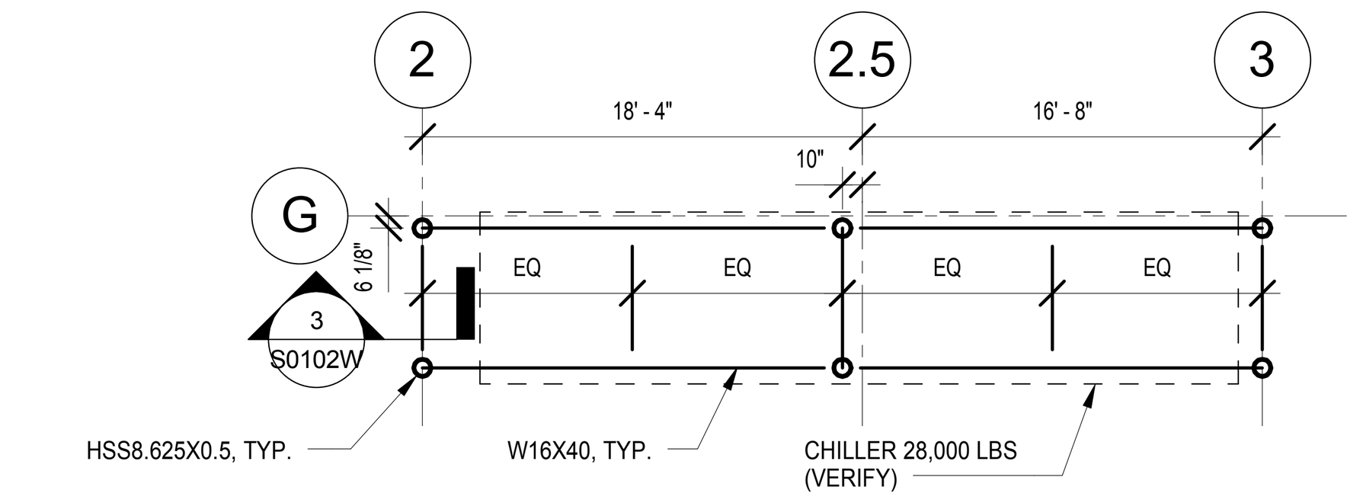



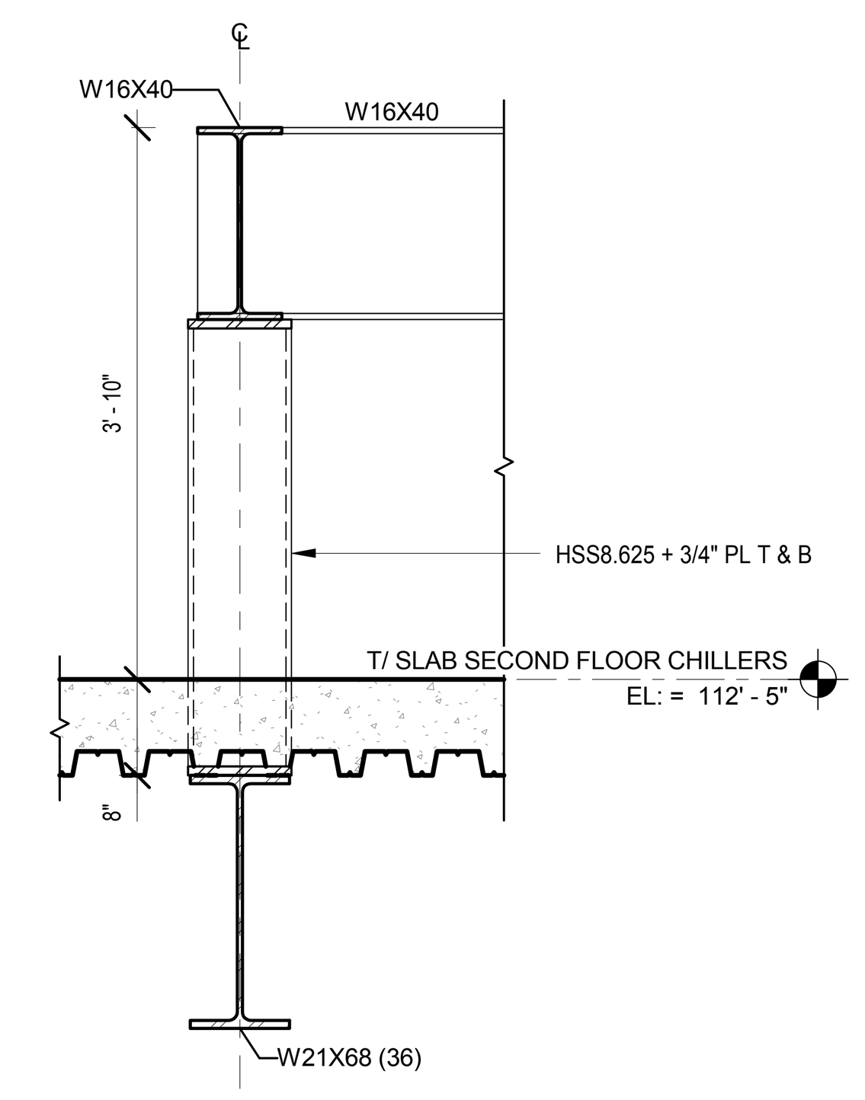
SECOND FLOOR FRAMING PLAN- WEST

1 / S0102W — SCALE: 1/8" = 1'-0"



CHILLER SUPPORT PLAN

2 / S0102W — SCALE: 1/8" = 1'-0"



CHILLER SUPPORT SECTION

3 / S0102W — SCALE: 3/4" = 1'-0"

PLAN NOTES:

1. TOP OF TYPICAL SECOND FLOOR ELEVATION 114'-0" TYPICAL UNLESS OTHERWISE NOTED ON THE PLANS AND DETAILS.
2. TOP OF TYPICAL SECOND FLOOR STEEL ELEVATION 113'-6" TYPICAL UNLESS OTHERWISE NOTED ON THE PLANS AND DETAILS.
3. TOP OF SLAB AT GYMNASIUM FLOOR (BETWEEN COLUMN LINES B AND F / COLUMN LINES 1 AND 5) ELEVATION 113'-9". VERIFY THICKNESS OF GYMNASIUM FINISH FLOOR MATERIAL WITH ARCHITECTURAL DRAWINGS.
4. TOP OF SLAB AT STAGE FLOOR (BETWEEN COLUMN LINES A AND B) ELEVATION 117'-6". VERIFY STAGE FLOOR ELEVATION AND FINISH MATERIALS WITH ARCHITECTURAL DRAWINGS.
5. TYPICAL SECOND FLOOR SLAB SHALL BE:
   - 2" – 18 GAGE GALVANIZED COMPOSITE METAL DECKING
   - 4" NORMAL WEIGHT CONCRETE FILL
   - 6" TOTAL SLAB THICKNESS
   - REINFORCE WITH 6x6-W2.9xW2.9 WELDED WIRE FABRIC
6. TYPICAL SECOND FLOOR SLAB AT MECHANICAL UNIT (BETWEEN COLUMN LINES F AND H / COLUMN LINES 1 AND 4) SHALL BE:
   - 2" – 18 GAGE GALVANIZED COMPOSITE METAL DECKING
   - 6" NORMAL WEIGHT CONCRETE FILL
   - 8" TOTAL SLAB THICKNESS
   - EAST-WEST REINFORCEMENT (PARALLEL WITH SPAN OF DECK) #4 @ 12" / BOTTOM, #4 @ 12" TOP
   - NORTH-SOUTH REINFORCEMENT (PERPENDICULAR TO SPAN OF DECK) #3 @ 18" TOP AND BOTTOM.
   - REINFORCEMENT PLACEMENT
     - BOTTOM EAST-WEST BARS
     - BOTTOM NORTH-SOUTH BARS
     - TOP NORTH-SOUTH BARS
     - TOP EAST-WEST BARS
7. PROVIDE #4 x 4'-0" @ 12" SPACING ADDITIONAL TOP BAR REINFORCEMENT OVER ALL GIRDERS. SEE TYPICAL DETAILS.
8. PROVIDE ADDITIONAL DIAGONAL #4 TOP BARS EACH SIDE AT ALL COLUMNS. SEE TYPICAL DETAILS.
9. [+/- x"] INDICATES DIMENSION FROM BASE ELEVATION NOTED ABOVE FOR TOP OF STEEL.
10. "(xx)" INDICATES QUANTITY OF ¾" DIAMETER x 4 ½" HEADED STUD ANCHORS WELDED TO TOP FLANGE OF BEAMS, GIRDERS, AND SPANDRELS AS NOTED ON THE PLANS.
11. PERIMETER SLAB EDGE AT SPANDREL BEAMS/GIRDERS SHALL HAVE CONTINUOUS L6x6x5/16 OR 5/16" BENT PLATE WITH HORIZONTAL 1/2" DIAMETER x 5" HEADED STUD ANCHOR AT 18" ON CENTER.
12. TYPICAL SLAB EDGE AT FLOOR PENETRATIONS TO BE 6" FROM STEEL BEAM/GIRDER CENTERLINE FORMED WITH BENT GAGE MATERIAL POUR STOP UNLESS OTHERWISE SHOWN ON THE PLANS AND DETAILS.
13. PROVIDE MASONRY TIES AT ALL COLUMNS WITH ADJACENT MASONRY (BRICK AND/OR CMU) UNLESS OTHERWISE DETAILED/NOTED ON THE PLANS.
14. "Cx" INDICATES STRUCTURAL STEEL COLUMN. SEE STEEL COLUMN SCHEDULE ON DRAWING S0300.
15. INDICATES 12" REINFORCED CMU BEARING / SHEAR WALL.
16. ROOF DECK AT CANOPY (EAST OF COLUMN LINE 5/ NORTH OF COLUMN LINE D) SHALL BE 1 ½" –N18 GAGE PAINTED WIDE RIB METAL ROOF DECKING. SEE GENERAL NOTES AND SPECIFICATIONS. PROVIIDE PERIMETER DECK EDGE 4 SIDES L4x4x3/8 x CONTINOUS.
17. VERIFY ALL DIMENSIONS WITH ARCHITECTURALL DRAWINGS.
18. SEE ARCHITECTURAL DRAWINGS FOR FLOOR ASSEMBLY FIRE RATING AND FIREPROOFING REQUIREMENTS.
19. EXTERIOR WALL BACK-UP STUD FRAMING SHALL HAVE VERTICAL SLIP JOINT AT THE FLOOR LINE CAPABLE OF ACCOMODATING A MINIMUM VERTICAL MOVEMENT OF STEEL MEMBER SPAN/360. SEE ARCHTIECTURAL DETAILS.
20. SEE DRAWINGS S0001 AND S0002 FOR GENERAL NOTES.
21. SEE DRAWING S0003, S0004, S0005, S0006 AND S0007 FOR TYICAL DETAILS.
22. INDICATES 2 1/4" LW CONC. TOPPING, COORD. W/ ARCH. DWG'S.
23. INDICATES SLAB DEPRESSION. SEE TYPICAL DETAILS FOR ALL DEPRESSED SLAB TRANSITIONS. MAINTAIN SLAB THICKNESS OF 5" MINIMUM OR AS OTHERWISE NOTED.
24. PROVIDE HSS6X6X3/8 POST FOR WALL MOUNTED EQUIP. ADD W12X30 SUPPL. FLOOR BEAM BELOW EACH POST, SEE ARCH. DWG'S FOR LOCATION.
25. FLOOR OPENINGS SHOWN ARE TO BE COORDINATED WITH ARCHITECTURAL FIRESTOP REQUIREMENTS AND MECHANICAL DUCTS. PROVIDE SUPPLEMENTAL W8X10 FRAMING AND ADDITIONAL FLOOR SLAB AS REQUIRED TO ACHIEVE THE NECESSARY FIRE RATED ASSEMBLY.
26. LIGHT GAGE FRAMING CONTRACTOR SHALL PROVIDE DESIGN CALCULATIONS (SEE SPECIFICATIONS) FOR THE WALLS AND SLOPED ROOF/CEILING FOR ROOMS IMMEDIATELY EAST OF COLUMN LINE 1 BETWEEN LINES B AND E. LATERAL LOAD SHALL BE MINIMUM 10 PSF ON HORIZONTAL PROJECTION. GRAVITY LOADS ON SLOPED ROOF/CEILING SHALL BE 20 PSF DEAD LOAD + 30 PSF LIVE LOAD. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

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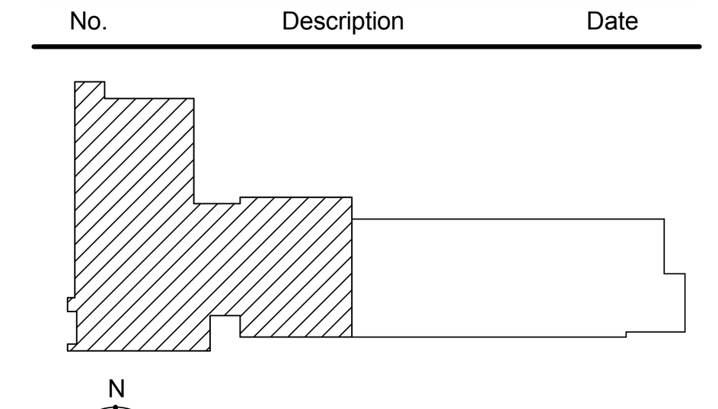
NOT FOR CONSTRUCTION

No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017



KEY PLAN

Drawing Title:

SECOND FLOOR FRAMING PLAN - WEST

Project No.: 004665.01 — Checked by: MCZ

S0102W

6/23/2017 11:44:35 AM
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Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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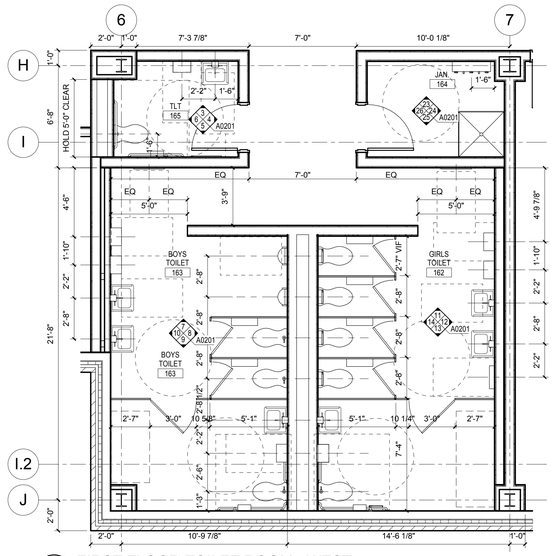
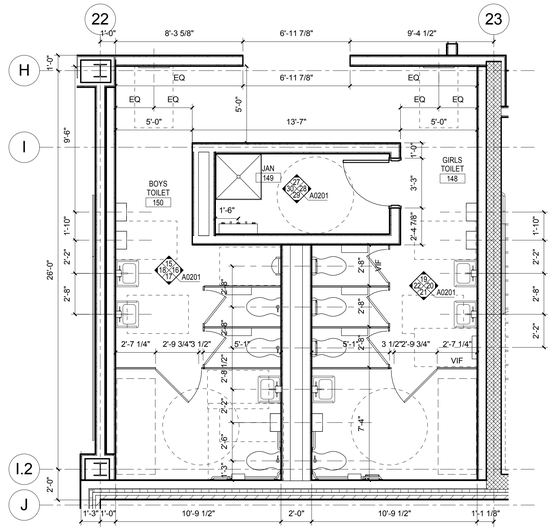
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



1 FIRST FLOOR TOILET ROOM - WEST
1/4" = 1'-0"

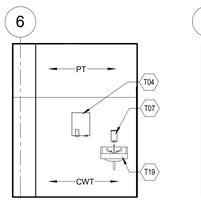


2 FIRST FLOOR TOILET ROOM - EAST
1/4" = 1'-0"

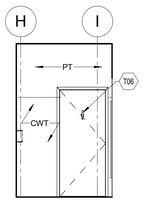
EQUIPMENT LIST	
KEY VALUE	KEYNOTE TEXT
T01	TOILET TISSUE DISPENSER - SINGLE
T02	TOILET TISSUE DISPENSER - DOUBLE
T03	MIRROR - 24"W x 60"T
T04	SURFACE MOUNTED HAND DRYER
T05	36" UTILITY SHELF
T06	COAT HOOK
T07	SURFACE-MOUNTED SOAP DISPENSER (TLT ROOMS)
T08	TOILET COMPARTMENT W/ COAT HOOK
T09	WATER CLOSET (SEE PLUMBING)
T10	URINAL (SEE PLUMBING)
T11	LAVATORY (SEE PLUMBING)
T12	MOP SINK (SEE PLUMBING)
T13	SANITARY NAPKIN DISPENSER
T14	18" VERTICAL GRAB BAR
T15A	36" HORIZONTAL GRAB BAR
T15B	24" HORIZONTAL GRAB BAR (SPLIT BAR)
T16A	42" HORIZONTAL GRAB BAR
T16B	54" HORIZONTAL GRAB BAR (SPLIT BAR)
T18A	SANITARY NAPKIN DISPOSAL - RECESSED (UNISEX TLT)
T18B	SANITARY NAPKIN DISPOSAL - SURFACE-MOUNTED (GIRLS TLT)
T19	ADA LAVATORY (SEE PLUMBING)

GENERAL NOTES

1. REFER TO ADA SHEETS FOR TYPICAL MOUNTING HEIGHTS.
2. CONTRACTOR TO COORDINATE AND CONFIRM REQUIRED MOUNTING HEIGHTS AND LOCATIONS OF ALL GRAB BARS, FIXTURES, AND RECEPTACLES PRIOR TO INSTALLATION OF PLUMBING FIXTURES AND PIPING.
2. PROVIDE CONTINUOUS SOLID FIRE-TREATED WOOD BLOCKING IN FIRE RATED WALL ASSEMBLIES AS REQUIRED FOR TOILET ACCESSORIES AND FIXTURES.
3. ALL EXPOSED PIPES UNDER SINKS SHALL BE INSULATED.
4. PROVIDE BLOCKING FOR ADULT CHANGING TABLES IN BOYS AND GIRLS TOILET ROOMS. TABLES TO BE PROVIDED AND INSTALLED BY OWNER.
5. REFER TO SPECIFICATIONS FOR LIST OF ACCESSORIES PROVIDED BY GC, VENDOR, OR OWNER.



3 TLT 165 - NORTH
1/4" = 1'-0"



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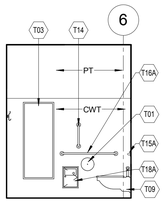
1/4" = 1'-0"



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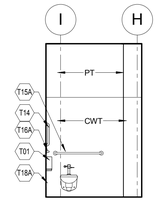

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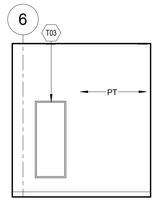
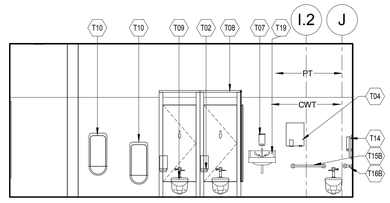


7 BOYS TLT 163 - NORTH
1/4" = 1'-0"



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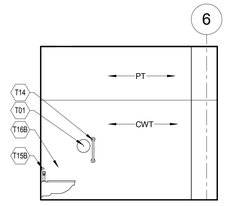

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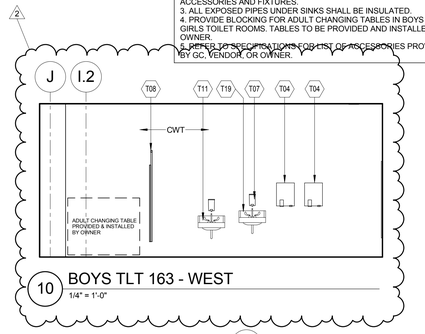
1/4" = 1'-0"



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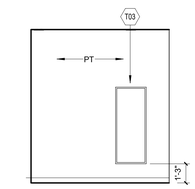
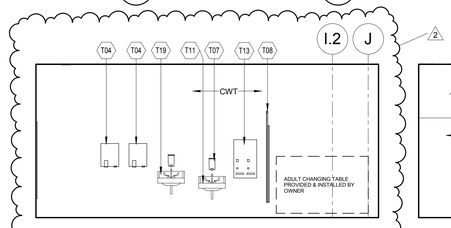
1/4" = 1'-0"



11 GIRLS TLT 162 - NORTH
1/4" = 1'-0"



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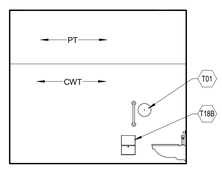
1/4" = 1'-0"



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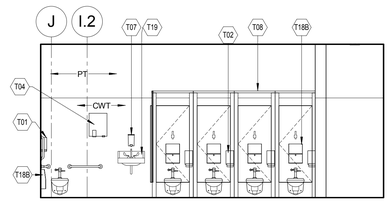
1/4" = 1'-0"



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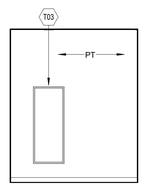
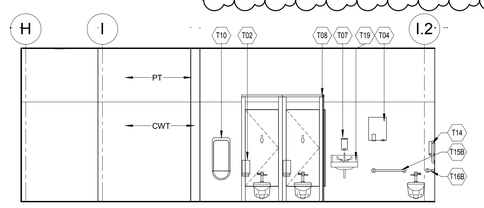
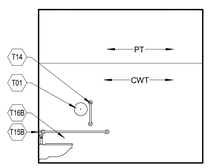


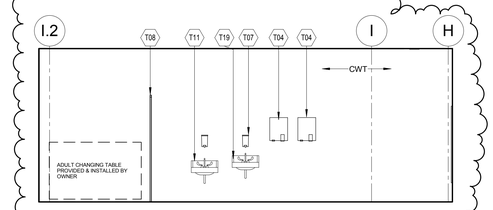
15 BOYS TLT 150 - NORTH
1/4" = 1'-0"



16 BOYS TLT 150 - EAST
1/4" = 1'-0"



17 BOYS TLT 150 - SOUTH
1/4" = 1'-0"



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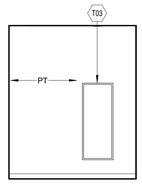
1/4" = 1'-0"



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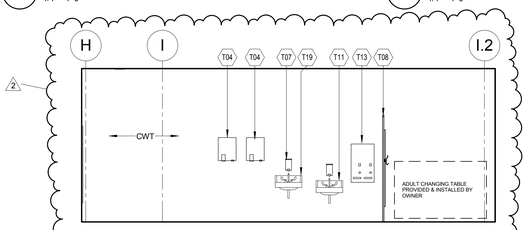
1/4" = 1'-0"



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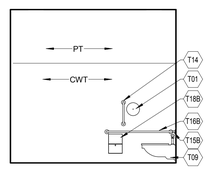

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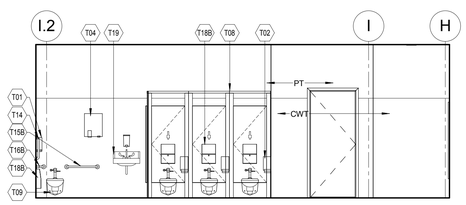
1/4" = 1'-0"



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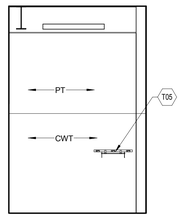
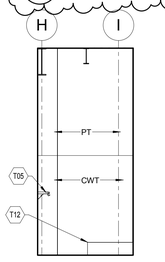
1/4" = 1'-0"



23 JAN 164 - NORTH
1/4" = 1'-0"



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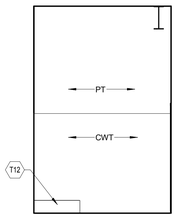
1/4" = 1'-0"



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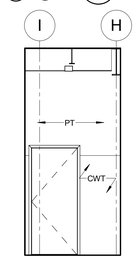
1/4" = 1'-0"



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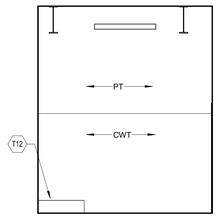
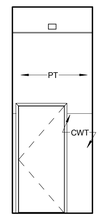
1/4" = 1'-0"



27 JAN 149 - NORTH
1/4" = 1'-0"



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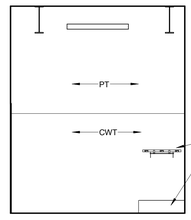
1/4" = 1'-0"



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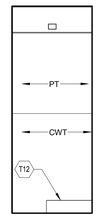

30 JAN 149 - WEST
1/4" = 1'-0"

Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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312.782.4486

NOT FOR CONSTRUCTION

No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

Drawing Title:

ENLARGED TOILET ROOM PLANS

Project No.: 004665.01 Checked by: Checker

A0201

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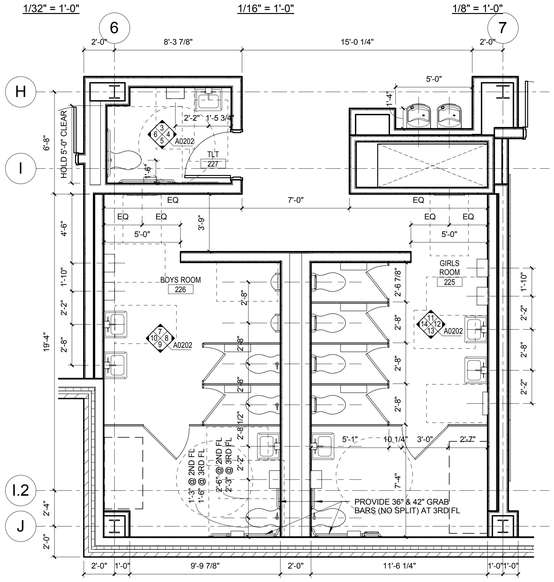
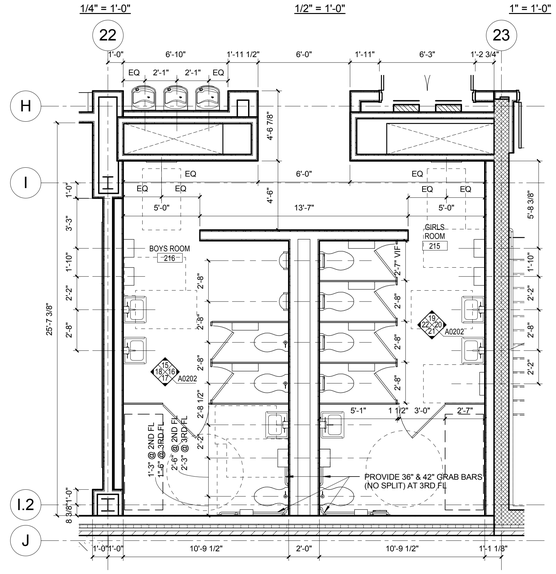


1 TYPICAL 2ND & 3RD FLOOR TOILET ROOM-WEST
1/4" = 1'-0"



2 TYP 2ND & 3RD FLOOR TOILET ROOMS-EAST
1/4" = 1'-0"

EQUIPMENT LIST	
KEY VALUE	KEYNOTE TEXT
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T07	SURFACE-MOUNTED SOAP DISPENSER (TLT ROOMS)
T08	TOILET COMPARTMENT W/ COAT HOOK
T09	WATER CLOSET (SEE PLUMBING)
T10	URINAL (SEE PLUMBING)
T11	LAVATORY (SEE PLUMBING)
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T14	18" VERTICAL GRAB BAR
T15A	36" HORIZONTAL GRAB BAR
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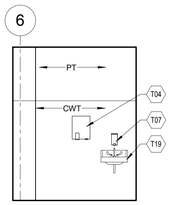
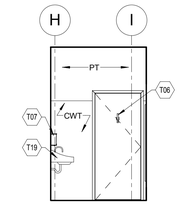
T18A	SANITARY NAPKIN DISPOSAL - RECESSED (UNISEX TLT)
T18B	SANITARY NAPKIN DISPOSAL - SURFACE-MOUNTED (GIRLS TLT)
T19	ADA LAVATORY (SEE PLUMBING)

GENERAL NOTES

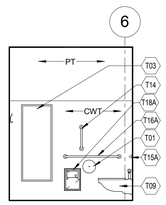
1. REFER TO ADA SHEETS FOR TYPICAL MOUNTING HEIGHTS.
2. CONTRACTOR TO COORDINATE AND CONFIRM REQUIRED MOUNTING HEIGHTS AND LOCATIONS OF ALL GRAB BARS, FIXTURES, AND RECEPTACLES PRIOR TO INSTALLATION OF PLUMBING FIXTURES AND PIPING.
2. PROVIDE CONTINUOUS SOLID FIRE-TREATED WOOD BLOCKING IN FIRE RATED WALL ASSEMBLIES AS REQUIRED FOR TOILET ACCESSORIES AND FIXTURES.
3. ALL EXPOSED PIPES UNDER SINKS SHALL BE INSULATED.
4. PROVIDE BLOCKING FOR ADULT CHANGING TABLES IN BOYS AND GIRLS TOILET ROOMS. TABLES TO BE PROVIDED AND INSTALLED BY OWNER.
5. REFER TO SPECIFICATIONS FOR LIST OF ACCESSORIES PROVIDED BY GC, VENDOR OR OWNER.



3 UNISEX TLT - NORTH
1/4" = 1'-0"



4 UNISEX TLT - EAST
1/4" = 1'-0"



5 UNISEX TLT - SOUTH
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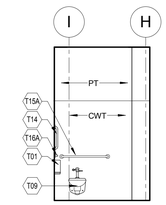

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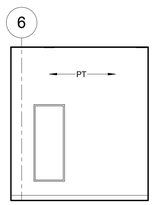
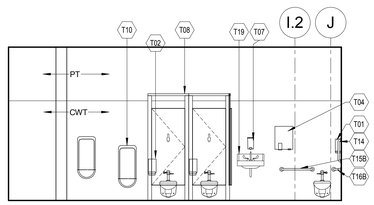


7 TYP WEST BOYS TLT - NORTH
1/4" = 1'-0"



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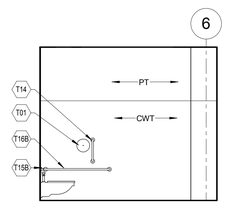
1/4" = 1'-0"



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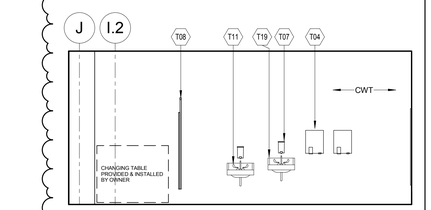

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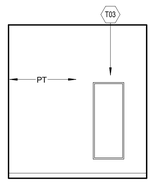
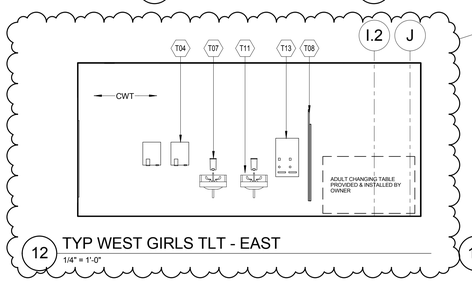
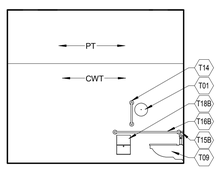


11 TYP WEST GIRLS TLT - NORTH
1/4" = 1'-0"



12 TYP WEST GIRLS TLT - EAST
1/4" = 1'-0"



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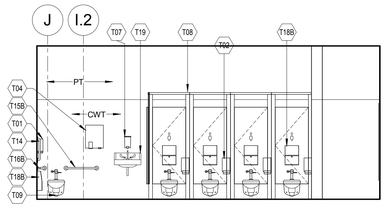

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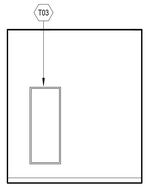

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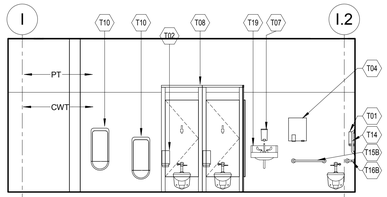
1/4" = 1'-0"



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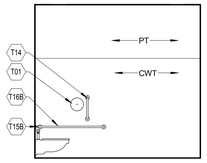
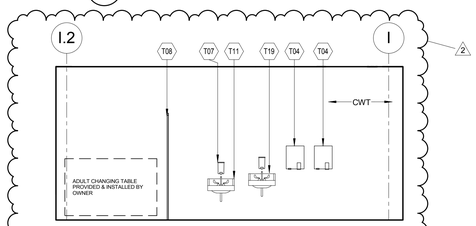
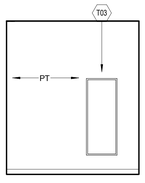
1/4" = 1'-0"



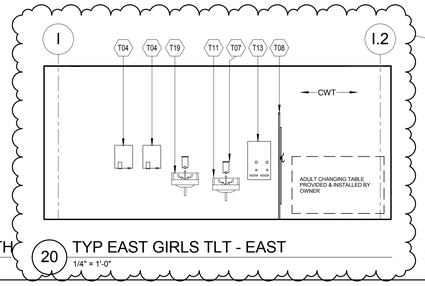
17 TYP EAST BOYS TLT - SOUTH
1/4" = 1'-0"



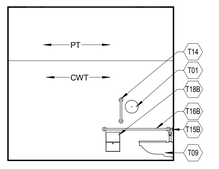
18 TYP EAST BOYS TLT - WEST
1/4" = 1'-0"



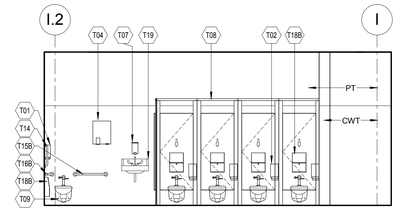
19 TYP EAST GIRLS TLT - NORTH
1/4" = 1'-0"



20 TYP EAST GIRLS TLT - EAST
1/4" = 1'-0"



21 TYP EAST GIRLS TLT - SOUTH
1/4" = 1'-0"



22 TYP EAST GIRLS TLT - WEST
1/4" = 1'-0"

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CARNOW, CONIBEAR & ASSOCIATES, LTD.
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600 W Van Buren Street, Suite 500
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312.782.4486

NOT FOR CONSTRUCTION

No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

Drawing Title:

ENLARGED TOILET ROOM PLANS

Project No.: 004665.01 Checked by: Checker

A0202

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FINISH SCHEDULE

WALL
BASE
FLOOR

FLOOR FINISH TRANSITION

EXTENT FINISHES

FLOOR FINISH

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
WM	WALK OFF MAT	BALCO	FMS-D SURFACE ROLL- UP, SURFACE MOUNTED, MILL ALUMINUM FRAME, BLACK VINYL HINGE ASSEMPLY AND PERIMETER VINYL, CLEAR ANODIZED ALUMINUM RAIL WITH TREAD INSERTS INSERT COLOR: BLUE LAGOON	BUILDING ENTRIES
CPT1	CARPET TILE	MOHAWK	PATTERN: TRANQUILI BEAUTY COLOR: 949 IDEAL	HALF LAP INSTALLATION/ADMIN & NURSE SUITES
CPT2	CARPET TILE (ACCENT)	MILLIKEN	PATTERN: FORMWORK COLLECTION COLOR: FWK183 SAPPHIRE	LIBRARY ACCENT AREA
CPT3	CARPET TILE (FIELD)	MILLIKEN	PATTERN: COMMON THREAD COLLECTION DESIGN: POINT 3 & POINT 5 COLOR: PTT183-174 ALERCE WITH ELECTRIC	EQUAL MIX POINT 3 & POINT 5, STRIPE PATTERN TO RUN LENGTH OF CORRIDOR
CT1	CERAMIC MOSAIC FLOOR TILE	AMERICAN OLEAN	PRODUCT: UNGLAZED PORCELAIN TILE, SIZE: 2"X2" COLOR: LIGHT SMOKE SPECKLED (1) A04	TOILET ROOMS
EP1	EPOXY FLOORING	SHERWIN WILLIAMS GENERAL POLYMER	PRODUCT: EPO-FLEX MER II COLOR: STEEL GRAY 54	MECHANICAL ROOMS, JANITOR ROOMS
VCT1	VINYL COMPOSITE TILE COMBINATION 1 (LIGHT BLUE/GRAY MIX)	ARMSTRONG	PRODUCT: IMPERIAL TEXTURE STANDARD EXCELON SIZE: 12X12" COLOR 'A'- 50% MIX COLOR: #51860 SOFT COOL GRAY COLOR 'B'- 30% MIX COLOR: #51903 BLUE/GRAY COLOR 'C'- 20% COLOR: #57508 BLUE DREAMS	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR CORRIDORS, ADMIN & NURSE SUITES, MEP & BACK OF HOUSE SPACES
VCT2	VINYL COMPOSITE TILE COMBINATION 2 (MEDIUM BLUE/GRAY MIX)	ARMSTRONG	PRODUCT: IMPERIAL TEXTURE STANDARD EXCELON SIZE: 12"X12" COLOR 'C' - 50% MIX COLOR: #57508 BLUE DREAMS COLOR 'A' - 30% MIX COLOR: #51860 SOFT COOL GRAY COLOR 'D'- 20% MIX COLOR: #57517 BODACIOUS BLUE	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR TYPICAL CLASSROOMS
VCT3	VINYL COMPOSITE TILE COMBINATION 3 (DARK BLUE/GRAY MIX)	ARMSTRONG	PRODUCT: IMPERIAL TEXTURE STANDARD EXCELON SIZE: 12X12" COLOR 'D'- 50% MIX COLOR: #57517 BODACIOUS BLUE COLOR 'B'- 30% MIX COLOR: #51903 BLUE/GRAY COLOR 'E'- 20% COLOR: #51820 MARINA BLUE	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR CORRIDORS, ACCENT, PULL- IN/OUT AND SN/PO CLASSROOMS, SHARED CLASSROOMS, LOBBY, DINING ROOM
VCT4	VINYL COMPOSITION TILE COMBINATION 4 (YELLOW/GRAY MIX)	ARMSTRONG	PRODUCT: IMPERIAL TEXTURE STANDARD EXCELON SIZE 12X12" COLOR 'F' - 50% MIX COLOR: #51812 LEMON YELLOW COLOR 'A' - 30% MIX COLOR: #51860 SOFT COOL GRAY COLOR 'B'- 20% MIX COLOR: #51903 BLUE/GRAY	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR STAIRS & CORRIDORS ACCENT, DINING, LOBBY
SVT1 (VCT ALTERNATE #1)	SOLID VINYL TILE COMBINATION 1 (LIGHT BLUE/GRAY MIX)	GERFLOR	PRODUCT: MIPOLAM ESPRIT SIZE: 12X12" COLOR 'A'- 50% MIX COLOR: 5329 CUMIN COLOR 'B'- 30% MIX COLOR: 5330 SMOKE COLOR 'C'- 20% COLOR: 5306 MIXBLUE	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR CORRIDORS, ADMIN & NURSE SUITES, MEP & BACK OF HOUSE SPACES
SVT2 (VCT ALTERNATE #1)	SOLID VINYL TILE COMBINATION 2 (MEDIUM BLUE/GRAY MIX)	GERFLOR	PRODUCT: MIPOLAM ESPRIT SIZE: 12X12" COLOR 'C' - 50% MIX COLOR:5306 MIXBLUE COLOR 'A' - 30% MIX COLOR: 5329 CUMIN COLOR 'D'- 20% MIX COLOR: 5366 IRIS	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR TYPICAL CLASSROOMS
SVT3 (VCT ALTERNATE #1)	SOLID VINYL TILE COMBINATION 3 (DARK BLUE/GRAY MIX)	GERFLOR	PRODUCT: MIPOLAM ESPRIT SIZE: 12X12" COLOR 'D'- 50% MIX COLOR: 5366 IRIS COLOR 'B'- 30% MIX COLOR: 5330 SMOKE COLOR 'E'- 20% COLOR: 5356 INDIGO	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR CORRIDORS, ACCENT, PULL- IN/OUT AND S/N CLASSROOMS, SHARED CLASSROOMS, LOBBY, DINING ROOM
SVT4 (VCT ALTERNATE #1)	SOLID VINYL TILE COMBINATION 4 (YELLOW/GRAY MIX)	GERFLOR	PRODUCT: MIPOLAM ESPRIT SIZE: 12X12" COLOR 'F' - 50% MIX COLOR: 5332 TUMERIC COLOR 'A' - 30% MIX COLOR: 5329 CUMIN COLOR 'B'- 20% MIX COLOR: 5330 SMOKE	NO MORE THAN THREE CONTIGUOUS TILES SHALL BE OF SAME COLOR STAIRS & CORRIDORS ACCENT, DINING, LOBBY
WD	WOOD ATHLETIC FLOORING	CONNOR	REFER TO ARCHITECTURAL SPEC., COLOR: SECOND & BETTER GRADE HARD MAPLE	
SF	STAGE FLOORING		PLYRON' HARDBOARD, BLACK PT. FINISH	
QT	QUARRY TILE	AMERICAN OLEAN	PRODUCT: QUARRY NATURALS, SIZE: 6x6" COLOR: N46 (2) SHADOW GRAY	FOOD AND PREP SERVERY
RTV	RUBBER TREADS W/ INTEGRATED RISER FOR THE VISUALLY IMPAIRED	JOHNSONITE	PRODUCT: VIHTRS-XX-SQ COLOR: 38 PEWTER CG SOLID RUBBER INSERT COLOR: BLACK	STAIRS
VTS	SOLID VINYL STATIC DISSIPATIVE TILE	JOHNSONITE	PRODUCT: IQ GRANITE SD, COLOR: 726 SIDEWALK CG, MULTICOLOR WELD ROD 1290026	MDF ROOM, ELECTRICAL ROOMS
DWS	DETECTABLE WARNING SURFACE	JOHNSONITE	TACTILE WARNING SURFACE COMPLYING W/ ANSI A117.1-1986, FULL STAIR WIDTH, 36" IN DIRECTION OF TRAVEL COLOR: 40 BLACK	STAGE STAIRS TOP LANDING

WALL BASE

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
CTB1	CERAMIC TILE BASE	AMERICAN OLEAN	PRODUCT: BUILT-UP BASE, MT-6A, SIZE: TWO ROWS OF 2X2"/ ONE ROW OF C833 COLOR: A04 (1) LIGHT SMOKE SPECK	AT TILE WALLS/TOILET ROOMS, TOILET ROOM ENTRY, JANITOR
CTB2	CERAMIC TILE BASE	AMERICAN OLEAN	PRODUCT: BUILT-UP BASE, MT-6, SIZE: ONE ROW OF 2X2"/ ONE ROW OF C833/ ONE ROW S886	AT DRYWALL/ TOILET ROOMS
VC1	RESILIENT COVE BASE	JOHNSONITE	VINYL COVE BASE COLOR: 21 PLATINUM SIZE: 4" HIGH	USE EVERYWHERE EXCEPT AT LOCKERS AND DRINKING FOUNTAINS
VC2	RESILIENT COVE BASE	JOHNSONITE	VINYL COVE BASE COLOR: 21 38 PEWTER SIZE: 4" HIGH	AT LOCKERS AND DRINKING FOUNTAINS WITH CWT2
VC3	RESILIENT COVE BASE	JOHNSONITE	VINYL COVE BASE COLOR: 40 BLACK SIZE: 4" HIGH	STAGE
VS1	RESILIENT STRAIGHT BASE	JOHNSONITE	VINYL STRAIGHT BASE COLOR: 21 PLATINUM SIZE: 4" HIGH	ADMIN, NURSE SUITES, LIBRARY
SSB1	SOLID SURFACE WALL BASE	AVONITE	COLOR: PLUMBIC GRAY F1-8290 SIZE:	BASE DESIGN: DINING ROOM ALTERNATE #3: FIRST FLOOR CORRIDORS, LOBBY & STAIR FLOOR LOBBY
SSB2	SOLID SURFACE WALL BASE	HI-MACS	COLOR: BANANA S026 SIZE:	DINING ROOM, FIRST & SECOND FLOOR LOBBY
ATH	VENTILATED ATHLETIC FLOOR COVER BASE	JOHNSONITE	COLOR: BLACK SIZE: 4" HIGH, 3" LONG x 3/8" THICK TOE	GYMNASIUM
QTB	QUARRY TILE COVE BASE	AMERICAN OLEAN	PRODUCT: FLOOR BULLNOSE Q-1665U, SIZE: 6"X6" COLOR: N46(2) SHADOW GRAY	FOOD & PREP SERVERY
EPB1	EPOXY COVE INTEGRAL BASE SYSTEM	SHERWIN WILLIAMS GENERAL POLYMER	PRODUCT: MER II COLOR: STEEL GRAY 54	MECHANICAL ROOMS, JANITOR ROOMS, 6" U.N.O.

WALL FINISH

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
PT1	PAINT	BENJAMIN MOORE	COLOR: 2124-60 MISTY GRAY	
PT2	PAINT	SHERWIN WILLIAMS	COLOR: SW7663 MONORAIL SILVER	DINING ROOM COLUMNS, DOORS & DOOR FRAMES, PROSCENIUM & STAGE WALLS, GYM WALLS
PT3 (NOT USED)				
PT4	PAINT	SHERWIN WILLIAMS	COLOR: SW6903 CHEERFUL	ACCENT WALLS, LOCKER ACCENT
PT5	PAINT	BENJAMIN MOORE	COLOR: 2013 ORANGE NECTAR	ACCENT WALLS, LOCKER ACCENT
PT6	PAINT	BENJAMIN MOORE	COLOR: 2015-30 CALYPSO ORANGE	ACCENT WALLS, LOCKER ACCENT
PT7	PAINT	SHERWIN WILLIAMS	COLOR: SW 6786 CLOUDLESS	ACCENT WALLS, LOCKER ACCENT
PT8	PAINT	BENJAMIN MOORE	COLOR: 2066-40 ROCKY MOUNTAIN SKY	ACCENT WALLS, LOCKER ACCENT, GYM
PT9	PAINT	BENJAMIN MOORE	COLOR: 2065-30 BRILLIANT BLUE	ACCENT WALLS, LOCKER ACCENT
CWT1	CERAMIC WALL TILE	AMERICAN OLEAN	PRODUCT: UNGLAZED PORCELAIN TILE SIZE: 2"X 2" COLOR: ICE WHITE A25	TOILET ROOMS & JANITOR FIELD TILE, UP TO 6'-6" A.F.F. U.N.O.
CWT2	CERAMIC WALL TILE	AMERICAN OLEAN	PRODUCT: UNGLAZED PORCELAIN TILE SIZE: 2"X 2" COLOR: SAPPHIRE SKY 808	DRINKING FOUNTAIN ACCENT TILE & BOY'S TOILET ROOM (FULL HEIGHT)
CWT3	CERAMIC WALL TILE	AMERICAN OLEAN	PRODUCT: UNGLAZED PORCELAIN TILE SIZE: 2"X 2" COLOR: CUSTOM TO MATCH S52 (HI-MACS BANANA S26)	GIRL'S TOILET ROOM (FULL HEIGHT)
SS1	SOLID SURFACE PANEL	AVONITE	COLOR: PLUMBIC GRAY F1-8290 SIZE: REFER TO DRAWINGS	ALTERNATE #3: FIRST FLOOR CORRIDORS, LOBBY & STAIR FLOOR LOBBY
SS2	SOLID SURFACE PANEL	HI-MACS	COLOR: BANANA S26 SIZE: REFER TO DRAWINGS	DINING ROOM, FIRST & SECOND FLOOR LOBBY
AWP	ATHLETIC WALL PADDING	JAYPRO	COLOR: YELLOW AND ROYAL BLUE	GYMNASIUM

WALL PROTECTION

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
WP1	FRP	CRANE	PRODUCT: VARIETEX THICKNESS: 0.09" (2.3mm) TEXTURE: SANDSTONE MATTE STAC COLOR: COTTON WHITE 1130	FOOD PREP, SERVERY, KITCHEN STORAGE

SOLID SURFACE

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
SSW1	SOLID SURFACE WINDOW SILL	AVONITE	PRODUCT: #F1- 8292 COLOR: CLOUD THICKNESS: 1/2" SHEEN: SATIN	
SSW2	SOLID SURFACE	CORIAN	COLOR: DOVE THICKNESS: 1/2" SHEEN: SATIN	RECEPTION DESK IN ADMIN SUITE
SSW3	SOLID SURFACE	HI-MACS	COLOR: PEBBLE PEARL G107 THICKNESS: 1/2" SHEEN: SATIN	WET COUNTER TOPS/NURSE SUITE, CLASSROOMS, ART, SCIENCE

LAB TOP

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
DURCON	EPOXY RESIN WORK SURFACE	DURCON INC.	COLOR: GRAPHITE	SCIENCE

MILLWORK

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
PL1	PLASTIC LAMINATE	WILSONART	COLOR: GREY PAMPAS 4168-60 POST-FORMED EDGE	TO BE USED FOR HORIZONTAL SURFACES/MAILROOM, BUSINESS OFFICE
PL2	PLASTIC LAMINATE	FORMICA	COLOR: FOX 1994-58 POST-FORMED EDGE	TO BE USED FOR VERTICAL SURFACES
PL3	PLASTIC LAMINATE	PIONITE	COLOR: FOLKSTONE GRAY AG241 SUEDE POST-FORMED EDGE	TO BE USED FOR HORIZONTAL SURFACES/MAILROOM
PL4	PLASTIC LAMINATE	FORMICA	COLOR: PENCIL WOOD 7747-58 MATTE FINISH POST-FORMED EDGE	TO BE USED FOR VERTICAL SURFACES

FABRIC-WRAPPED PANELS

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
AP1	FABRIC-WRAPPED ACOUSTICAL WALL PANELS	KINETICS NOISE CONTROL, INC.	KINETICS HARDSIDE FABRIC FACING: GUILFORD OF MAINE PATTERN: BEE HAVE 3948, COLOR: SLATE 2703	MUSIC ROOM

WINDOW COVERINGS

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
WC1	VINYL ROLLER SHADES	MECHO SHADE	PATTERN: EUROTWILL REVERSIBLE WEAVE 6000 SERIES OPEN: 3% COLOR: 6010 NICKEL	CLASSROOMS, OFFICES, LIBRARY
WC2	BLACKOUT ROLLER SHADES	MECHO SHADE	PATTERN: EQUINOX BLACKOUT 0100 SERIES (OPAQUE) OPEN: 0% COLOR: 0106 DUSK	GYMNASIUM

TOILET PARTITIONS

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
TP1	COMPOSITE PLASTIC TOILET PARTITION	SANTANA (SCRANTON)	HINY HIDERS COLOR: GREY TEXTURE: ORANGE PEAL FINISH	BOY'S & GIRL'S TOILET ROOMS

METAL LOCKERS

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
L1	METAL LOCKER, 2 HIGH	LYON	PRODUCT: #GY655-7G COLOR: DOVE GRAY	CLASSROOM CORRIDORS
L2	METAL ADA LOCKER	LYON	PRODUCT: #GY655-7G COLOR: DOVE GRAY	ADA LOCKERS IN CLASSROOM CORRIDORS & SERVICE AREA

WALL CORNER GUARDS

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
CP1	EXTRUDED	TBD	PER SPEC	INTEGRAL WITH GYPSUM HEAVY GAUGE DRYWALL CORNER CONST., AT ALL EXPOSED CORNERS U.N.O.

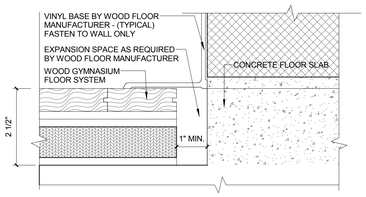
CEILING TILE

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
ACT1	ACOUSTICAL CEILING TILE	CERTAINTEED	PERFORMA SYMPHONY F ITEM: #1322-40F-1, TRIM EDGE SIZE: 24 X 24 X 3/4" NRC: 0.90 CAC: 22 LR: .90	CERTAINTEED 15/16" CLASSIC STAB GRID SYSTEM/CORRIDORS, CLASSROOMS, OFFICES, CONFERENCE ROOMS, ADMIN AND NURSE SUITES, LIBRARY, MUSIC ROOMS, CAFETERIA.
ACT2	ACOUSTICAL CEILING TILE	CERTAINTEED	PERFORMA VINYLROCK ITEM: #1142-CRF-1, TRIM EDGE SIZE: 24 X 24 X 1/2" NRC: 0 CAC: 38 LR: .78	CERTAINTEED 15/16" CLASSIC STAB GRID SYSTEM/FOOD & PREP SERVERY
ACT3	ACOUSTICAL CEILING TILE	CERTAINTEED	PERFORMA SCHOOL BOARD ITEM: #FSB-157, TRIM EDGE SIZE: 24 X 24 X 5/8" NRC: 0.55 CAC: 35 LR: .84	CERTAINTEED 15/16" CLASSIC STAB GRID SYSTEM/STORAGE ROOMS, BACK OF HOUSE

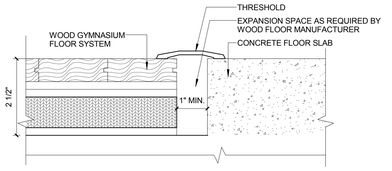
WOOD VENEER DOORS

CODE	MATERIAL	MANUFACTURER	DESCRIPTION	COMMENTS/LOCATION
WD1	VENEER DOORS	ALGOMA	SPECIES: WHITE OAK COLOR: RA-1050	
FRPD1	EXTERIOR FRP DOOR	SPECIAL-LITE	PRODUCT: SL-17 FRP DOOR FRP COLOR: SLATE GREY #5572, PEBBLE GRAIN FINISH FRAME: KYNAR 500 COLOR: SLATE GRAY	

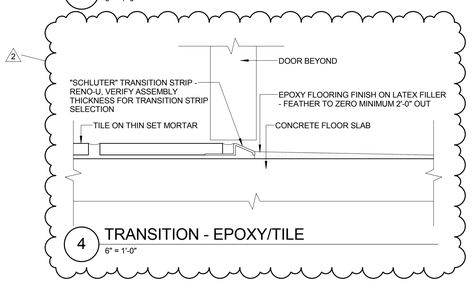
NOTE: SEE SHEET G0201 FOR FLAME SPREAD RATING AND SMOKE DEVELOPED INDEX VALUE OF INTERIOR FINISHES.



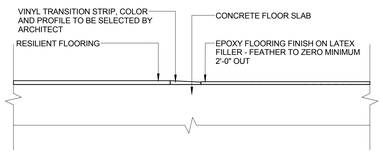
6 TRANSITION - WOOD GYM FLOOR/WALL
6" = 1'-0"



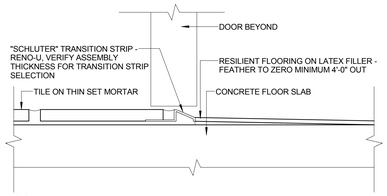
5 TRANSITION - WOOD GYM FLOOR/CONC
6" = 1'-0"



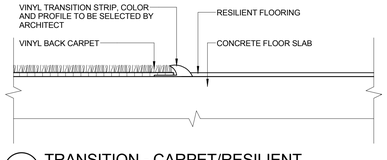
4 TRANSITION - EPOXY/TILE
6" = 1'-0"



3 TRANSITION - RESILIENT/EPOXY
6" = 1'-0"



2 TRANSITION - RESILIENT/TILE
6" = 1'-0"



1 TRANSITION - CARPET/RESILIENT
6" = 1'-0"

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No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

Drawing Title:

ROOM FINISH SCHEDULE & DETAILS

Project No.: 004665.01 Checked by: Checker

A1200

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32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

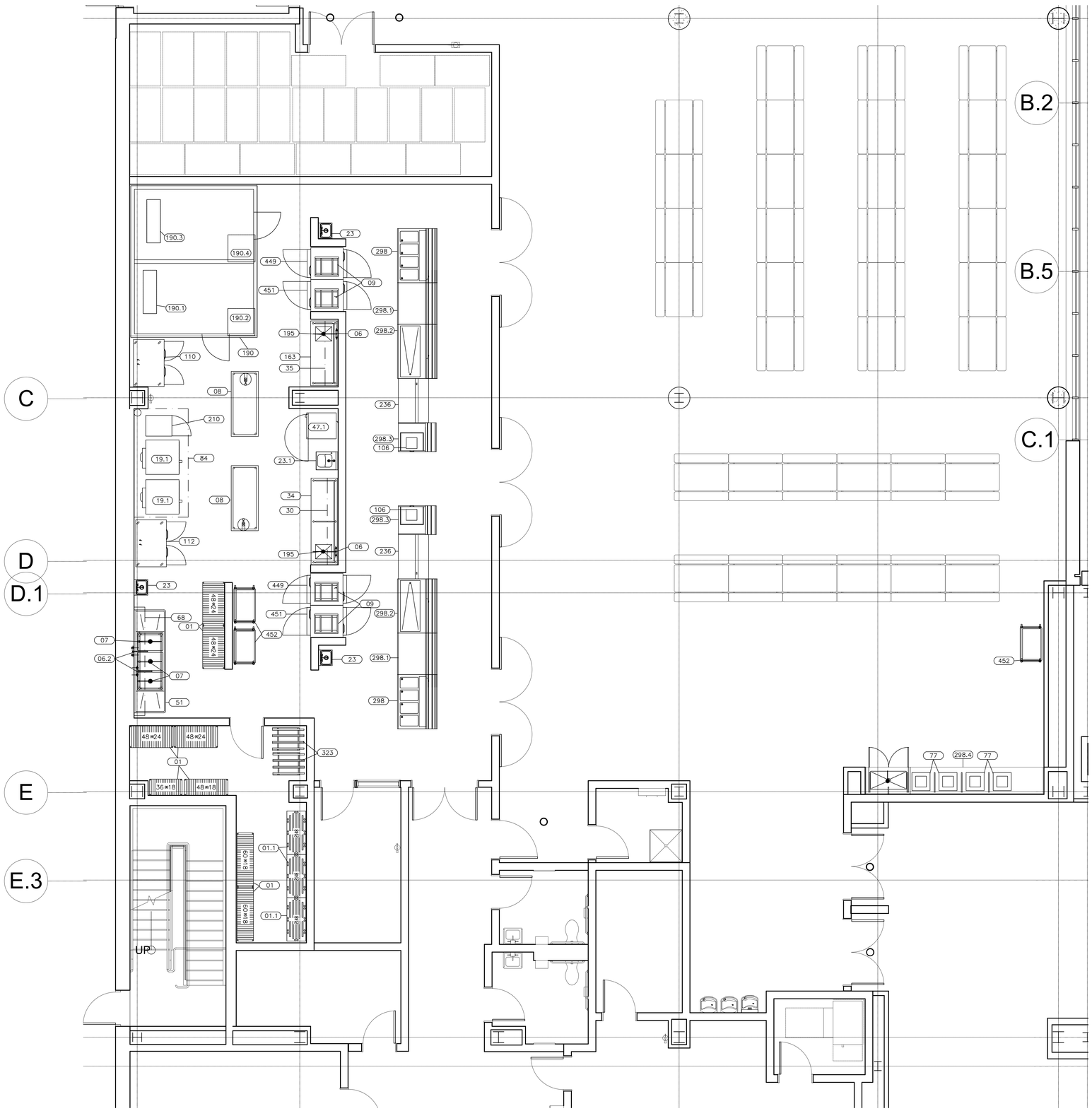
2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"



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5. KITCHEN EQUIPMENT CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS.

2

EQUIPMENT SCHEDULE

ITEM NO	QTY	G.C.PROVIDED & INSTALLED	OWNER/VENDOR PROV./INST.	EQUIPMENT CATEGORY	EQUIPMENT REMARKS
01	6		X	SHELVING UNIT	
01.1	3		X	RACK, DUNNAGE	
06	2	X		FAUCET, BACKSPLASH MOUNT	
06.2	2	X		FAUCET, BACKSPLASH MOUNT	
07	3	X		DRAIN, LEVER HANDLE, W/ OVERFLOW	
08	2		X	MOBILE WORK TABLE	
09	4		X	RACK, ROLL–IN	
19.1	2		X	OVEN, CONVECTION, GAS	DOUBLE STACK
23	3		X	HAND SINK, WALL MOUNT	
23.1	1		X	HAND SINK, WALL MOUNT	ADA
30	1	X		SHELF, WALL MOUNT	
34	1	X		WORKTABLE W SINK	
35	1	X		SHELF, WALL MOUNT	
47.1	1		X	CABINET, MOBILE, WARMING & HOLDING	
51	1		X	SINK, SCULLERY, 3 COMPARTMENTS	
68	1	X		SHELF, WALL MOUNT	
77	4		X	TRASH CAN	
84	1	X		EXHAUST HOOD–TYPE II	
106	2		X	CASH REGISTER/POS SYSTEM	
110	1	X		REFRIGERATOR, REACH–IN	
112	1	X		FREEZER, REACH–IN	
163	1	X		TABLE, WORK	
190	1	X		WALK–IN COOLER/FREEZER	
190.1	1	X		EVAPORATOR COIL–COOLER	
190.2	1	X		COMPRESSOR–COOLER	
190.3	1	X		EVAPORATOR COIL–FREEZER	
190.4	1	X		COMPRESSOR–FREEZER	
195	2	X		DRAIN, LEVER HANDLE	
210	2		X	STEAMER	
236	2		X	MILK COOLER	
298	2		X	HOT FOOD COUNTER	
298.1	2		X	BUFFET/CAFETERIA, FLAT TOP	
298.2	2		X	BUFFET/CAFETERIA, COLD FOOD STATION	
298.3	2		X	BUFFET/CAFETERIA, CASHIER STATION	
298.4	1	X		TRASH COUNTER WITH SINK	
323	2		X	RACK, CAN	
449	2	X		REFRIGERATOR, ROLL–IN	
451	2	X		CABINET, HEATED, ROLL–IN	
452	3		X	UTILITY CART	

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Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

PUBLIC BUILDING COMMISSION • CHICAGO
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No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

N

KEY PLAN

Drawing Title:

FOODSERVICE EQUIPMENT LAYOUT AND SCHEDULE

Project No.: 004665.01 Checked by: Checker

FS0001

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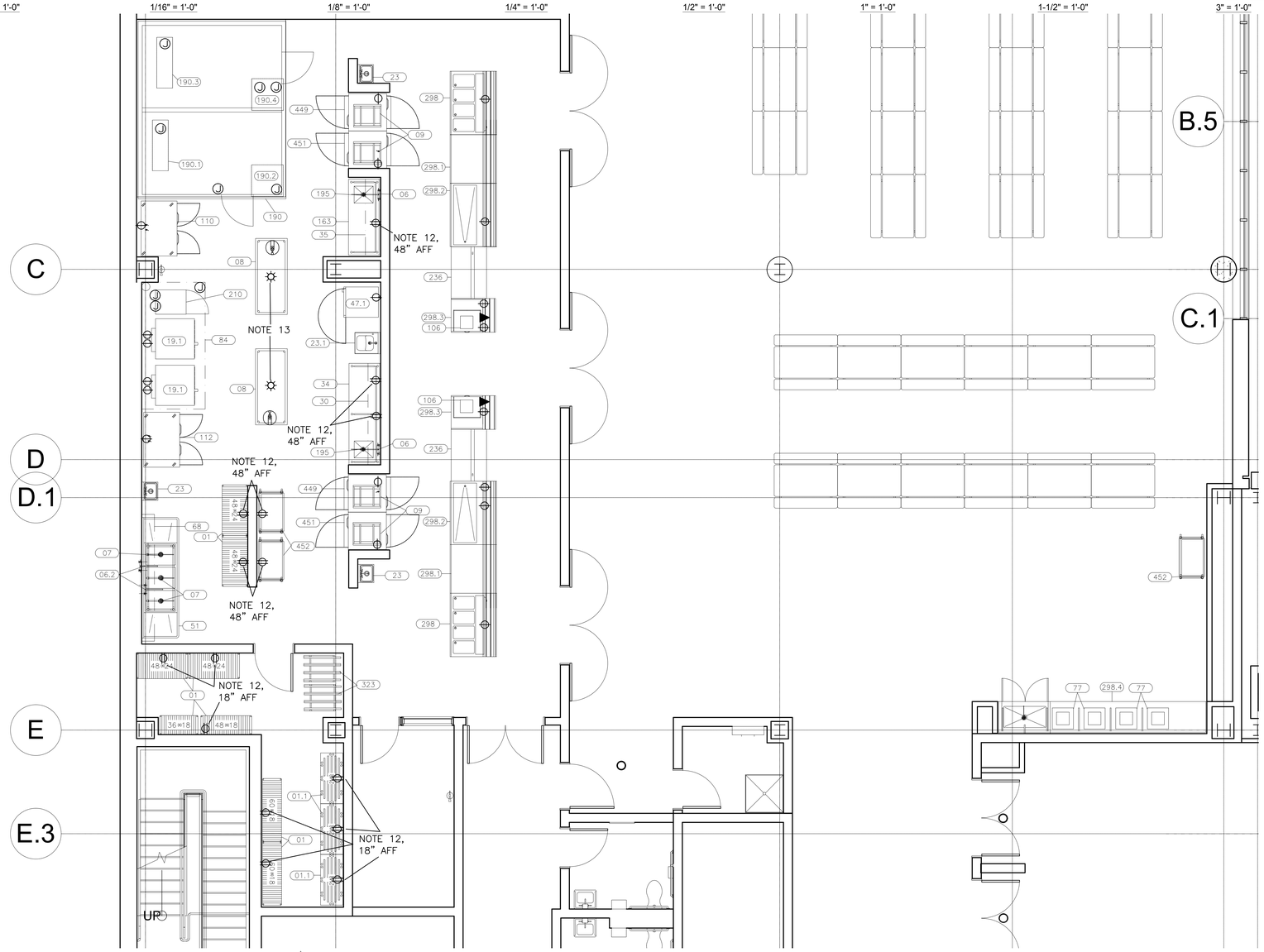
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



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5. KITCHEN EQUIPMENT CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS.

ELECTRICAL SYMBOLS

- $ SWITCH
- $3 3 WAY SWITCH
- SINGLE OUTLET 110 V.
- DUPLEX OUTLET 110 V.
- DOUBLE DUPLEX OUTLET 110 V.
- CEILING MOUNT FIXTURE
- JUNCTION BOX
- PHONE OUTLET
- DATA OUTLET
- POWER FEED JUMPER
- FLOURECENT LIGHT (SIZE OF FIXTURE VARIES)

ELECTRICAL NOTES

TO BE PROVIDED BY ELECTRICAL CONTRACTOR

1. DRAWING SHOWS CONNECTION POINTS ON EQUIPMENT. ROUGH-IN POINTS ARE NOT THE SAME AND ALLOWANCES SHALL BE MADE FOR DISCONNECTS, ACCESS, ETC. ALL ROUGH-INS AND CONNECTIONS SHALL BE PER APPLICABLE CODE.
2. DRAWING SHOWS REQUIREMENTS FOR FOOD SERVICE EQUIPMENT ONLY; SEE ELECTRIC DRAWINGS FOR ADDITIONAL INFORMATION.
3. ALL CONDUITS, BOXES, ETC. SHALL BE CONCEALED WITHIN WALLS AND STUBBED OUT AS CLOSE AS POSSIBLE TO THE CONNECTION POINT. DO NOT RUN EXPOSED ON THE WALL.
4. CONDUIT EXPOSED ABOVE THE WORKING SURFACE OF THE EQUIPMENT SHALL BE STAINLESS STEEL, CHROME PLATED, OR SHROUDED IN A STAINLESS STEEL COVER.
5. NOT USED
6. THE EXTINGUISHING SYSTEM REQUIRES AN EMPTY J-BOX AT THE EXIT FROM THE HAZARD AREA FOR INSTALLATION OF THE REMOTE PULL. REMOTE PULL TO BE FURNISHED AND INSTALLED AS PART OF THE EXTINGUISHING SYSTEM PACKAGE.
7. INTERCONNECT EXTINGUISHING SYSTEM TO SHUNT TRIP BREAKERS AND REMOTE NOTIFICATION, PER REQUIREMENTS OF NFPA 96.
8. NOT USED
9. CASH REGISTERS AND SIMILAR COMPUTERIZED POINT-OF-SALE EQUIPMENT REQUIRE CLEAN, ISOLATED SERVICE.
10. PROVIDE CAT 6 CABLE BETWEEN CASH REGISTERS, POINT-OF-SALE UNITS AND CENTRAL LOCATION.
11. NOT USED
12. PROVIDE DUPLEX CONVENIENCE OUTLET (DCO), 120/1, 20 AMPS AT HEIGHT INDICATED.

ELECTRIC LOAD SCHEDULE

ITEM NO	QTY	EQUIPMENT REMARKS	G.C. PROVIDED & INSTALLED	OWNER/VENDOR PROV./INST.	EQUIPMENT CATEGORY	AMPS	KW	HP	VOLTS	PHASE	DIRECT	PLUG	NEMA	ELECTRICAL AFF (IN)	ELEC REMARKS
08	2			X	MOBILE WORK TABLE	16.0			120	1		X	5-20P	78	CONVENIENCE OUTLET - PENDENT RECEPTACLE
19.1	2	DOUBLE STACK		X	OVEN, CONVECTION, GAS	9.0		0.5	120	1		X	5-20P	17	
						9.0		0.5	120	1		X	5-20P	34	
34	1		X		WORK TABLE W SINK	(2)16			120			X	5-20P	48	DR-CONVENIENCE OUTLET ON WALL
47.1	1			X	CABINET, MOBILE, WARMING & HOLDING	12.5			120	1		X	5-20P	12	
84	1		X		EXHAUST HOOD-TYPE II	15.0			120	1	X			86	LIGHTS/FAN
106	2			X	CASH REGISTER/POS SYSTEM	5.0			120	1		X	5-20P	24	DATA REQ'D, DEDICATED RECEPTACLE REQ'D
110	1		X		REFRIGERATOR, REACH-IN	9.1		0.5	120	1		X	5-20P	82	
112	1		X		FREEZER, REACH-IN	9.5		0.5	120	1		X	5-20P	82	
163	1		X		TABLE, WORK	16.0			120	1		X	5-20P	48	
190	1		X		WALK-IN COOLER/FREEZER	(2)16			120	1	X			102	LIGHTS/ALARM
190.1	1		X		EVAPORATOR COIL-COOLER	16.0			208	3	X			96	
190.2	1		X		COMPRESSOR-COOLER			2.0	208	3	X			102	
190.3	1		X		EVAPORATOR COIL-FREEZER	16.0			208	1	X			96	
190.4	1		X		COMPRESSOR-FREEZER			3.5	208	3	X			102	
210	2			X	STEAMER		14.0		208	3		X	15-50P	36	
236	2			X	MILK COOLER	5.0			120	1		X	5-20P	4	
298	2			X	HOT FOOD COUNTER	17.3	4.8		208	1		X	L6-30P	4	
298.2	2			X	BUFFET/CAFETERIA, COLD FOOD STATION	6.0		0.25	120	1		X	5-20P	4	
298.3	2			X	BUFFET/CAFETERIA, CASHIER STATION				120	1		X	5-20P	4	
449	2		X		REFRIGERATOR, ROLL-IN	8.9		0.33	115	1		X	5-20P	82	
451	2		X		CABINET, HEATED, ROLL-IN		2.0		120/208	1		X	14-20P	82	

FIRE EXTINGUISHING SYSTEM NOTES - ELECTRIC

A. INTERCONNECT EXHAUST HOOD CONTROL AND MICRO SWITCH TO SHUT OFF FAN IN EVENT OF SYSTEM ACTUATION.
B. INTERCONNECT SHUNT TRIP CONTROL AND MICRO SWITCH TO SHUT OFF POWER TO EQUIPMENT UNDER THE EXHAUST HOOD.
C. INTERCONNECT MICRO SWITCH TO REMOTE NOTIFICATION LOCATION PER NFPA 96.

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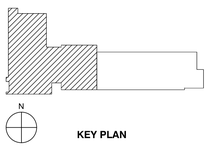

KEY PLAN

Drawing Title:

FOODSERVICE EQUIPMENT ELECTRIC SPOT PLAN AND SCHEDULE

Project No.: 004665.01 Checked by: Checker

FS0002

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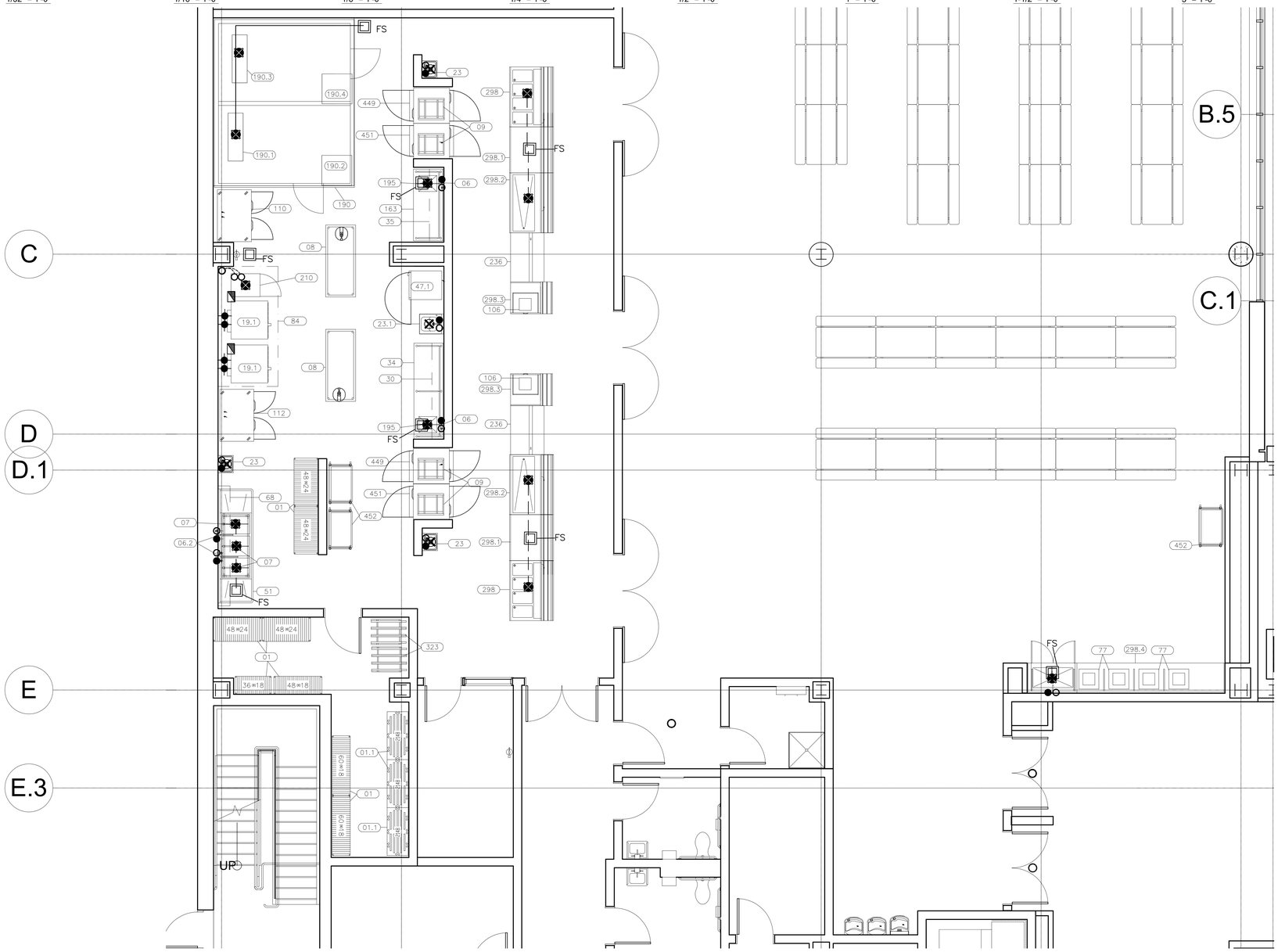
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



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3. GENERAL CONTRACTOR SHALL PROVIDE A MEANS TO EVACUATE HEAT GENERATED BY FOODSERVICE EQUIPMENT WITHIN ENCLOSED SPACE(S).
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL BLOCKING IN WALLS FOR MOUNTING WALL SHELVES, POT RACKS, DISPLAY CASES, HOSE REEL(S), HAND SINKS, CONTROL PANELS, ETC. AS SHOWN ON PLAN(S).
5. KITCHEN EQUIPMENT CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS.

MECHANICAL SYMBOLS

- HOT WATER
- COLD WATER
- INDIRECT WASTE
- DIRECT WASTE
- GAS CONNECTION
- COOLING WATER TOWER
- COOLING WATER TOWER RETURN
- STEAM SUPPLY
- CONDENSATE RETURN
- FLOOR SINK
- FUNNEL FLOOR DRAIN
- AREA FLOOR DRAIN
- COMPRESSED AIR
- REFRIGERATION LINE
- EXHAUST DUCT
- SUPPLY DUCT
- WATER FILTER INTERCONNECT

MECHANICAL NOTES

THESE NOTES APPLY TO THE WORK OF THE MECHANICAL AND PLUMBING TRADES.

1. DRAWING SHOWS CONNECTION POINTS ON EQUIPMENT. ROUGH-IN POINTS ARE NOT THE SAME AND ALLOWANCES SHALL BE MADE FOR VALVES, STOPS, ACCESS, ETC. ALL ROUGH-INS AND CONNECTIONS SHALL BE PER APPLICABLE CODE.
2. DRAWING SHOWS REQUIREMENTS FOR FOOD SERVICE EQUIPMENT ONLY; SEE MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
3. ALL PIPE, FITTINGS, ETC. SHALL BE CONCEALED WITHIN WALLS AND STUBBED OUT AS CLOSE AS POSSIBLE TO THE CONNECTION POINT. DO NOT RUN EXPOSED ON THE WALL.
4. PIPING EXPOSED ABOVE THE WORKING SURFACE OF THE EQUIPMENT SHALL BE STAINLESS STEEL, CHROME PLATED, OR SHROUDED IN A STAINLESS STEEL COVER.
5. ALL PIPING SHALL BE AT LEAST 6" ABOVE THE FLOOR TO ALLOW FOR EASE OF CLEANING.

6.-9. NOT USED

10. WE RECOMMEND CENTRAL GREASE TRAPS EXTERNAL OF THE BUILDING CODE OR FOOD-SERVICE SPACE. IF THIS IS NOT POSSIBLE, THEN RECESSED, POINT-OF-USE GREASE TRAPS ARE PERMITTED; COORDINATE LOCATION WITH KITCHEN DESIGNER.
11. REFRIGERATED EQUIPMENT IS DESIGNED FOR OPERATION IN AN AMBIENT TEMPERATURE NOT EXCEEDING 100 DEGREES FAHRENHEIT. AIR COOLED EQUIPMENT REQUIRES VENTILATION AT 1,000 CFM PER HORSEPOWER; WATER-COOLED EQUIPMENT REQUIRES COOLING WATER AT 70 DEGREES FAHRENHEIT AT THE RATE OF 1.5 GPM PER HORSEPOWER.

DISCLAIMER

THIS DRAWING IS PREPARED FOR THE USE OF THE DESIGN TEAM IN PREPARING THEIR RESPECTIVE DOCUMENTS; AND FOR BIDDING OF THE FOOD SERVICE EQUIPMENT. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION AND FOR ROUGHING IN OF SERVICES. DIMENSIONED ROUGHING IN DRAWINGS WILL BE PREPARED BY THE KITCHEN EQUIPMENT CONTRACTOR.

2

MECHANICAL LOAD SCHEDULE

ITEM NO	QTY	EQUIPMENT REMARKS	G.C. PROVIDED & INSTALLED	OWNER/VENDOR PROV./INST.	EQUIPMENT CATEGORY	COLD WATER SIZE (IN)	COLD WATER AFF (IN)	HOT WATER SIZE (IN)	HOT WATER AFF (IN)	DIRECT DRAIN SIZE (IN)	DIRECT DRAIN AFF (IN)	INDIR DRAIN SIZE (IN)	INDIR DRAIN AFF (IN)	GAS SIZE (IN)	MBTUH	GAS AFF (IN)	PLUMBING REMARKS	HVAC EXHAUST DUCT SIZE (IN)	HVAC EXHAUST CFM	HVAC EXHAUST SPWG	HVAC EXHAUST AFF (IN)
06	2		X		FAUCET, BACKSPLASH MOUNT	0.5	40	0.5	40												
06.2	2		X		FAUCET, BACKSPLASH MOUNT	0.5	38	0.5	38												
07	3		X		DRAIN, LEVER HANDLE, W/ OVERFLOW							2					FS REQ'D				
19.1	2	DOUBLE STACK		X	OVEN, CONVECTION, GAS									0.75	50	14.5					
				X										0.75	50	35					
23	3			X	HAND SINK, WALL MOUNT	0.5	24	0.5	24	1.5	24										
23.1	1	ADA		X	HAND SINK, WALL MOUNT	0.5	24	0.5	24	1.5	20										
51	1			X	SINK, SCULLERY, 3 COMPARTMENTS							X					DRAIN THORUGH GREASE TRAP				
84	1		X		EXHAUST HOOD-TYPE II													10"DIA	750	.113	102
			X															10"DIA	750	.113	102
190.3	1		X		EVAPORATOR COIL-FREEZER							1					FS REQ'D				
195	2		X		DRAIN, LEVER HANDLE							2					FS REQ'D				
210	2			X	STEAMER	0.75	36					1.0					FS REQ'D				
298	2			X	HOT FOOD COUNTER							0.5					FS REQ'D				
298.2	2			X	BUFFET/CAFETERIA, COLD FOOD STATION							1					FS REQ'D				
298.4	1		X		TRASH COUNTER WITH SINK	0.5	34	0.5	34			1.5					FS REQ'D				

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No.	Description	Date
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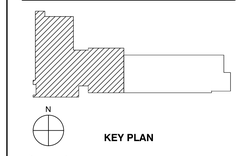
1	ISSUED FOR BID	JUNE 7, 2017



KEY PLAN

Drawing Title:

FOODSERVICE EQUIPMENT MECHANICAL SPOT PLAN AND SCHEDULE

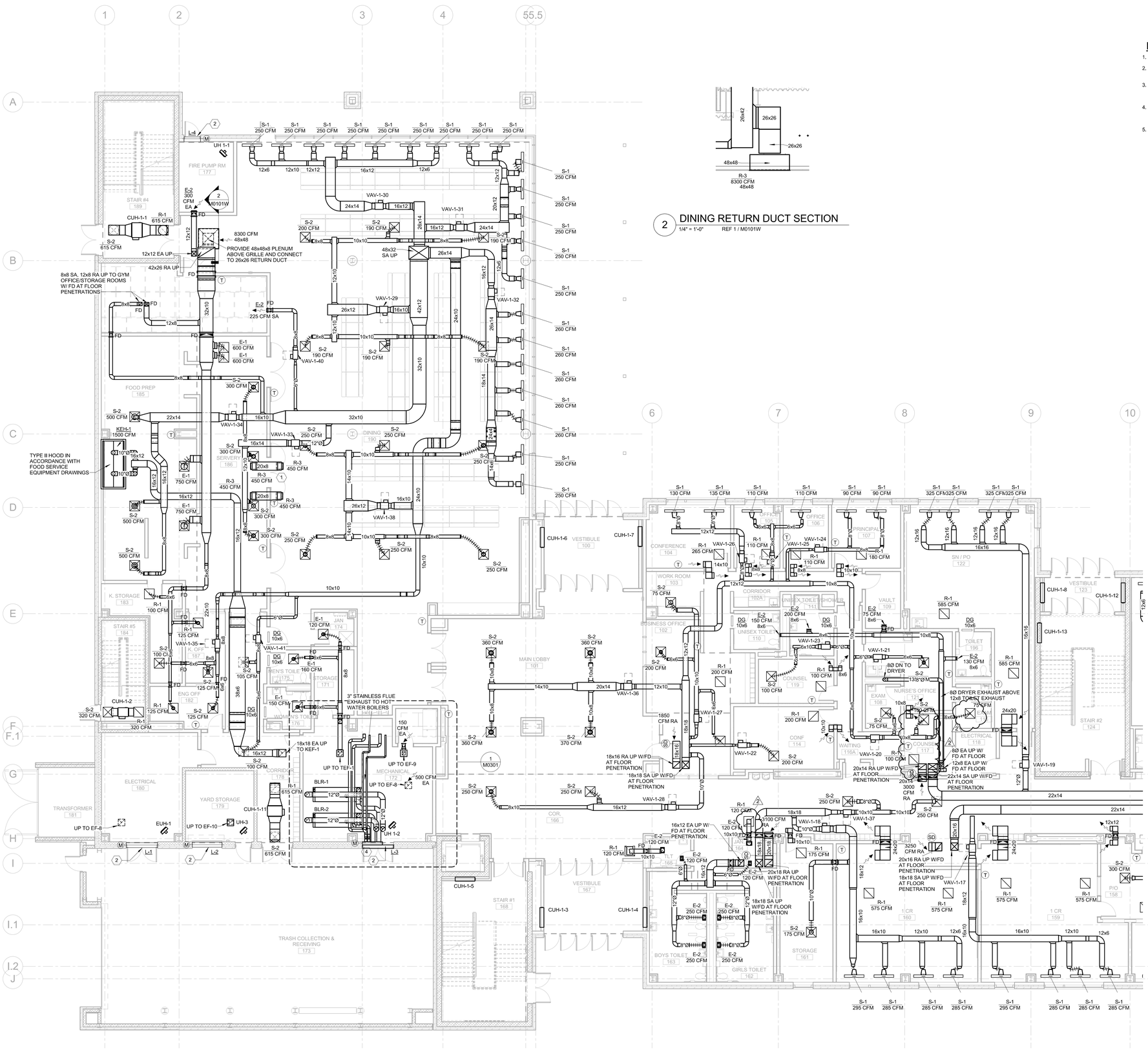
Project No.: 004665.01 Checked by: Checker

FS0003

KEYED NOTES

1. PROVIDE TRANSFER DUCTS FROM DINING TO SERVERY.
2. PROVIDE MOTORIZED DAMPER BEHINDD LOUVER. LOUVERS ARE PART OF DOOR ASSEMBLY PROVIDED BY ARCHITECT.
3. PROVIDE MOTOR OPERATED DAMPER FOR KITCHEN RETURN. DUCT TO CEILING RETURN GRILLES IN THE SERVERY.
4. PROVIDE 36x12x10 PLENUM BEHIND LOUVER AND CONNECT SEALED COMBUSTION AIR DUCT TO BOILERS AND WATER HEATERS AS SHOWN.
5. AIR TRANSFER DUCT WITH FIRE DAMPER. TYPICAL FOR ALL ROOMS WITH FULL HEIGHT RATED WALLS.

2 DINING RETURN DUCT SECTION
1/4" = 1'-0" REF 1 / M0101W



1 GROUND HVAC DUCTWORK AREA PLAN AREA PLAN - WEST
1/8" = 1'-0"

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1	ISSUED FOR BID	JUNE 7, 2017

KEY PLAN

Drawing Title:

GROUND HVAC DUCTWORK AREA PLAN AREA PLAN - WEST

Project No.: 004665.01 Checked by: KH

M0101W

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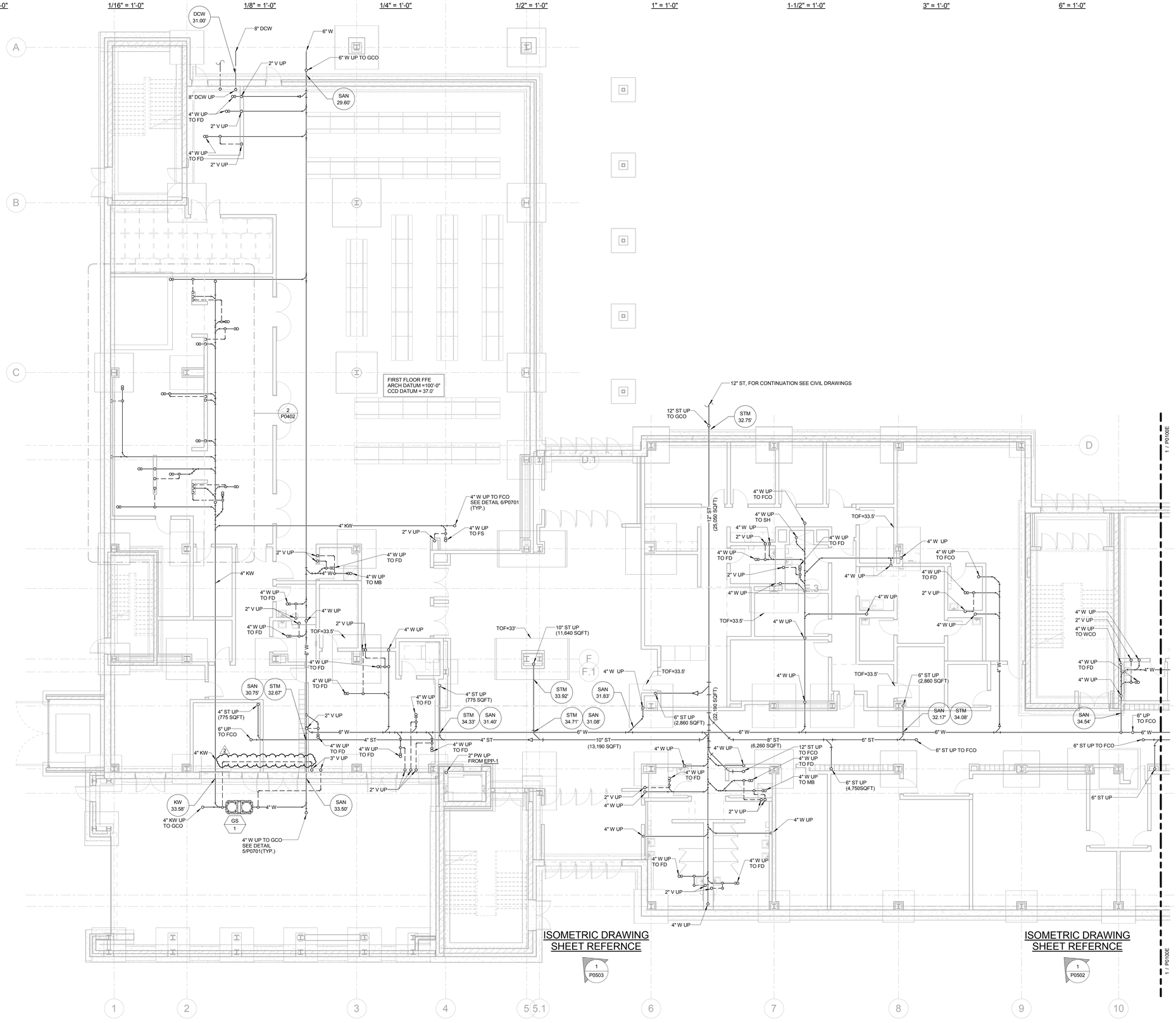

1 UNDERGROUND PLUMBING PLAN - WEST
1/8" = 1'-0"

Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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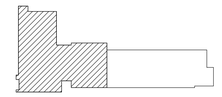

N

KEY PLAN

Drawing Title:

UNDERGROUND PLUMBING PLAN - WEST

Project No.: 4665.01 Checked by: BT

P0100W

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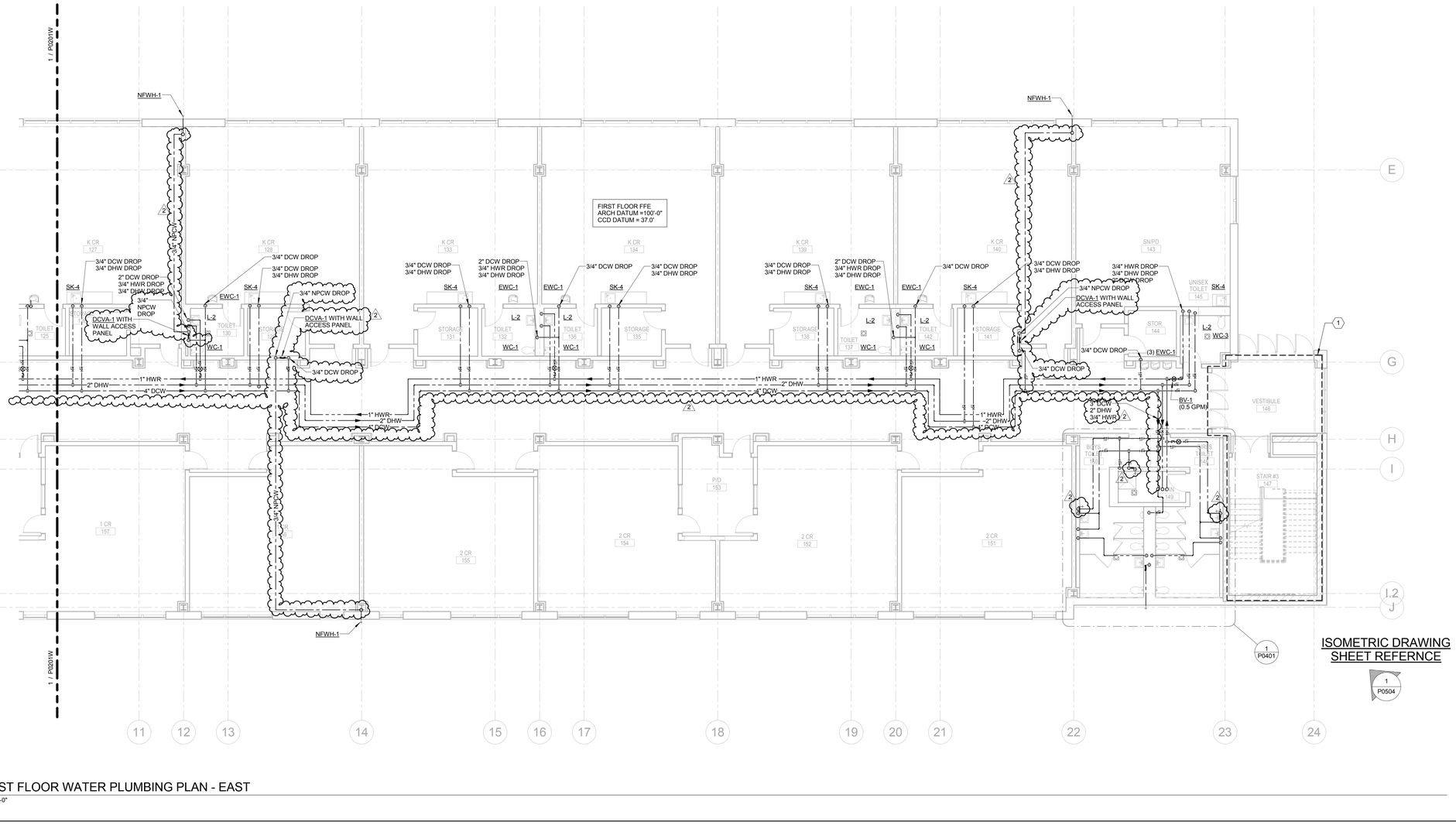
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"

KEY NOTES:

1. DO NOT ROUTE PLUMBING PIPING THROUGH THIS AREA.



1 FIRST FLOOR WATER PLUMBING PLAN - EAST
1/8" = 1'-0"

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No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

KEY PLAN

Drawing Title:

FIRST FLOOR DOMESTIC WATER PLUMBING PLAN - EAST

Project No.: 4665.01 Checked by: BT

P0201E

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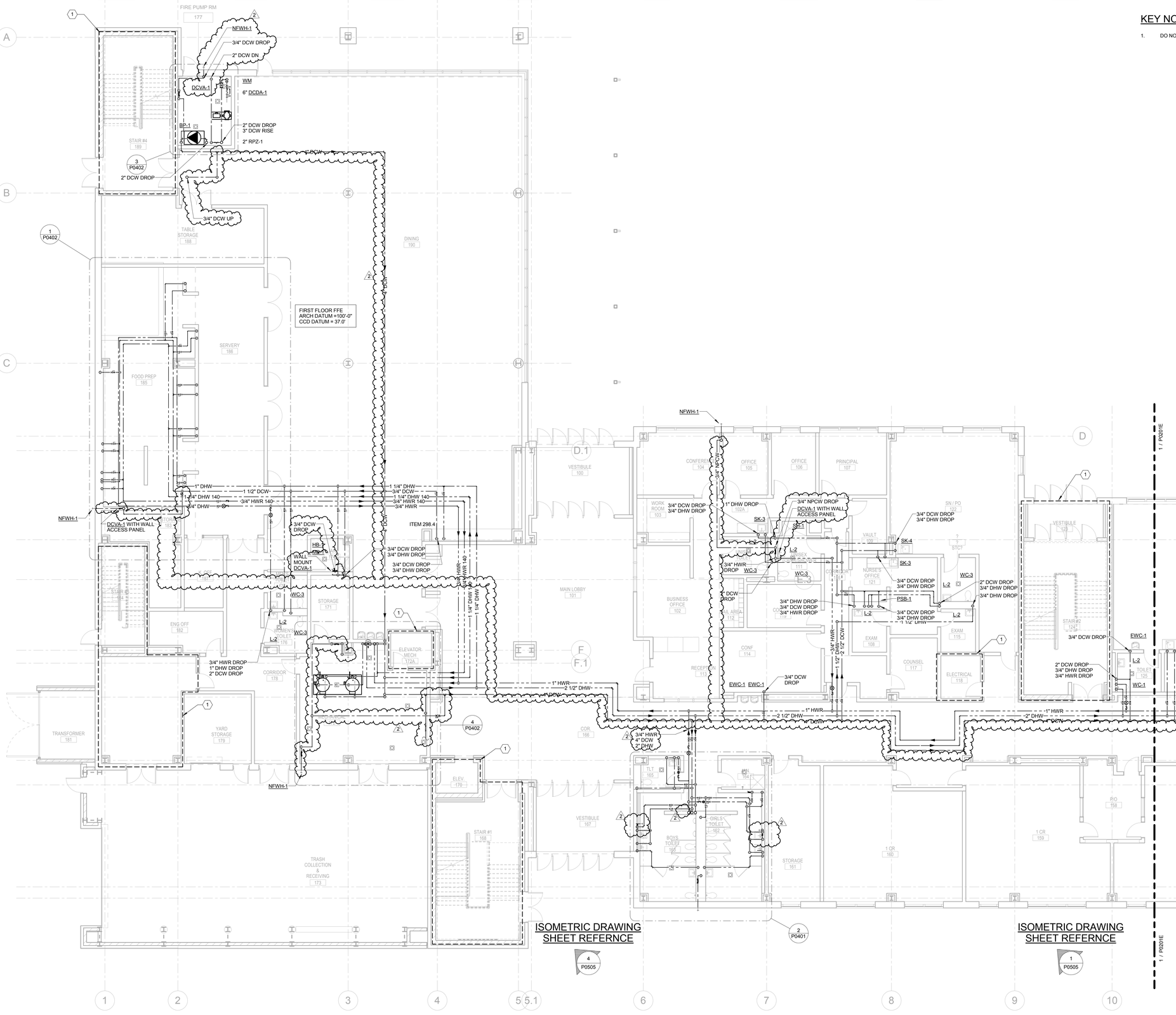
32'-0" 0'-0" 16'-0" 32'-0" 64'-0" 1/32" = 1'-0"
16'-0" 0'-0" 8'-0" 16'-0" 32'-0" 1/16" = 1'-0"
8'-0" 0'-0" 4'-0" 8'-0" 16'-0" 1/8" = 1'-0"
4'-0" 0'-0" 2'-0" 4'-0" 8'-0" 1/4" = 1'-0"
2'-0" 0'-0" 1'-0" 2'-0" 4'-0" 1/2" = 1'-0"
1'-0" 0'-0" 0'-6" 1'-0" 2'-0" 1" = 1'-0"
0'-0" 0'-6" 1'-0" 2'-0" 1-1/2" = 1'-0"
0'-0" 0'-3" 0'-6" 0'-9" 1'-0" 3" = 1'-0"
0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6" 6" = 1'-0"



KEY NOTES:

1. DO NOT ROUTE PLUMBING PIPING THROUGH THIS AREA.

1 FIRST FLOOR WATER PLUMBING PLAN - WEST
1/8" = 1'-0"

Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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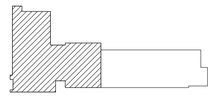

KEY PLAN

Drawing Title:

FIRST FLOOR DOMESTIC WATER PLUMBING PLAN - WEST

Project No.: 4665.01 Checked by: BT

P0201W

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1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"

KEY NOTES:

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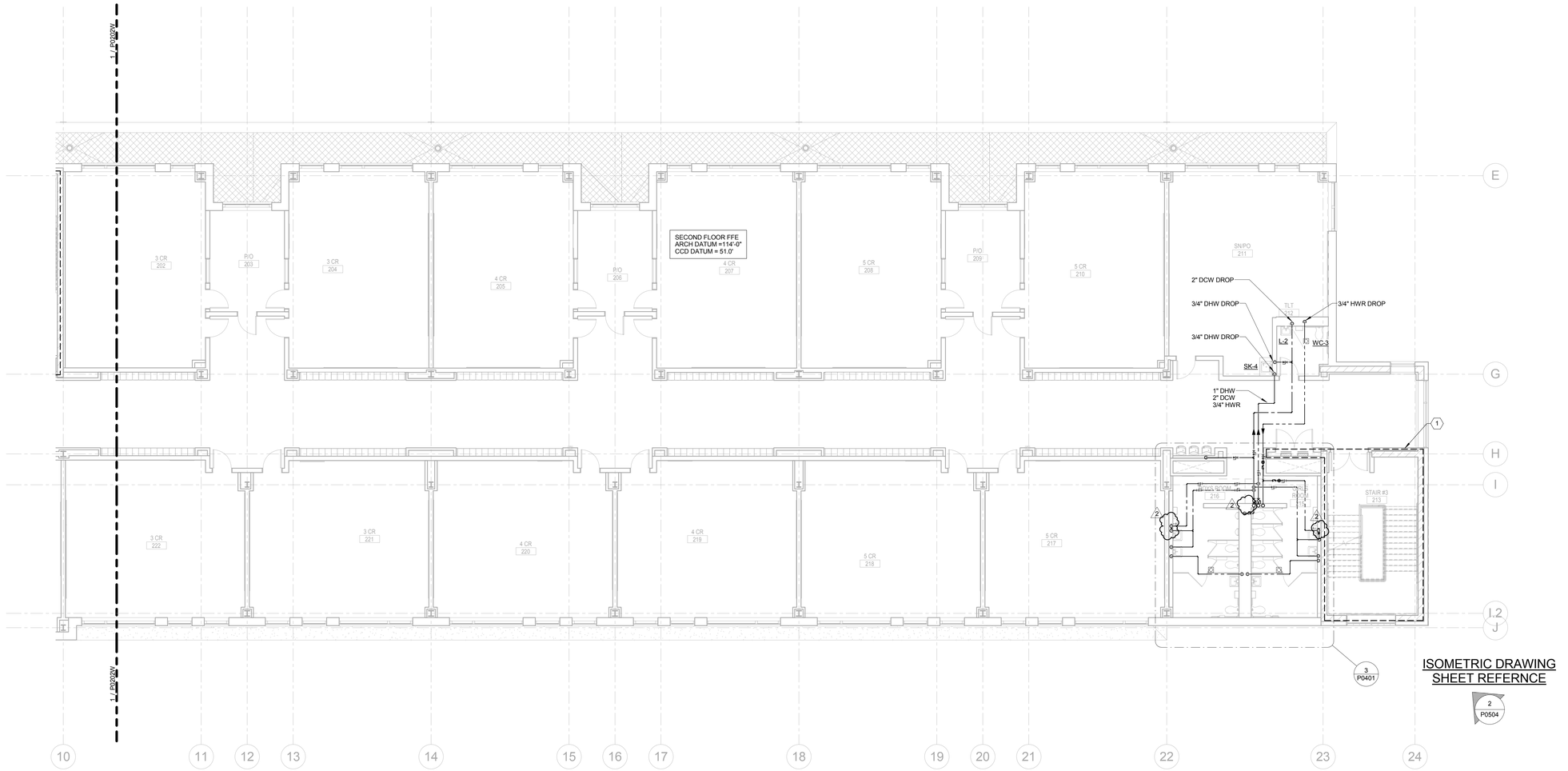

1 SECOND FLOOR DOMESTIC WATER PLUMBING PLAN - EAST

1/8" = 1'-0"

6/23/2017 10:49:55 AM

Date of Issue: June 28, 2017
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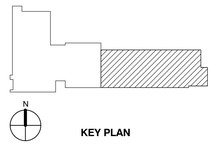

KEY PLAN

Drawing Title:

SECOND FLOOR DOMESTIC WATER PLUMBING PLAN - EAST

Project No.: 4665.01 Checked by: BT

P0202E

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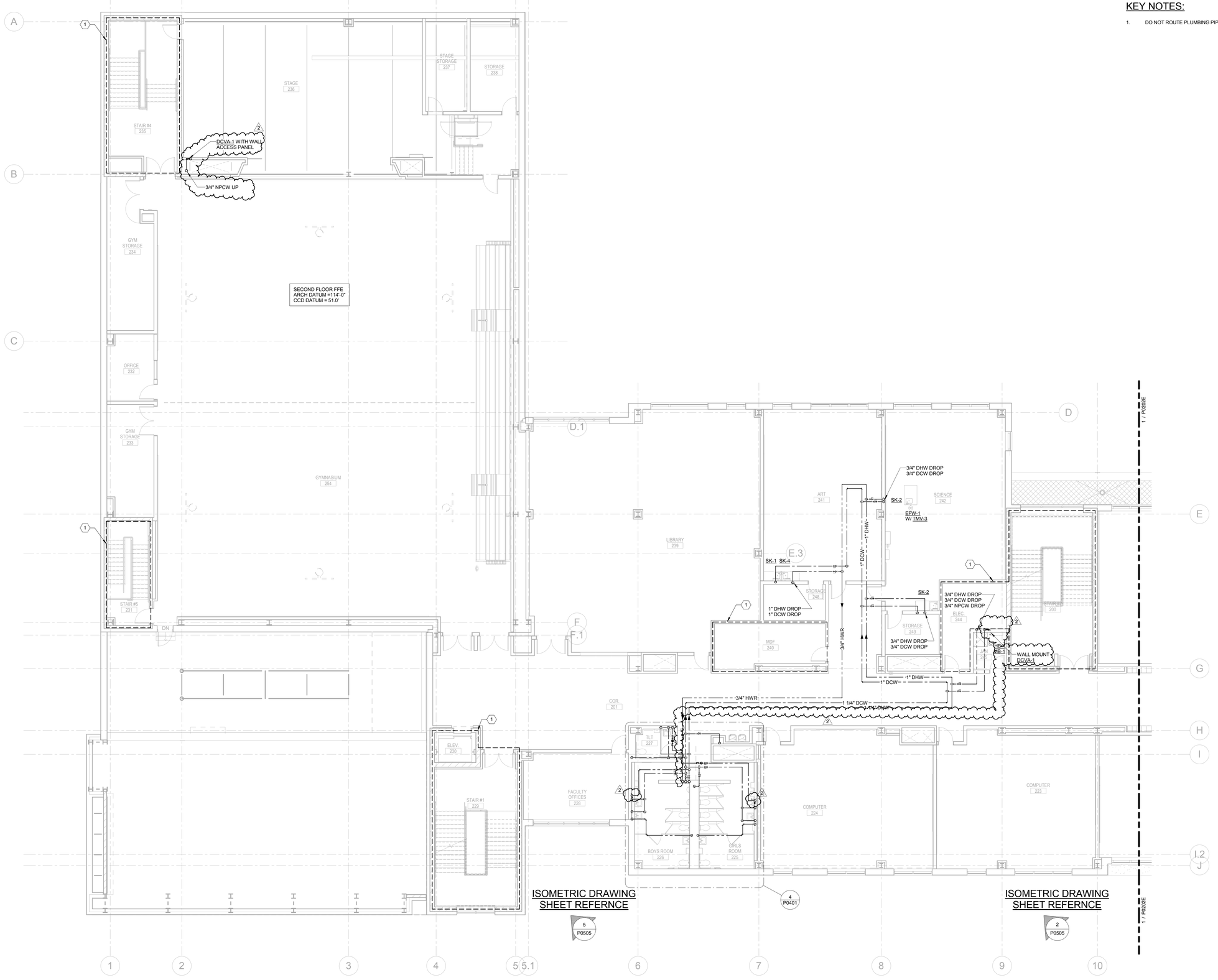

KEY NOTES:

1. DO NOT ROUTE PLUMBING PIPING THROUGH THIS AREA.

1 SECOND FLOOR DOMESTIC WATER PLUMBING PLAN - WEST
1/8" = 1'-0"

Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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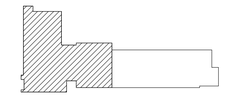


N

KEY PLAN

Drawing Title:

SECOND FLOOR DOMESTIC WATER PLUMBING PLAN - WEST

Project No.: 4665.01 Checked by: BT

P0202W

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

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

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

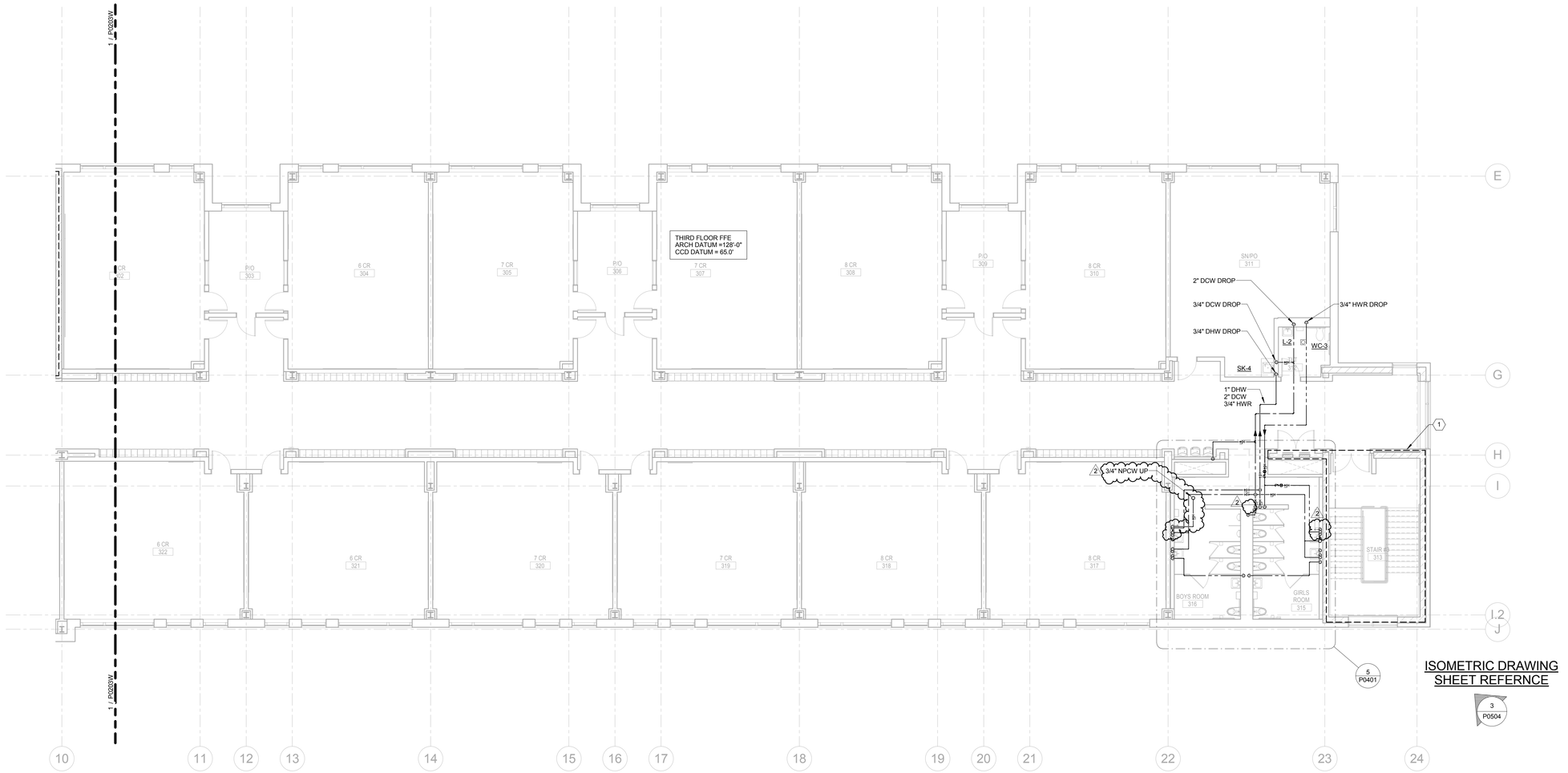
0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

KEY NOTES:

1. DO NOT ROUTE PLUMBING PIPING THROUGH THIS AREA.



ISOMETRIC DRAWING SHEET REFERNCE

1 THIRD FLOOR DOMESTIC WATER PLUMBING PLAN - EAST
1/8" = 1'-0"

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No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

N

KEY PLAN

Drawing Title:

THIRD FLOOR DOMESTIC WATER PLUMBING PLAN - EAST

Project No.: 4665.01 Checked by: BT

P0203E

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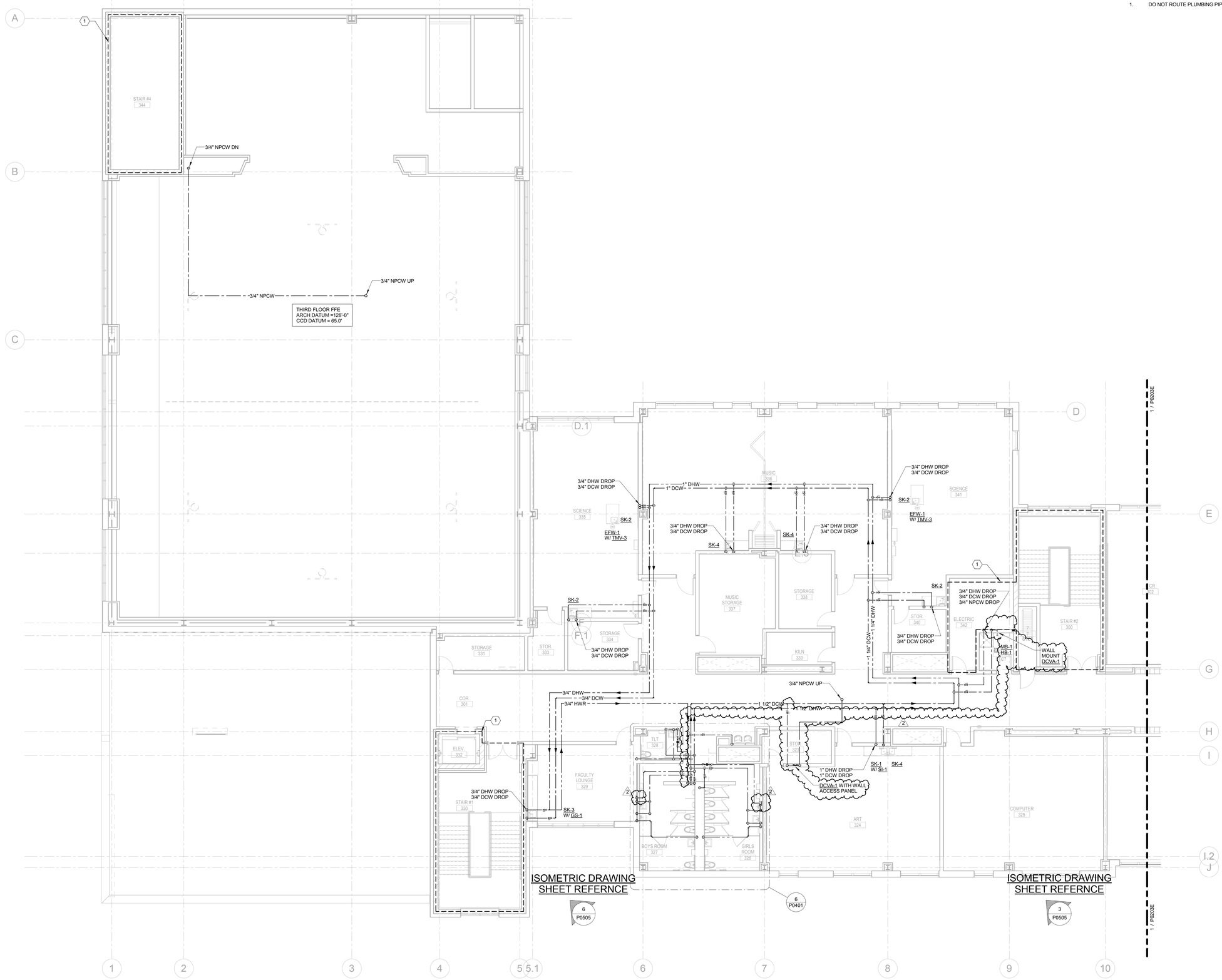
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"

KEY NOTES:

1. DO NOT ROUTE PLUMBING PIPING THROUGH THIS AREA.



1 THIRD FLOOR DOMESTIC WATER PLUMBING PLAN - WEST
1/8" = 1'-0"

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Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

KEY PLAN

Drawing Title:

THIRD FLOOR DOMESTIC WATER PLUMBING PLAN - WEST

Project No.: 4665.01 Checked by: BT

P0203W

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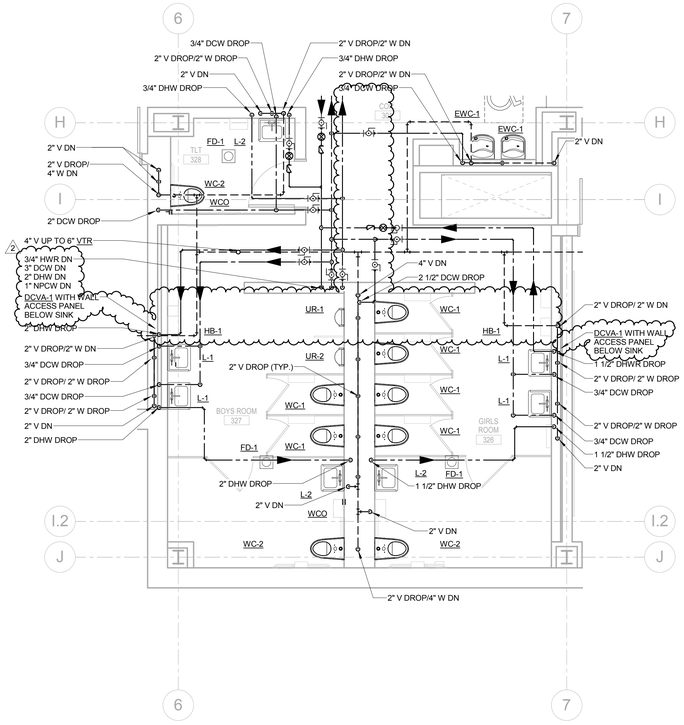
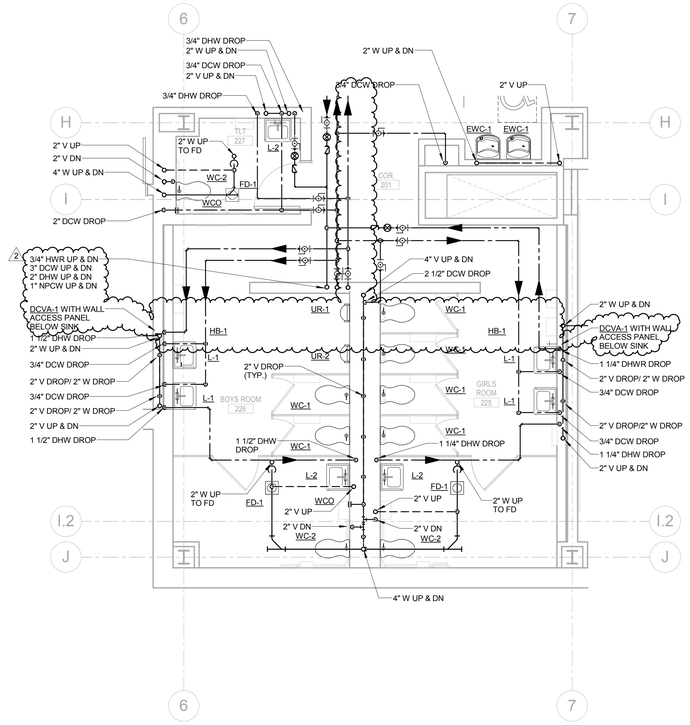
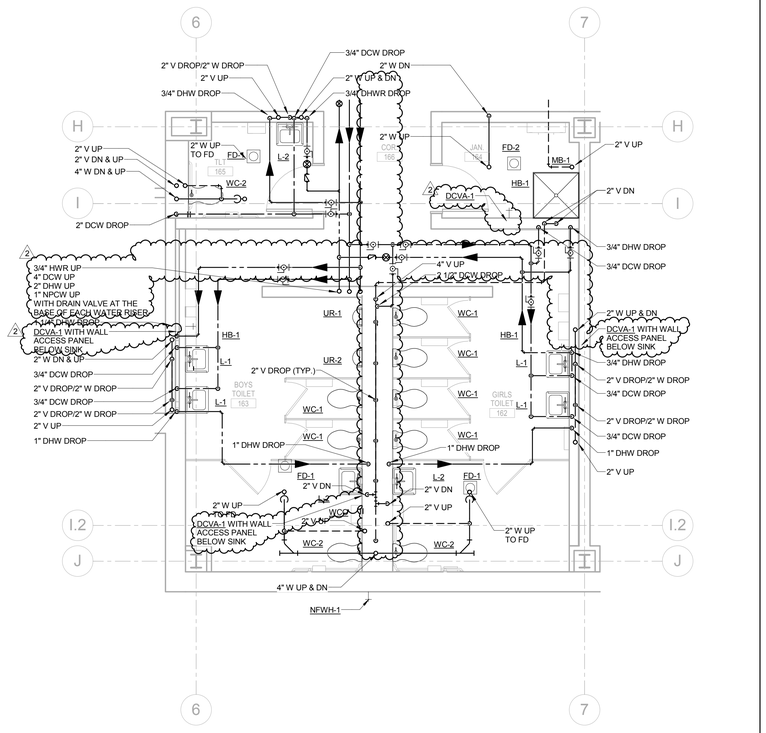


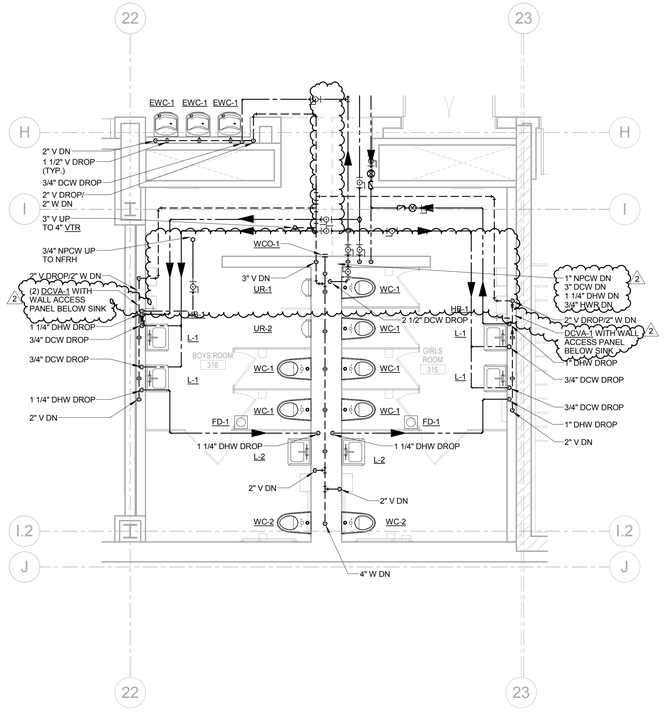
6 ENLARGED SW TOILET ROOMS LEVEL 03 FLOOR PLAN
1/4" = 1'-0"



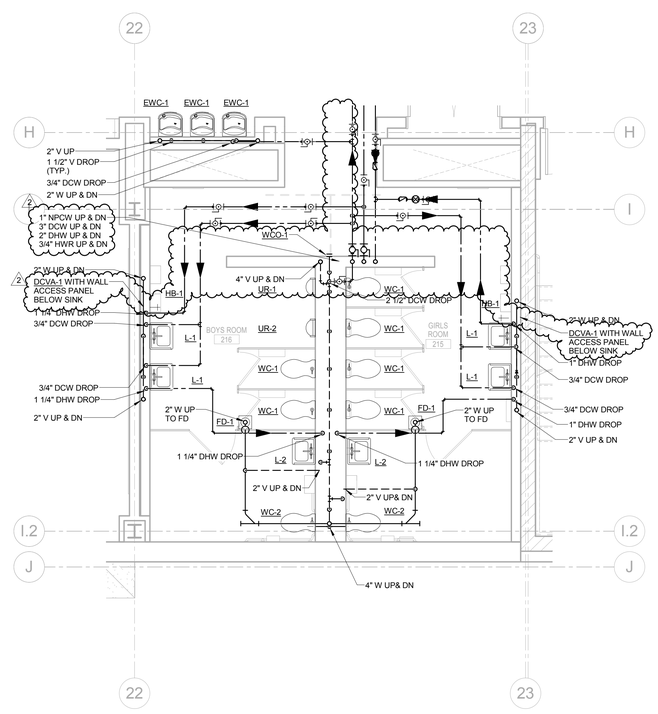
4 ENLARGED SW TOILET ROOMS LEVEL 02 FLOOR PLAN
1/4" = 1'-0"



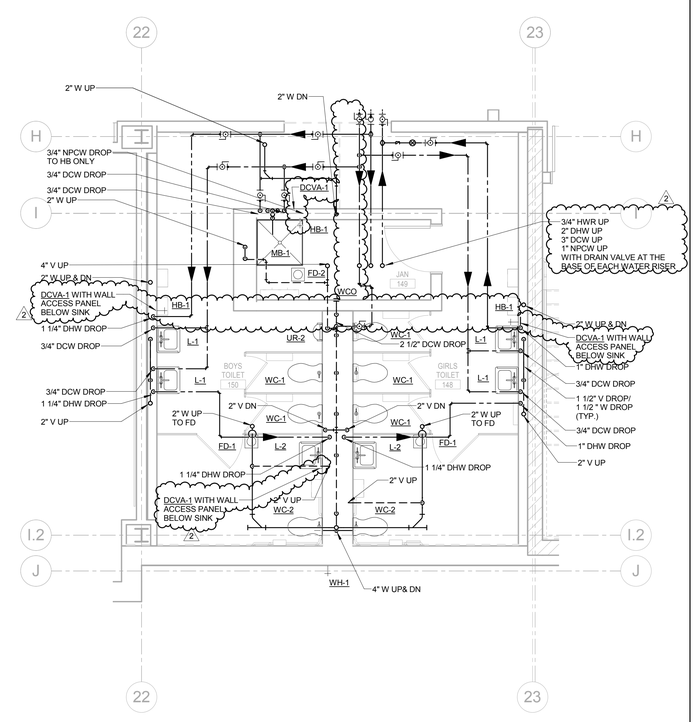
2 ENLARGED SW TOILET ROOMS LEVEL 01 FLOOR PLAN
1/4" = 1'-0"



5 ENLARGED SE TOILET ROOMS LEVEL 03 FLOOR PLAN
1/4" = 1'-0"



3 ENLARGED SE TOILET ROOMS LEVEL 02 FLOOR PLAN
1/4" = 1'-0"



1 ENLARGED SE TOILET ROOMS LEVEL 01 FLOOR PLAN
1/4" = 1'-0"

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Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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Drawing Title:

ENLARGED PLANS

Project No.: 4665.01 Checked by: BT

P0401

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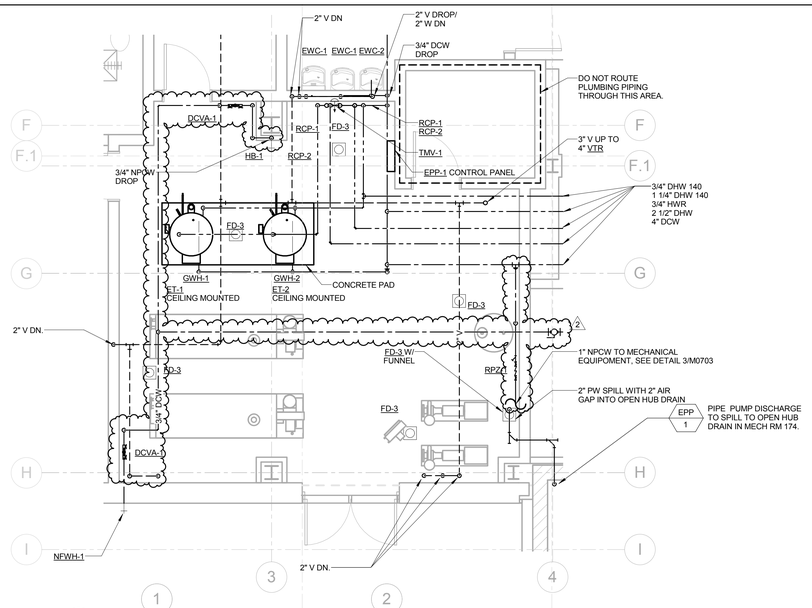
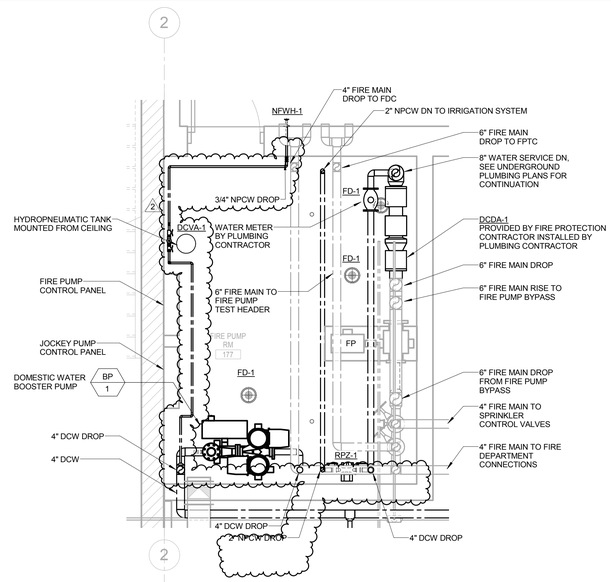


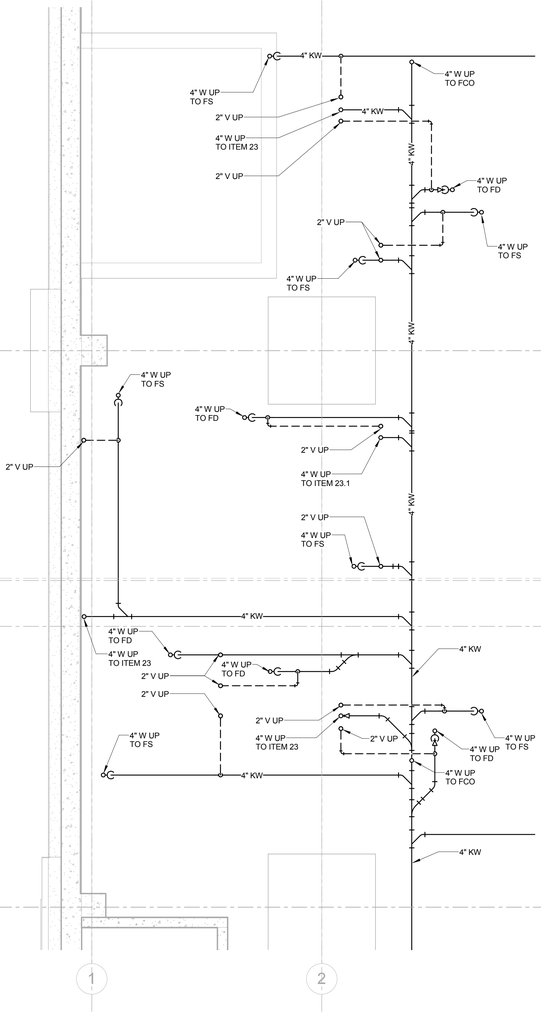
4 ENLARGED MECHANICAL ROOM FLOOR PLAN

1/4" = 1'-0"



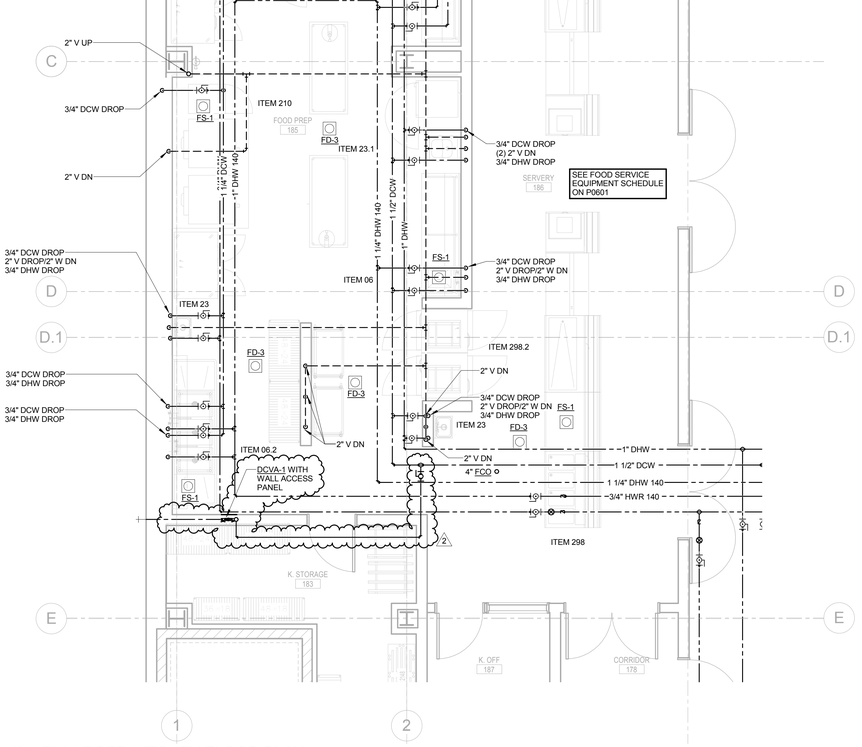
3 ENLARGED FIRE PUMP ROOM FLOOR PLAN

3/8" = 1'-0"



2 ENLARGED KITCHEN UNDERGROUND PLAN

1/4" = 1'-0"



1 ENLARGED KITCHEN FLOOR PLAN

1/4" = 1'-0"

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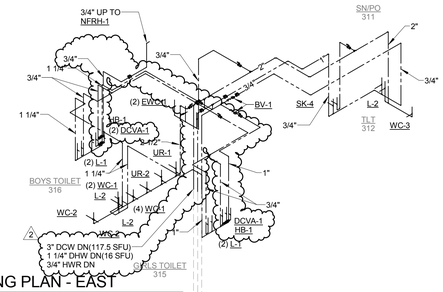
Drawing Title:

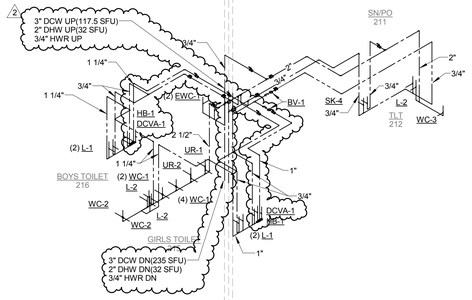
ENLARGED PLANS

Project No.: 4665.01 Checked by: BT

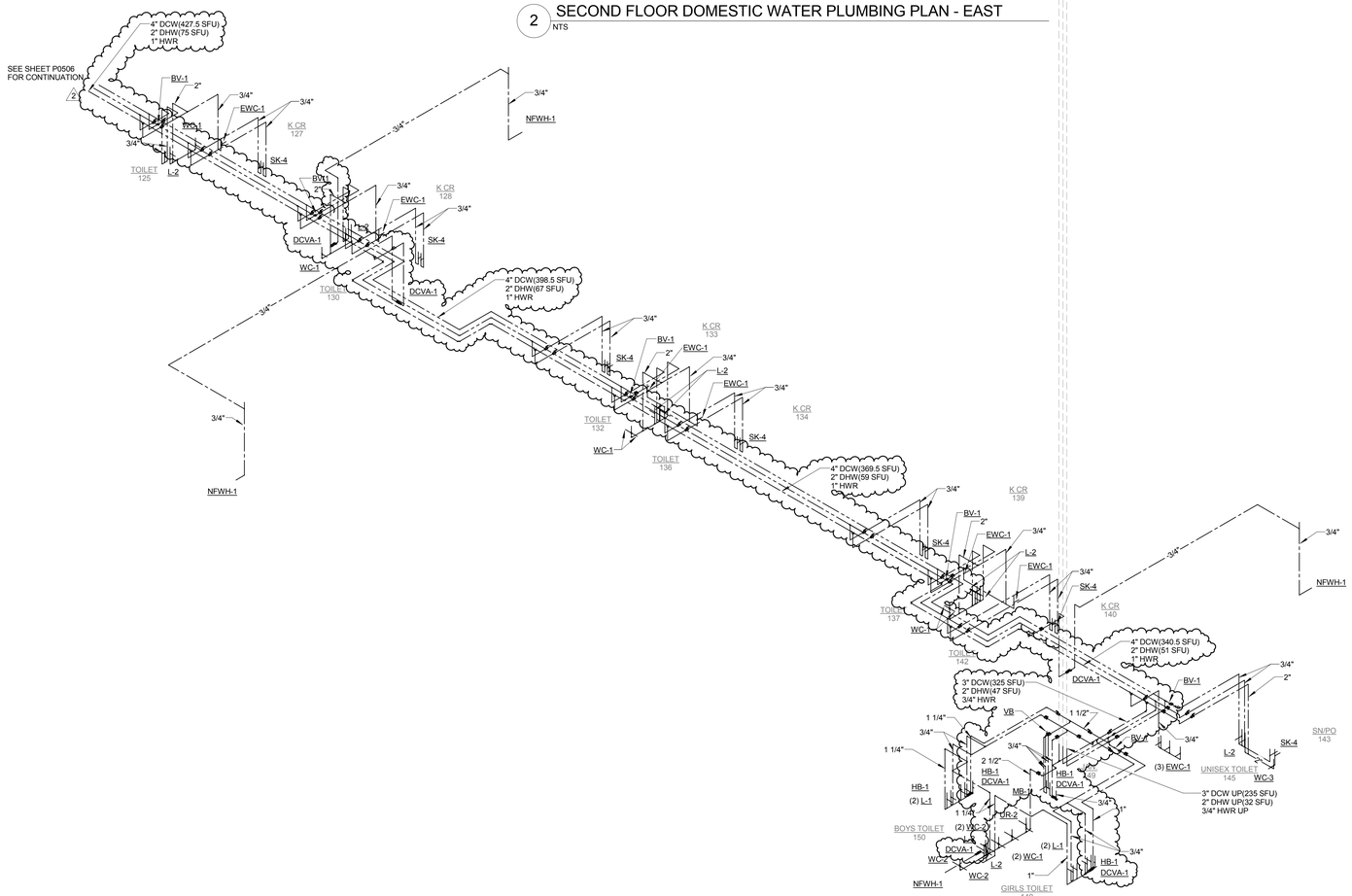
P0402



3 THIRD FLOOR DOMESTIC WATER PLUMBING PLAN - EAST
NTS



2 SECOND FLOOR DOMESTIC WATER PLUMBING PLAN - EAST
NTS



1 FIRST FLOOR DOMESTIC WATER PLUMBING PLAN - EAST
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Drawing Title:

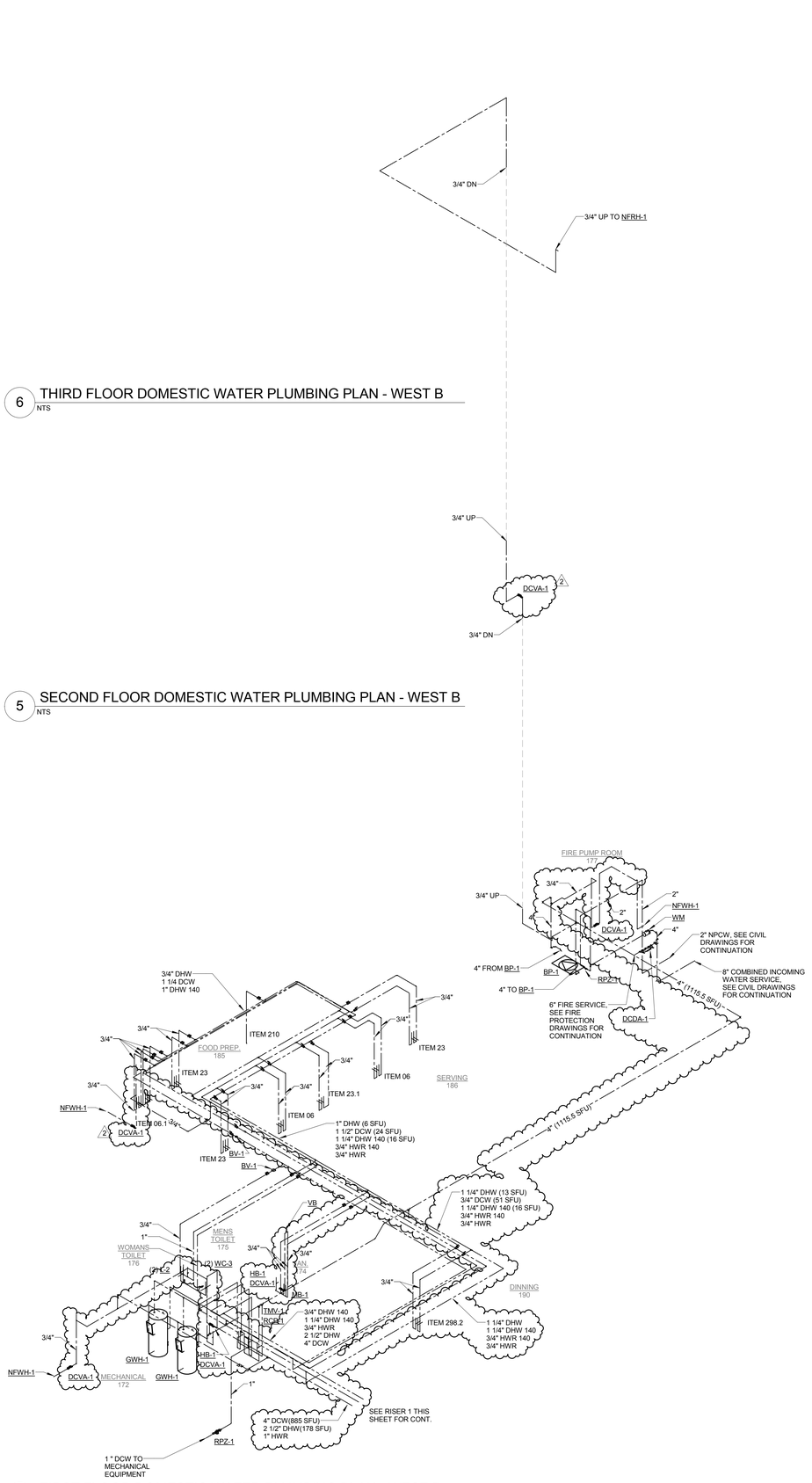
RISER DIAGRAMS

Project No.: 4665.01 Checked by: Checker

P0504

6 THIRD FLOOR DOMESTIC WATER PLUMBING PLAN - WEST B
NTS

5 SECOND FLOOR DOMESTIC WATER PLUMBING PLAN - WEST B
NTS



4 FIRST FLOOR DOMESTIC WATER PLUMBING PLAN - WEST B
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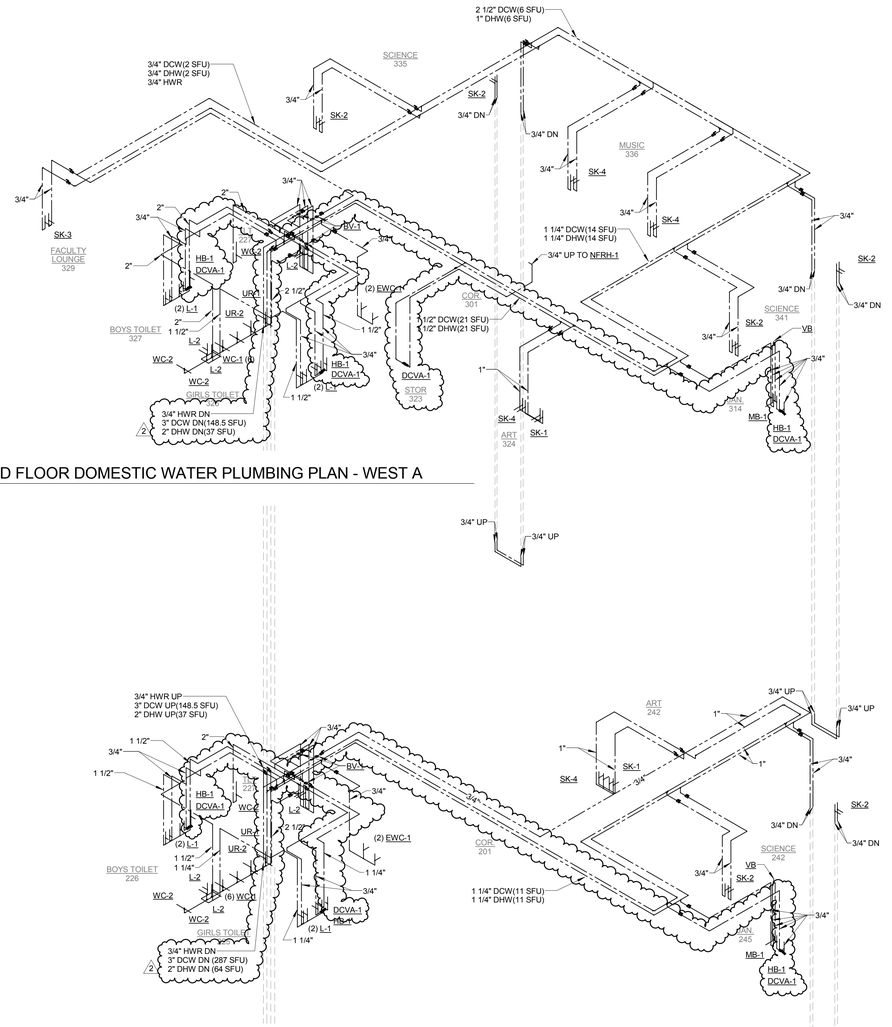

3 THIRD FLOOR DOMESTIC WATER PLUMBING PLAN - WEST A
NTS

2 SECOND FLOOR DOMESTIC WATER PLUMBING PLAN - WEST A
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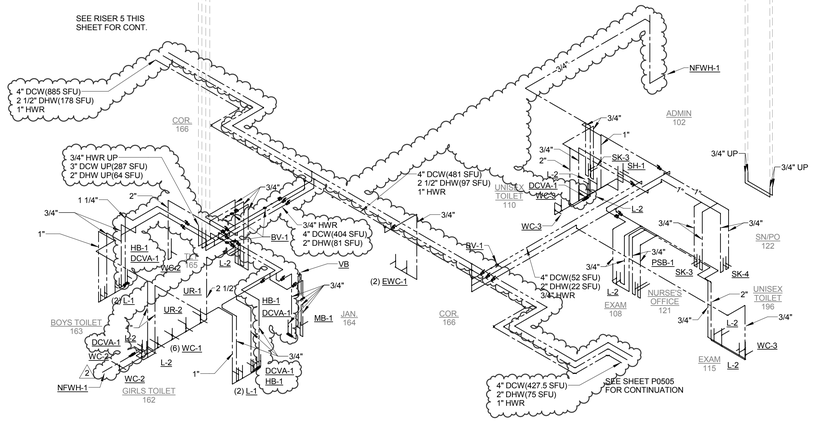

1 FIRST FLOOR DOMESTIC WATER PLUMBING PLAN - WEST A
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PLUMBING FIXTURE ROUGH-IN SCHEDULE

FIXTURE TYPE	TRAP	WASTE	VENT	AIR CHAMBER		INLET TO STOP		REMARKS
				CW	HW	CW	HW	
WC (F.V.)	-	4"	2"	1 1/4"	-	1"	-	
URINAL	-	2"	1 1/2"	1"	-	3/4"	-	
LAVATORY	1 1/4"	1 1/2"	1 1/2"	1/2"	1/2"	1/2"	1/2"	
SINK	1 1/2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
DRINKING FOUNTAIN	1 1/4"	1 1/2"	1 1/2"	1/2"	-	1/2"	-	
MOP BASIN	3"	3"	2"	3/4"	3/4"	3/4"	3/4"	
FLOOR DRAIN	2"	2"	2"	-	-	-	-	1
FLOOR DRAIN	4"	4"	2"	-	-	-	-	2
SHOWER	1 1/2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	

NOTES: 1. SUSPEND PIPING ABOVE GRADE
2. PIPING BELOW GRADE

SPECIALTY FIXTURES

SYMBOL	TYPE	MFR	MODEL NO	NOTES/OPTIONS	QUANTITY
DCDA-1	DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER	WATTS	SERIES 774DCDA	STAINLESS STEEL, ASSE 1048 RATED. UL LISTED, FM APPROVED. FIRE PROTECTION SERVICE. 6" SIZE, TESTABLE UNIT. FURNISHED BY FIRE PROTECTION CONTRACTOR. INSTALLED BY PLUMBING CONTRACTOR.	1
DCVA-1	DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER	WATTS	SERIES LF007	BRONZE, ASSE 1015 RATED. 3/4" SIZE TESTABLE UNIT. PROVIDE WITH STRAINER & ACCESS PANEL/COVER AS REQUIRED. INSTALL AT MAXIMUM 5'-0" AFF.	29
DCV-1	DUAL CHECK VALVE ASSEMBLY	WATTS	SERIES LF7	ASSE 1024 RATED. 3/4" SIZE. BRONZE BODY CONSTRUCTION. PROVIDE WITH STRAINER.	1
RPZ-1	REDUCED PRESSURE ZONE ASSEMBLY	WATTS	SERIES LF009	ASSE 1013 RATED. 2" SIZE. BRONZE BODY CONSTRUCTION. PROVIDE WITH STRAINER. PIPE DRAIN TO NEAREST FLOOR DRAIN. MINIMUM 1" AIR GAP.	2
TMV-1	MASTER TEMPERATURE MIXING VALVE ASSEMBLY	POWERS	LFSH1432HL	ASSE 1017 RATED. HI/LO TYPE SINGLE MIXING VALVE UNIT. 67 GPM FLOW RATE AT 5 PSI PRESSURE DROP. 3/4" INLETS & 1" OUTLET CONNECTIONS. INSTALL ON FIELD FABRICATED CHANNEL SUPPORT ASSEMBLY WITH RECIRC PUMP, ADJACENT TO WATER HEATERS.	1
TMV-2	TEMPERATURE MIXING VALVE ASSEMBLY	WATTS	LFUSG-B-M2	ASSE 1016/1070 RATED. POINT-OF-USE TEMPERING VALVE. 3/8" INLETS & OUTLET. 0.5 GPM AT 1 PSI PRESSURE DROP. 1.5 PSIG MINIMUM OPERATING PRESSURE, 70 PSIG MAXIMUM. INSTALL AT FIXTURE WITH LOCKING ADJUSTMENT KNOB. PROVIDE CHECK VALVES AT H&CW SUPPLY INLETS. LEAD FREE BRASS BODY CONSTRUCTION. OUTLET TEMPERATURE: 105°F	87
TMV-3	TEMPERATURE MIXING VALVE ASSEMBLY	GUARDIAN	G3600	ANSI Z358.1-2009 RATED. POINT-OF-USE TEMPERING VALVE. 1/2" INLETS & OUTLET. INSTALL AT ALL EYE/FACE WASH STATIONS. PROVIDE CHECK VALVES AT H&CW SUPPLY INLETS. LEAD FREE BRASS BODY CONSTRUCTION. OUTLET TEMPERATURE: 80°F	4
ET-1	THERMAL EXPANSION TANK	WATTS	DELTA 30	THERMAL EXPANSION TANK WITH INTERNAL BUTYL DIAPHRAGM. ASME RATED. 15 GALLON TANK VOLUME. 10 GALLON ACCEPTANCE VOLUME. FDA APPROVED FOR POTABLE WATER. PROVIDE FOR EACH WATER HEATER.	1
ET-2	THERMAL EXPANSION TANK	WATTS	DELTA 30	THERMAL EXPANSION TANK WITH INTERNAL BUTYL DIAPHRAGM. ASME RATED. 15 GALLON TANK VOLUME. 10 GALLON ACCEPTANCE VOLUME. FDA APPROVED FOR POTABLE WATER. PROVIDE FOR EACH WATER HEATER.	1
GS-1	GREASE SEPARATOR	ROCKFORD	G-1012	UNIT CAPABLE OF THE FOLLOWING: INTERMITTENT FLOW CAPACITY OF 8 GPM, 3.5 GALLON STATIC HOLDING CAPACITY, AND 12 LBS OF SLUDGE CAPACITY	1
GI-1	GREASE INTERCEPTOR	SCHIER PRODUCTS	GB-250	HIGH DENSITY POLYETHYLENE CONSTRUCTION. PROVIDE WITH ANCHOR KIT (PART# AK250), AND (2) EXTENSION RISERS. PART# LR24). INSTALL PER MANUFACTURER'S SPECIFICATIONS	1
NFWH-1	NON-FREEZE WALL HYDRANT	WOODFORD	B65	CHROME FREEZELESS WALL HYDRANT ASSEMBLY WITH SQUARE WALL BOX & DOOR, INTEGRAL VACUUM BREAKER & LOOSE KEY HANDLE. PROVIDE STAINLESS STEEL ACCESS PANEL AS REQUIRED FOR SERVICING. PROVIDE WITH APPROVED BACKFLOW DEVICE.	9
NFRH-1	NON-FREEZE ROOF HYDRANT	WOODFORD	SRH-MS	FREEZELESS ROOF HYDRANT ASSEMBLY WITH FIELD TESTABLE ASSE 1052 DOUBLE CHECK BACKFLOW PREVENTER.	3
HB-1	WASHDOWN & SILL	CHICAGO FAUCET	965-CP	SOLID BRASS -CHROME PLATED SILL COCK . ELEVATED VACUUM BREAKER INSTALLED 7'- 6" A.F.F.	17
SI-1	SOLIDS INTERCEPTOR	JAY R SMITH	8714-SS	REMOVABLE STAINLESS STEEL PERFORATED DEBRIS BASKET. 1-1/2" PLAIN END OUTLET AND INLET CONNECTIONS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS FOR MAINTENANCE PURPOSES. STAINLESS STEEL BODY. COORDINATE LOCATION WITH ADA REQUIREMENTS.	2
AN-1	ACID NEUTRALIZER TANK	STRIEM	LB-2	HIGH DENSITY POLYETHYLENE, VANDAL RESISTANT INSTALLATION. TANK SHALL BE FURNISHED WITH TOP OR SIDE INLET CONNECTION FIELD- ADAPTABLE FOR 1-1/2" OR 2" DRAIN LINE PIPE SIZE. PROVIDE WITH TOP OPENING FOR 1-1/2" VENT, WITH GASKETED COVER.	6
PSB-1	PLUMBING SUPPLY BOX	GUY GRAY	T200QT	20 GAUGE BOX / 20 GAUGE FACEPLATE. WHITE POWDER COAT ON COLD ROLLED STEEL FINISH. WITH 1/4 TURN BALL VALVES	1
HT-1	HYDRO-PNEUMATIC TANK	TACO	PAX215-150	HYDRO-PNEUMATIC TANK WITH 31 GAL. ACCEPTANCE VOLUME	1

NOTES:

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FOOD SERVICE EQUIPMENT

ITEM NO. & DESCRIPTION		PLUMBING					REMARKS
		QUANTITY	DOMESTIC COLD WATER	DOMESTIC HOT WATER	DIRECT WASTE	INDIRECT WASTE	
06	PREP TABLE WITH SINKS	2	1/2"	1/2"	-	FS	PIPE 2" WASTE FROM EACH COMPARTMENT TO SPILL OVER NEAREST FS WITH AIR GAP
06.2	THREE COMPARTMENT SINK	1	3/4"	3/4"	-	FS	PROVIDE WITH INDIVIDUAL ROUGH-INS FOR EACH OF (2) TWO FAUCETS, PIPE 2" WASTE FROM EACH COMPARTMENT TO SPILL OVER NEAREST FS WITH AIR GAP
23	HAND SINKS	3	1/2"	1/2"	1 1/2"	-	PROVIDE WITH TMV-2
23.1	HAND SINKS (ADA)	1	1/2"	1/2"	1 1/2"	-	PROVIDE WITH TMV-2. SEE FOOD SERVICE DRAWINGS FOR ADA MOUNTING HIGHT
210	DOUBLE STEAMER	1	3/4"	-	-	FS	PROVIDE WITH DCV-1.
298	HOT FOOD COUNTERS	2	-	_	-	FS	PIPE 1/2" WASTE FROM EACH COMPARTMENT TO SPILL OVER NEAREST FS WITH AIR GAP
298.2	COLD FOOD COUNTERS	2	-	_	-	FS	PIPE 1" WASTE FROM EACH COMPARTMENT TO SPILL OVER NEAREST FS WITH AIR GAP
298.4	RECYCLING COUNTER	1	1/2"	1/2"	-	FS	PROVIDE SK-3 FIXTURE AND FAUCET, PIPE 1 1/2" WASTE FROM EACH COMPARTMENT TO SPILL OVER NEAREST FS WITH AIR GAP, PROVIDE WITH TMV-2

NOTES:

1. THE ABOVE SCHEDULE REPRESENTS FOOD SERVICE EQUIPMENT & FIXTURES THAT REQUIRE PLUMBING SUPPORT. REFER TO THE FOOD SERVICE/KITCHEN CONSULTANT'S DRAWINGS FOR ROUGH-IN REQUIREMENTS & EXACT LOCATIONS OF ALL FOOD SERVICE FIXTURES & EQUIPMENT. ALL FOOD SERVICE EQUIPMENT AND FIXTURES INDICATED ABOVE TO BE PROVIDED BY FOOD SERVICE EQUIPMENT CONTRACTOR.
2. PLUMBING CONTRACTOR SHALL PROVIDE AND ROUTE INDIRECT WASTE PIPING FROM KITCHEN FIXTURES & EQUIPMENT TO ADJACENT FLOOR SINK(S) AS REQUIRED, & SPILL OVER FLOOR SINK(S) WITH CODE APPROVED AIR GAP(S). NO DIRECT SANITARY CONNECTION OF THIS TYPE OF EQUIPMENT IS ALLOWED. CONTRACTOR SHALL ALSO PROVIDE A MINIMUM OF 1" THICK INSULATION (WITH APPROVED SANITARY BARRIER WRAP) FOR CONDENSATE AND/OR REFRIGERATED WASTE PIPING DISCHARGING INTO FLOOR SINKS TO PREVENT SWEATING (I.E. ALL PIPING CONVEYING DRAINAGE LOWER THAN 6O°F). SEE FOOD SERVICE/KITCHEN CONSULTANT'S DRAWINGS FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE EMERGENCY DRAIN PAN ASSEMBLY DIRECTLY UNDERNEATH ALL DRAINAGE PIPING LOCATED ABOVE FOOD SERVICE AREAS. PROVIDE MINIMUM 1" COPPER DRAIN PIPE CONNECTION AT DRAIN PAN LOW POINTS, & ROUTE TO NEAREST FLOOR SINK WITH APPROVED AIR GAP.
4. SEE FOOD SERVICE PLANS FOR ROUGH-IN ELEVATIONS

PLUMBING MATERIALS SPECIFICATIONS

		TYPE of SERVICE												
TYPE of MATERIAL	SIZE	SUSPEN. DRAINS & STACKS	SUSPEN. VENTS & STACKS	SUSPEN. STORM DRAINS & DOWMSPOUTS	ACID WASTE SUSPEN. DRAINS & STACKS	ACID WASTE SUSPEN. VENTS & STACKS	SUSPEN. DOM. WTR. DISTRIB. TO 150#	BURIED DOM. WTR. SERVICE	BURIED FIRE PROT. SERVICE	BURIED BLDG. SEWER	BURIED BLDG. DRAINS	ACID WASTE AND VENT	FORCE MAINS	
CAST IRON SOIL PIPE & FITTINGS ASTM A74	2"-15" dia.													
CAULKED JOINTS w\ LEAD & OAKUM FS QQ-C-40		*	*	*						*	*			
PUSH-ON JOINTS w\ ASTM C564 GASKETS										*	*			
COPPER PIPE HARD DRAWN TYPE M ASTM B88 w\														
CAST ASTM B16.23 or WROT ASTM B16.29														
COPPER SOLDER JOINT DRAINAGE FITTINGS	1 1/2"-2 1/2" dia.	*	*											
DUCTILE IRON PIPE & FITTINGS AWWA C151														
CEMENT LINED AWWA A21.4, w\														
MECHANICAL JOINTS AWWA A21.11	4"-8" dia.							*	*					
GALV. STL. PIPE ASTM A53 Sch.40 w\ GALV. 125#	4"-6" clia						*						*	
THREADED MALLEABLE IRON FITTINGS ANSI B16.3							*						*	
FLANGED CAST IRON FITTINGS ANSI B16.1							*							
COPPER PIPE HARD DRAWN TYPE L ASTM B88 w\	to 3" dia.						*							
CAST ASTM B16.18 or WROT ASTM B16.22														
COPPER LEAD FREE SOLDER JOINT PRESSURE FITTINGS							*							
ACID WASTE PIPING - PVDF ASTMD3222	to 2 1/2" dia.						*							
MECHANICAL JOINTS ASTM F 1673					*	*								
SCHEDULE 40 PVC ASTM D 2665	3"-4" dia.													
PVC FITTINGS AND SOLVENT WELD ASTM -D-2672						*						*		

WATER HEATER SCHEDULE

SYMBOL	LOCATION	TYPE	STORAGE (GALLON)	RECOVERY (GPH)	TEMP RISE (°F)	ELECTRICAL/GAS		WATER OUTLET TEMP	MFR	MODEL NO.	REMARKS
						V/PH/KW	BTU/HR INPUT				
GWH 1	MECHANICAL ROOM	GAS FIRED, HIGH EFFICIENCY, CONDENSING TYPE DOMESTIC WATER HEATER	119	460	100	120V/1ϕ	300,000	140 °F	PVI	CONQUEST 130	GAS FIRED, HIGH EFFICIENCY, CONDENSING TYPE DOMESTIC WATER HEATER. MODULATING BURNER WITH 5:1 TURNDOWN. 96% EFFICIENCY. LOW NOx. 80"H x 28"DIA. 1500 LBS (FULL). 3"DIA STAINLESS STEEL VENT, 3"DIA PVC AIR INLET. PROVIDE WITH P&TRV, CONDENSATE NEUTRALIZATION KIT & EXTERNAL INSULATION BLANKET WRAP.
GWH 2	MECHANICAL ROOM	GAS FIRED, HIGH EFFICIENCY, CONDENSING TYPE DOMESTIC WATER HEATER	119	460	100	120V/1ϕ	300,000	140 °F	PVI	CONQUEST 130	GAS FIRED, HIGH EFFICIENCY, CONDENSING TYPE DOMESTIC WATER HEATER. MODULATING BURNER WITH 5:1 TURNDOWN. 96% EFFICIENCY. LOW NOx. 80"H x 28"DIA. 1500 LBS (FULL). 3"DIA STAINLESS STEEL VENT, 3"DIA PVC AIR INLET. PROVIDE WITH P&TRV, CONDENSATE NEUTRALIZATION KIT & EXTERNAL INSULATION BLANKET WRAP.

NOTES:

1. PROVIDE EACH WATER HEATER WITH A SET OF DRY CONTACTS.

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PUMP SCHEDULE

SYMBOL	TYPE	GPM	TDH FEET	MOTOR			CONTROLS	REMARKS	MANUFACTURER & MODEL NO.
				V/PH/HZ	HP	RPM			
RCP 1	HOT WATER RECIRCULATION PUMP	12	32 (14 PSI)	208/1/60	1 HP	--	PROVIDE WITH AQUASTAT. PUMP SHALL BE CONTROLLED BY THE AQUASTAT	BUILDING HOT WATER RETURN SYSTEM. WET ROTOR TYPE, IN-LINE, SINGLE STAGE. ALL BRONZE OR STAINLESS STEEL CONSTRUCTION. 15 LBS. LEAD FREE CERTIFIED.	BELL & GOSSETT ELECTRONIC XL 20-140
RCP 2	HOT WATER RECIRCULATION PUMP	3	7 (3 PSI)	115/1/60	270 WATT	3300	PROVIDE WITH AQUASTAT. PUMP SHALL BE CONTROLLED BY THE AQUASTAT	140° KITCHEN HOT WATER RETURN SYSTEM. WET ROTOR TYPE, IN-LINE, SINGLE STAGE. ALL BRONZE OR STAINLESS STEEL CONSTRUCTION. 10 LBS. LEAD FREE CERTIFIED.	BELL & GOSSETT NBF-36 SPEED 1
BP 1	DUPLEX DOMESTIC BOOSTER PUMP	100 (EACH)	144 (62 PSI)	480/3/60	5HP (EACH)	3600	VARIABLE FREQUENCY DRIVE SYSTEM INTEGRAL TO BOOSTER PUMP PACKAGE. (SINGLE DISCONNECT WITH WIRING TO CONTROL PANEL BY ELECTRICAL). POWER SUPPLY TO ACCOMMODATE SIMULTANEOUS OPERATION OF BOTH PUMPS	FACTORY BUILT, SKID MOUNTED PACKAGE SYSTEM COMPLETE WITH PUMPS, CONTROLS, ALARMS & ACCESSORIES. DUPLEX CONFIGURATION WITH VARIABLE FREQUENCY DRIVE SYSTEM. PROVIDE WITH HYDRO-PNEUMATIC TANK WITH 43 GALLON ACCEPTANCE VOLUME. PROVIDE WITH DRY CONTACTS FOR BUILDING AUTOMATION SYSTEM	DELTA P CARVER PUMP, MODEL ABEA-2CMD-AETV-EAAH-A10, DUPLEX VERTICAL MULTI-STAGE
EPP 1	ELEVATOR SUMP PUMP	50	31 (14 PSI)	115/1/60	1/2 HP	–	ZOELLER 10-1526 ALARM PANEL, 10-1528 OIL SMART PUMP SWITCH	–	ZOELLER 940-0014

NOTES:

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PLUMBING FIXTURE SCHEDULE

TAG	QTY	FIXTURE		VALVE / FAUCET / TRIM		TRAP	SUPPLIES	FLOW CONTROL (GPM) / (GPF) / (GPC)	ADDITIONAL REQUIREMENTS & NOTES
		TYPE	MFR / MODEL	TYPE	MFR / MODEL				
WC-1	41	WATER CLOSET HIGH EFFICIENCY (HET) WALL-MOUNT ELONGATED, VITREOUS CHINA, 1 1/2" TOP SPUD	KOHLER K-4325	MANUAL, EXPOSED WATER CLOSET FLUSHOMETER	SLOAN 111	INTEGRAL	-	1.28 GPF	PROVIDE WITH WALL CARRIER AND WHITE OPEN FRONT SEAT. (35 PSIG MINIMUM OPERATING PRESSURE). REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
WC-2	15	ADA-WATER CLOSET HIGH EFFICIENCY (HET) WALL-MOUNT ELONGATED, VITREOUS CHINA, 1 1/2" TOP SPUD	KOHLER K-4325	MANUAL, EXPOSED WATER CLOSET FLUSHOMETER	SLOAN 111	INTEGRAL	-	1.28 GPF	PROVIDE WITH WALL CARRIER AND WHITE OPEN FRONT SEAT. (35 PSIG MINIMUM OPERATING PRESSURE). REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
WC-3	8	ADA-WATER CLOSET HIGH EFFICIENCY (HET) WALL-MOUNT ELONGATED, VITREOUS CHINA, 1 1/2" TOP SPUD	KOHLER K-4325	CONCEALED, SENSOR ACTIVATED FLUSHOMETERS WITH WALL BOX	SLOAN 153-1.28 ES-S TMO SWB	INTEGRAL	-	1.28 GPF	PROVIDE WITH WALL CARRIER AND WHITE OPEN FRONT SEAT. (35 PSIG MINIMUM OPERATING PRESSURE). REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
UR-1	5	URINAL HIGH EFFICIENCY WALL-MOUNT, VITREOUS CHINA, 3/4" TOP SPUD	KOHLER K-4904-ET	MANUAL, EXPOSED HIGH-EFFICIENCY URINAL FLUSHOMETER	SLOAN 186-0.125 HEU	INTEGRAL	-	0.125 GPF	PROVIDE WITH WALL CARRIER (20 PSIG MINIMUM OPERATING PRESSURE). REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
UR-2	6	ADA-URINAL HIGH EFFICIENCY WALL-MOUNT, VITREOUS CHINA, 3/4" TOP SPUD	KOHLER K-4904-ET	MANUAL, EXPOSED HIGH-EFFICIENCY URINAL FLUSHOMETER	SLOAN 186-0.125 HEU	INTEGRAL	-	0.125 GPF	PROVIDE WITH WALL CARRIER INSTALL AT ADA HEIGHT, (20 PSIG MINIMUM OPERATING PRESSURE). REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
L-1	37	LAVATORY WALL HUNG, VITREOUS CHINA, 3-HOLE, 21"x18"	KOHLER K-2032	MANUAL, METERING, 4" CENTER-SET SPOUT	CHICAGO FAUCETS 3400-ABCP	OFFSET GRID STRAINER, 11/4"x11/2" 17 GAUGE P-TRAP	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	0.08 GPC	PROVIDE WITH: CONCEALED ARM SUPPORT, TEMPERATURE MIXING VALVE TMV-2, (20 PSIG MINIMUM OPERATING PRESSURE). REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT. METER SET TO 10 SEC CYCLE, FACTORY PROVIDED 0.5 GPM AERATOR.
L-2	18	ADA-LAVATORY WALL HUNG, VITREOUS CHINA, 3-HOLE, ADA, 21"x18"	KOHLER K-2032	MANUAL, METERING, 4" CENTER-SET SPOUT	CHICAGO FAUCETS 3400-ABCP	OFFSET GRID STRAINER, 11/4"x11/2" 17 GAUGE P-TRAP	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	0.08 GPC	PROVIDE WITH: CONCEALED ARM SUPPORT, TEMPERATURE MIXING VALVE TMV-2, (20 PSIG MINIMUM OPERATING PRESSURE). INSTALL AT ADA HEIGHT. REFER TO ARCH PLANS FOR MOUNTING HEIGHT. METER SET TO 10 SEC CYCLE, FACTORY PROVIDED 0.5 GPM AERATOR.
EWC-1	22	DRINKING FOUNTAIN WALL MOUNTED	ELKAY EZ8	PUSH-BUTTON ACTIVATED,CHROME PLATED BRASS BUBBLER	-	OFFSET GRID STRAINER, 11/4"x11/2" 17 GAUGE P-TRAP	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH COPPER RISER TUBE CONNECTORS	1.5 GPM	INSTALL IN STANDARD, ADA, OR CHILD CONFIGURATION AS INDICATED ON ARCHITECTURAL DRAWINGS. (20 PSIG MINIMUM OPERATING PRESSURE). PROVIDE WITH WALL MOUNTING PLATE. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
EWC-2	1	DRINKING FOUNTAIN WALL MOUNTED WITH BOTTLE FILLING STATION	ELKAY EZS8WSSK	PUSH-BUTTON ACTIVATED,CHROME PLATED BRASS BUBBLER	-	OFFSET GRID STRAINER, 11/4"x11/2" 17 GAUGE P-TRAP	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH COPPER RISER TUBE CONNECTORS	-	INSTALL IN STANDARD, ADA, OR CHILD CONFIGURATION AS INDICATED ON ARCHITECTURAL DRAWINGS. (20 PSIG MINIMUM OPERATING PRESSURE). PROVIDE WITH WALL MOUNTING PLATE. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
MB-1	5	MOP BASIN FLOOR MOUNTED, PRECAST TERRAZZO, 24"x24"x12"D	FIAT TSB-400	WALL MOUNTED SERVICE FAUCET WITH ELEVATED VACUUM BREAKER, 8" CENTER	CHICAGO FAUCETS 911-CP	INTEGRAL STAINLESS STEEL STRAINER WITH 3" C.I. P-TRAP	-	2.2 GPM	PROVIDE WITH: FIAT 889-CC MOP HANGER, 832-AA HOSE & HOOK, & MSG-2424 STAINLESS STEEL WALL GUARDS. INSTALL VACUUM BREAKER AT 7'-6" AFF.
FD-1	29	6"ϕ FLOOR DRAIN CAST IRON, FINISHED AREAS	JAY R SMITH 2010	-	-	2" (OR 4" BELOW GRADE) CAST IRON DEEP SEAL TRAP	-	-	PROVIDE WITH: ADJUSTABLE NICKEL BRONZE STRAINER & VANDAL PROOF SCREWS. STAINLESS STEEL STRAINER, VANDAL PROOF SCREWS. PROVIDE WITH TRAP PRIMER OPTION
FD-2	13	8"ϕ FLOOR DRAIN CAST IRON, FINISHED AREAS	JAY R SMITH 2220-C	-	-	4" CAST IRON DEEP SEAL TRAP	-	-	PROVIDE WITH: CAST IRON GRATE, SLOTTED SEDIMENT BUCKET WITH LIFTING BAR.
FD-3	5	8" FLOOR DRAIN CAST IRON, KITCHEN/FOOD SERVICE AREA	JAY R SMITH 9710-C	-	-	4" CAST IRON DEEP SEAL TRAP	-	-	PROVIDE WITH: NICKEL BRONZE TOP, STAINLESS STEEL STRAINER, VANDAL PROOF SCREWS, AND ACID RESISTANT COATING.
FCO	33	STAINLESS STEEL ROUND DECK PLUG TYPE CLEAN OUT	JAY R SMITH 9760	-	-	--	-	-	PROVIDE WITH: STAINLESS STEEL COVER IN FINISHED FLOORS, VANDAL PROOF SCREWS
FS-1	7	8"x8" FLOOR SINK, CAST IRON, ARC CAST IRON, KITCHEN/FOOD SERVICE AREA	JAY R SMITH 3100-C	-	-	4" CAST IRON DEEP SEAL TRAP	-	-	PROVIDE WITH: ACID RESISTANT COATED INTERIOR (ARC), DOME STRAINER & NICKEL BRONZE RIM WITH SECURED 1/2-GRATE.
RD-1	23	ROOF DRAIN CAST IRON	JR SMITH 1015C-R-C-CID ADJUSTABLE EXTENSION	-	-	-	-	-	ROOF DRAIN WITH CAST IRON BODY & COLLAR. PROVIDE WITH ADJUSTABLE EXTENSION, SUMP RECEIVER, UNDERDECK CLAMP, CAULK OUTLET & CAST IRON DOME. BOTTOM OUTLET (SEE PLAN FOR OUTLET PIPE SIZE).
SK-1	3	STAINLESS STEEL SELF-RIMMING SINGLE BOWL SINK	ELKAY 1919	MANUAL LEVER GOOSENECK WITH	CHICAGO FAUCETS 50-GN8AE35-317XKAB	OFFSET GRID STRAINER,	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	1.5 GPM AERATOR (FACTORY PROVIDED)	PROVIDE WITH TEMPERATURE MIXING VALVE TMV-2 & INSULATION OVER WASTE & SUPPLIES. PROVIDE WITH SI-1 IN LIEU OF P-TRAP. ADA COMPLIANT. PROVIDE WITH OFF-CENTERED FAUCET PER DETAILS 3C/ADA.09 AND 3D/ADA.09.
SK-2	6	EPOXY RESIN SINK REFER TO ARCHITECTURAL DRAWINGS	INTEGRAL TO COUNTER	MANUAL LEVER GOOSENECK VACUUM BREAKER	CHICAGO FAUCETS 930-317XKCP	OFFSET GRID STRAINER,	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	1.5 GPM AERATOR (FACTORY PROVIDED)	PROVIDE WITH TEMPERATURE MIXING VALVE TMV-2 & INSULATION OVER WASTE & SUPPLIES. ADA COMPLIANT. PROVIDE WITH AN-1 IN LIEU OF P-TRAP WHERE NOTED
SK-3	3	STAINLESS STEEL SELF-RIMMING SINGLE BOWL SINK, ADA	ELKAY LRAD2219	MANUAL LEVER GOOSENECK	CHICAGO FAUCETS 201-AGN8AE35V317AB	OFFSET GRID STRAINER,	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	1.5 GPM AERATOR (FACTORY PROVIDED)	PROVIDE WITH TEMPERATURE MIXING VALVE TMV-2 & INSULATION OVER WASTE & SUPPLIES. ADA COMPLIANT.
SK-4	15	STAINLESS STEEL SELF-RIMMING SINGLE BOWL SINK, ADA	ELKAY LRAD1919	MANUAL LEVER GOOSENECK	CHICAGO FAUCETS 50-GN8AE35-317XKAB	OFFSET GRID STRAINER,	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	1.5 GPM AERATOR (FACTORY PROVIDED)	PROVIDE WITH TEMPERATURE MIXING VALVE TMV-2 & INSULATION OVER WASTE & SUPPLIES. ADA COMPLIANT. PROVIDE WITH OFF-CENTERED FAUCET PER DETAILS 3C/ADA.09 AND 3D/ADA.09.
EFW-1	3	EYE/FACE WASH WALL/DESK MOUNTED	GUARDIAN G1753	MANUAL LEVER	-	1 1/4" X 1 1/2" 17 GAUGE P-TRAP	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	-	PROVIDE WITH TMV-3
EFW-2	1	EYE/FACE WASH FREE STANDING	GUARDIAN G1825	MANUAL LEVER	-	1 1/4" X 1 1/2" 17 GAUGE P-TRAP	1/2"x 1/2" CAST BRASS, HEAVY PATTERN QUARTER-TURN BALL VALVE WITH POLISHED CHROME RISER TUBE CONNECTORS	-	PROVIDE WITH TMV-3
SH-1	1	SHOWER	FIAT ADAWN6036	PRESSURE BALANCE	SYMMONS 1-117-FS-B30	-	INTEGRAL STOPS WITH VALVE	1.5 GPM	ASSE 1016 RATED 4-231-1.5 GPM SYMMONS SHOWER HEAD INCLUDING HAND SPRAY AND GRAB BAR. ADJUST STOP SCREW FOR OUTLET TEMPERATURE MAX 105°F. SEE ARCHITECTURAL DOCUMENTS FOR MOUNTING HEIGHTS AND SHOWER ENCLOSURE.

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No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

Drawing Title:

SCHEDULES

Project No.: 4665.01 Checked by: BT

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SCOPE OF WORK

1. NEW 3 STORY CONCRETE AND STEEL SCHOOL BUILDING.
2. NEW SPRINKLER SYSTEM TO BE SUPPORTED BY NEW 500 GPM FIRE PUMP SYSTEM WITH JOCKEY PUMP. SEE SCHEDULE.
3. INSTALL MAIN SPRINKLER RISER IN STAIR #1.
4. INSTALL NEW WET SPRINKLER SYSTEM THROUGH ENTIRE BUILDING EXCEPT WHERE NOTED
5. SYSTEM DESIGN
   - LIGHT HAZARD (225 SQFT) DENSITY 0.12/1500 CLASSROOMS, CORRIDORS, STAIRS, BATHROOMS, OFFICE SPACES
   - LIGHT HAZARD (225 SQFT) DENSITY 0.15/1500 GYMNASIUM.
   - ORDINARY HAZARD (130 SQFT) DENSITY 0.15/2500 MECHANICAL ROOM.
   - ORDINARY HAZARD (130 SQFT) DENSITY 0.20/2000 STAGE, STORAGE ROOMS.

SHEET INDEX SCHEDULE

THIS SET OF FIRE PROTECTION DRAWINGS CONTAIN THE FOLLOWING SHEETS:

REFER TO THE PROJECT SPECIFICATION MANUAL FOR FURTHER INFORMATION AND REQUIREMENTS REGARDING THE NEW WORK.

FIRE PROTECTION GENERAL NOTES

1. FIRE PROTECTION CONTRACTOR, PRIOR TO FINAL BID, MUST DETERMINE/OBTAIN WATER SUPPLY FLOW TEST DATA AND SIZE AND SELECT THE FIRE PUMP ACCORDINGLY. FIRE PROTECTION CONTRACTOR MUST ADJUST THE SIZE OF THE SELECTED FIRE PUMP, PIPING, AND JOCKEY PUMP ACCORDING TO THE WATER SUPPLY FLOW TEST DATA.
2. THE DESIGN AND INSTALLATION OF AUTOMATIC SPRINKLER AND STANDPIPE SYSTEMS SHALL COMPLY WITH THE 2016 CHICAGO BUILDING CODE, NFPA 13 1994 EDITION, NFPA 20 1993 EDITION, CPS STANDARDS, AND ANY REFERENCED AMENDMENTS AND STANDARDS, CHICAGO FIRE DEPARTMENT REQUIREMENTS, AND OWNERS' INSURANCE UNDERWRITERS REQUIREMENTS.
3. CONTRACTOR SHALL INSTALL ALL FIRE PROTECTION SYSTEM EQUIPMENT, DEVICES, AND RELATED ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTION.
4. FIRE PROTECTION EQUIPMENT AND DEVICES SHALL BE UL LISTED AND FM APPROVED. CONTRACTOR SHALL SUBMIT MANUFACTURE PRODUCT LISTS FOR EACH TYPE OF PROPOSED EQUIPMENT AND DEVICES TO THE ARCHITECT/ENGINEER, AND OWNERS' INSURANCE UNDERWRITER FOR APPROVAL PRIOR TO INSTALLATION.
5. INSTALLATION OF EQUIPMENT AND DEVICES NOT APPROVED BY THE ARCHITECT/ENGINEER SHALL BE AT THE RISK OF THE CONTRACTOR. CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR THE COST OF REPLACEMENT WITH APPROVED EQUIPMENT AND DEVICES
6. CONTRACTOR SHALL PROVIDE ROUTING OF MAIN AND BRANCH PIPING AND SPRINKLERS AS REQUIRED TO ACCOMMODATE ARCHITECTURAL LAYOUT, DUCTWORK, DUCTWORK ROUTING, LIGHTS, DIFFUSERS AND WORK OF OTHER TRADES.
7. THE SPACE ABOVE THE CEILING IS LIMITED AND THE INSTALLATION OF WORK WILL BE TIGHT. DUE TO THIS, IT IS IMPORTANT THAT THE SPRINKLER CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THEIR WORK WITH THE CEILING SYSTEM HEIGHT AND CONSTRUCTION THE STRUCTURAL SYSTEM, THE LIGHTING FIXTURES, THE SPRINKLER HEADS/MAINS AND THE PLUMBING PIPES. ROUTE PIPING AS HIGH AS POSSIBLE. MAINTAIN PROPER SERVICE ACCESS CLEARANCES. ACCURATE SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FIELD INSTALLATION.
8. SPRINKLER AND STANDPIPE PIPING LOCATIONS SHOWN ON THESE PLANS ARE SUGGESTED LOCATIONS FOR COORDINATION PURPOSES ONLY AND INTENDED TO DESCRIBE THE DESIRED CONFIGURATION FOR APPEARANCE PURPOSES AND DO NOT RELIEVE THE SPRINKLER CONTRACTOR FROM PROVIDING NECESSARY SPRINKLER QUANTITIES AND LOCATIONS FOR A FULLY SPRINKLED BUILDING. LOCATIONS INDICATED SHALL BE FOLLOWED, AND SPRINKLER CONTRACTOR SHALL PROVIDE ADDITIONAL SPRINKLER LOCATIONS, QUANTITIES AND SPACING AS REQUIRED TO PROVIDE A FULLY SPRINKLED BUILDING ACCORDING TO THE REQUIREMENTS OF NFPA 13, NFPA 14, ILLINOIS STATE FIRE MARSHAL AND OTHER APPLICABLE CODES.
9. SPRINKLER SYSTEM SHALL BE ZONED AS SHOWN ON DRAWINGS, UNLESS OTHERWISE REQUIRED BY CODE.
10. CONTRACTOR SHALL HYDROSTATICALLY TEST ALL NEW SPRINKLER AND STANDPIPE PIPING IN ACCORDANCE WITH NFPA 13 AND NFPA 14 REQUIREMENTS
11. SPRINKLERS SHALL BE PROVIDED ABOVE AND BELOW ALL EXPOSED DUCTWORK AND OTHER OBSTRUCTIONS 4'-0" WIDE AND LARGER.
12. PROVIDE HEAD GUARDS ON ALL SPRINKLER HEADS SUBJECT TO MECHANICAL DAMAGE.
13. WHERE ACOUSTICAL CEILING TILES ARE PROVIDED, ALL SPRINKLERS SHALL BE INSTALLED IN CENTER OF CEILING TILES +/- 1/2 INCH.
14. ALL VALVES CONTROLLING WATER SERVICE TO FIRE PROTECTION SYSTEM SHALL BE PROVIDED WITH TAMPER SWITCHES CONNECTED TO THE BUILDING FIRE ALARM SYSTEM.
15. PROVIDE WATER FLOW SWTICH AND CONTROL VALVE WITH WITH TAMPER SWITCH TO PROTECT ELEVATOR MACHINE ROOMS AND ELEVATOR SHAFTS. ELEVATOR SHAFTS TO BE PROTECTED AT BOTTOM OF SHAFT ONLY.
16. SPRINKLER PROTECTION FOR ELECTRICAL ROOMS, TELE/COM ROOMS AND ANY ASSOCIATED ROOM PRIMARILY WITH ELECTRICAL EQUIPMENT SHALL BE PROTECTED WITH SIDEWALL SPRINKLER HEADS. SPRINKLER PIPING SHALL NOT BE ROUTED OVERHEAD THROUGH ANY OF THESE ROOMS. STUB INTO ROOMS FOR SIDEWALL HEADS.
17. PROVIDE SPRINKLERS IN ALL STAIRWELLS PER NFPA 13 REQUIREMENTS.
18. VALVES WILL BE READILY ACCESSIBLE FROM A SAFE HEIGHT AND ARE TO BE CLEAR OF ALL OBSTRUCTIONS AND THEIR OPERATION SHALL NOT BE ENCUMBERED BY ANY DEVICE OR EQUIPMENT.
19. INSTALL ALL OVERHEAD HANGERS AND SUPPORTS PRIOR TO SPRAY FIREPROOFING OR DRYWALL CEILING.
20. SEE ARCHITECTURAL PLANS FOR FIRE EXTINGUISHER LOCTAIONS AND. FIRE EXTINGUISHER CABINET SCHEDULE.

FIRE PROTECTION SYMBOL LIST

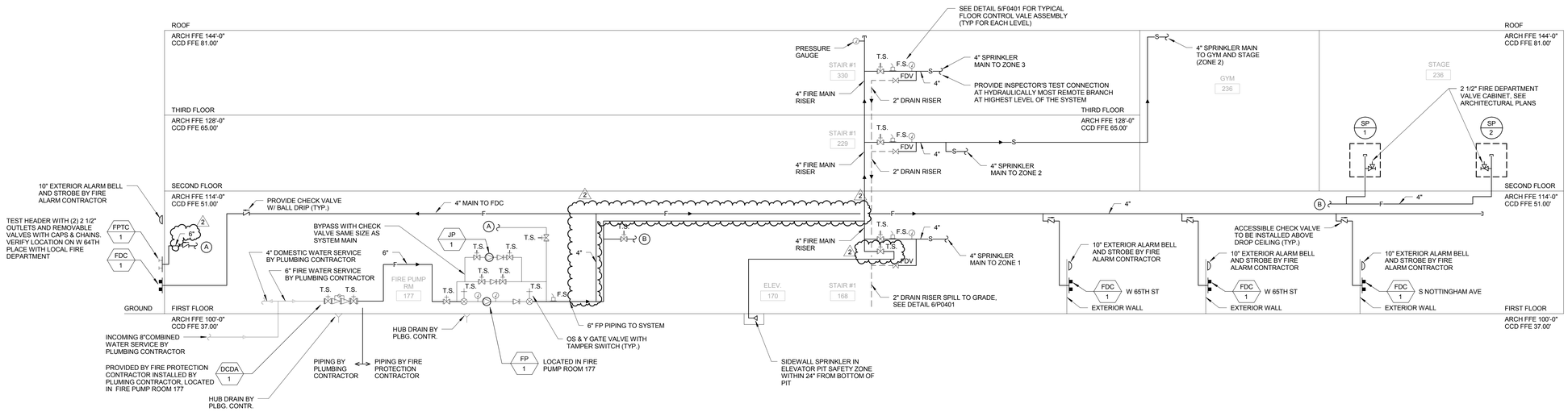
SYMBOL	DESCRIPTION
ALARM BELL	ALARM BELL
	ALARM STROBE
F.S.	WATER FLOW SWITCH
	PRESSURE GAUGE
	THRUST BLOCK
	SLEEVE THROUGH WALL
	PIPE THROUGH WALL
	PIPE DOWN
	PIPE UP OR UP & DOWN
	INSPECTOR'S TEST CONNECTION
	CAP
	CAP
T.S. T.S.	DOUBLE CHECK VALVE
T.S. T.S.	DOUBLE DETECTOR CHECK VALVE
T.S. T.S.	REDUCER PRESSURE ZONE VALVE
	DRY PIPE VALVE
SP	STANDPIPE
CSP	COMBINED STANDPIPE
DSP	DRY STANDPIPE
EQM NO	EQUIPMENT DESIGNATION A - TYPE OF EQUIPMENT B - TAG NUMBER
1 FP1.1	DETAIL NUMBER DRAWING NUMBER
	POINT OF NEW CONNECTION
NS	NON-SPRINKLERED AREA

SYMBOL	DESCRIPTION
	NEW PIPING
	EXISTING PIPING
	EXISTING PIPING TO BE REMOVED
UG	UNDERGROUND PIPING
F	FIRE/BULK MAIN
F(HZ)	HIGHZONE FIRE MAIN
F(LZ)	LOWZONE FIRE MAIN
(DRY)	DRY SYSTEM PIPING
S	SPRINKLER PIPING
MD	MAIN DRAIN PIPING
T.S.	CONTROL VALVE W/TAMPER SWITCH
OR	CHECK VALVE W/BALL DRIP
	CHECK VALVE
	BACKFLOW PREVENTER
FDV	DRAIN VALVE
	POST INDICATOR VALVE
	WALL POST INDICATOR VALVE
	UNDERGROUND GATE VALVE IN BUFFALO BOX
	SPRINKLER RISER
	OS&Y CONTROL VALVE
	PUMP (SCHEMATIC)
FE-1	FIRE EXTINGUISHER
FEC-1	FIRE EXTINGUISHER CABINET
	FIRE HOSE CABINET
	FIRE DEPARTMENT HOSE VALVE CABINET
	FIRE HOSE
	FIRE DEPARTMENT HOSE VALVE
FDC-1	FLUSH FIRE DEPARTMENT CONNECTION
FDC-1	EXPOSED FIRE DEPARTMENT CONNECTION
FDC-1	FREE-STANDING FIRE DEPARTMENT CONNECTION
FH-1	FIRE HYDRANT
FPT-1	FLUSH FIRE PUMP TEST HEADER
FPT-1	FLUSH FIRE PUMP TEST HEADER
FPT-1	FREE-STANDING FIRE PUMP TEST HEADER
FPT-1	FIRE PUMP TEST HEADER

NOTE:
1. THIS IS A GENERAL SYMBOL LIST THEREFORE SOME ITEMS MAY NOT DIRECTLY APPLY TO THIS PROJECT AND DRAWINGS.
2. EXISTING PIPING SHOWN WITH THIN LINE WEIGHT. NEW PIPING SHOWN WITH THICK LINE WEIGHT.
3. DISREGARD SYMBOLS AND ABBREVIATIONS WHICH DO NOT APPLY TO THIS PROJECT.
4. THIS IS A GENERAL ABBREVIATION LIST THEREFORE SOME ITEMS MAY NOT DIRECTLY APPLY TO THIS PROJECT AND RELATED DRAWINGS.

ABBREVIATIONS LIST

ABBREVIATION	DESCRIPTION
AC	AIR COMPRESSOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AP	ACCESS PANEL
ARCH	ARCHITECTURE, ARCHITECTURAL
ASSY	ASSEMBLY
ATM	ATMOSPHERE
AUX	AUXILIARY
B/W	BETWEEN
BOB	BOTTOM OF BEAM
BOP	BOTTOM OF PIPE
BV	BUTTERFLY VALVE W/TAMPER SWITCH
CA	COMPRESSED AIR (INDUSTRIAL)
CALC	CALCULATIONS
CAP.	CAPACITY
CC	CEILING COLUMN
CCD	CHICAGO CITY DATUM
CM	CENTIMETER
CO2	CARBON DIOXIDE
CLG	CEILING
COL	COLUMN
COMP	COMPRESSOR
CONC	CONCRETE
CONN.	CONNECTION
CONT	CONTINUATION
CSP	COMBINED STANPIPE/SPRINKLER SYSTEM
CV	CHECK VALVE
CW	COLD WATER
DCV	DOUBLE CHECK VALVE
DDC	DOUBLE DETECTOR CHECK VALVE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DR	DRAIN
DPV	DRY PIPE VALVE
DV	DRAIN VALVE
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EOBL	END OF BRANCH LINE
EXIST OR (E)	EXISTING
EXP	EXPANSION
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDHV	FIRE DEPARTMENT HOSE VALVE
FDHVC	FIRE DEPARTMENT HOSE VALVE CABINET
FDV	FIRE DEPARTMENT VALVE
FDVC	FIRE DEPARTMENT VALVE CABINET
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN.	FINISHED
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HOUSE
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FP	FIRE PROTECTION
FPC	FIRE PUMP CONTROLLER
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FEET
GC	GENERAL CONTRACTOR
ITC	INSPECTOR TEST CONNECTION
MD	MAIN DRAIN
N&C	NIPPLE AND CAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NS	NOT SPRINKLERED
NTS	NOT TO SCALE
OS&Y	OUTSIDE SCREW & YOKE VALVE W/TAMPER SWITCH
PC	PLUMBING CONTRACTOR
PG	PRESSURE GAUGE
PIV	POST INDICATOR VALVE
PKG	PACKAGE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
QTY	QUANTITY
RPZ	REDUCED PRESSURE ZONE VALVE
RPM	REVOLUTIONS PER MINUTE
SCV	SECTIONAL CONTROL VALVE W/TAMPER SWITCH
SP	STANDPIPE
SPKLR	SPRINKLER
SUB	SUBCONTRACTOR
SYS	SYSTEM
TB	THRUST BLOCK
TD	TRENCH DRAIN
TEMP	TEMPERATURE
THERM OR T	THERMOMETER
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VEL	VELOCITY
VERT	VERTICAL
W	WASTE
W/	WITH
WIP	WALL INDICATOR POST
WF	WATER FILTER
WFS	WATER FLOW SWITCH
WH	WALL HYDRANT



1 FIRE PROTECTION RISER DIAGRAM
NTS

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2	ADDENDUM 1	JUNE 23, 2017
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Drawing Title:

LEGENDS, SYMBOLS & ABBREVIATIONS

Project No.: 4665.01 Checked by: BT

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1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"

GENERAL NOTES:

1. PROVIDE SPRINKLER SPACING FOR LIGHT HAZARD OCCUPANCY THROUGHOUT UNLESS NOTED OTHERWISE.

KEYED NOTES:

1. PROVIDE SPRINKLER SPACING FOR ORDINARY HAZARD, GROUP 1 OCCUPANCY WITHIN THIS AREA.
2. PROVIDE COMPLETE SPRINKLER COVERAGE IN ALL STAIR WELLS, INCLUDING BENEATH STAIRS AND INTERMEDIATE LANDINGS. SEE DETAILS OF STAIRS ON ARCHITECTURAL SHEETS. PIPING SHALL BE ROUTED WITHIN GYPSUM CAVITY BENEATH THE STAIRS (TYPICAL FOR ALL FLOORS).

1 FIRST FLOOR FIRE PROTECTION PLAN - EAST
1/8" = 1'-0"

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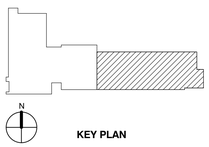

KEY PLAN

Drawing Title:

FIRST FLOOR FIRE PROTECTION PLAN - EAST

Project No.: 4665.01 Checked by: BT

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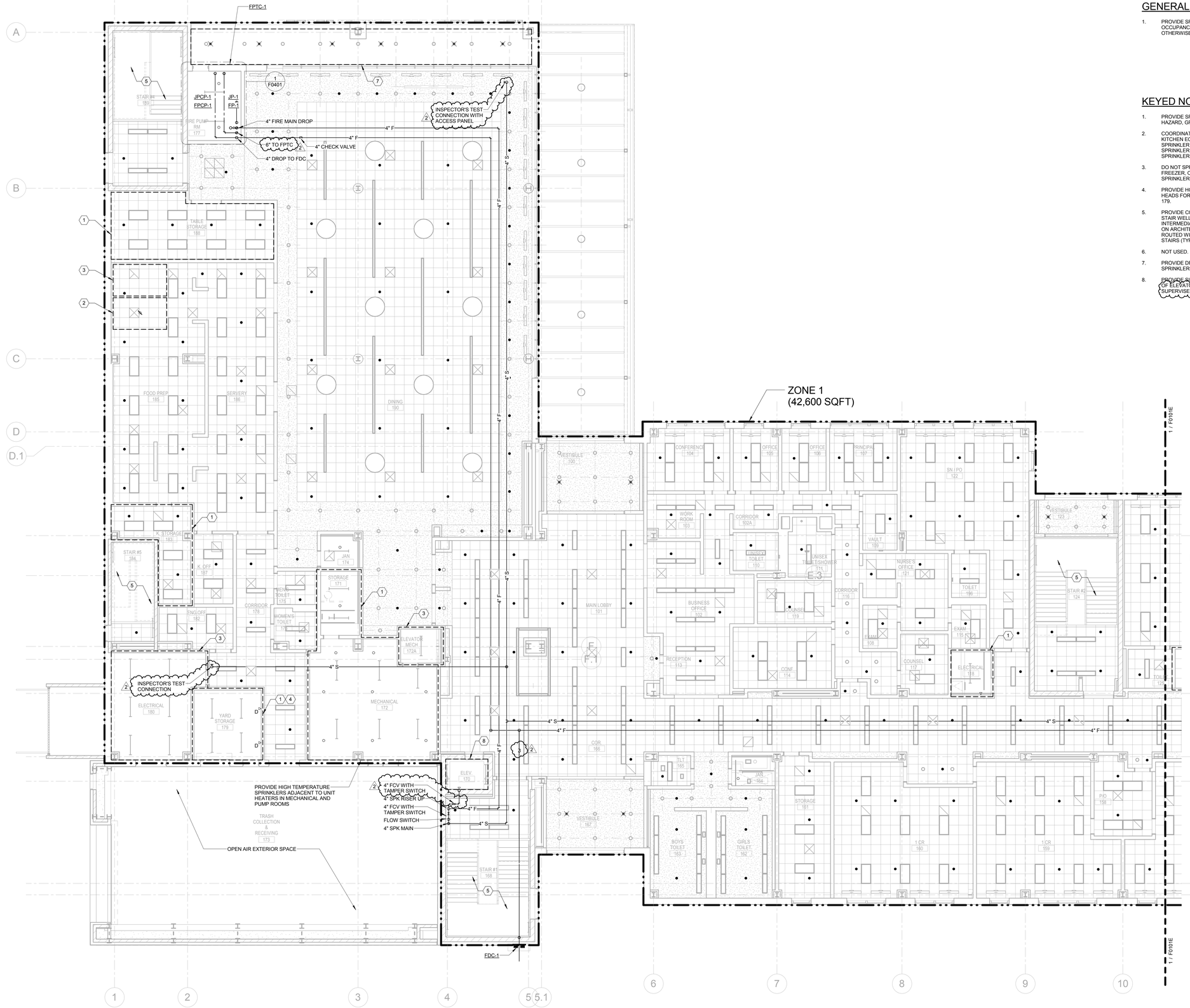

GENERAL NOTES:

1. PROVIDE SPRINKLER SPACING FOR LIGHT HAZARD OCCUPANCY THROUGHOUT UNLESS NOTED OTHERWISE.

KEYED NOTES:

1. PROVIDE SPRINKLER SPACING FOR ORDINARY HAZARD, GROUP 1 OCCUPANCY WITHIN THIS AREA.
2. COORDINATE SPRINKLER HEAD LOCATION WITH KITCHEN EQUIPMENT. PROVIDE DRY PENDENT SPRINKLER WITH HEAD GUARD CONNECTED TO WET SPRINKLER SYSTEM IN WALK-IN COOLER. PROVIDE SPRINKLERS ABOVE THE COOLER AS REQUIRED.
3. DO NOT SPRINKLER ELEVATOR MACHINE ROOM, FREEZER, OR MAIN ELECTRICAL ROOMS. PROVIDE SPRINKLERS ABOVE THE FREEZER AS REQUIRED.
4. PROVIDE HORIZONTAL DRY SIDEWALL SPRINKLER HEADS FOR COVERAGE IN YARD STORAGE ROOM 179.
5. PROVIDE COMPLETE SPRINKLER COVERAGE IN ALL STAIR WELLS, INCLUDING BENEATH STAIRS AND INTERMEDIATE LANDINGS. SEE DETAILS OF STAIRS ON ARCHITECTURAL SHEETS. PIPING SHALL BE ROUTED WITHIN GYPSUM CAVITY BENEATH THE STAIRS (TYPICAL FOR ALL FLOORS).
6. NOT USED.
7. PROVIDE DRY CONCEALED PENDENT TYPE SPRINKLERS FOR COVERAGE OF OVERHANG.
8. PROVIDE SIDEWALL SPRINKLER HEAD AT BOTTOM OF ELEVATOR SHAFT ONLY. PROVIDE WITH SUPERVISED CONTROL VALVE AND TAMPER SWITCH. 2

1 FIRST FLOOR FIRE PROTECTION PLAN - WEST
1/8" = 1'-0"

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2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

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KEY PLAN

Drawing Title:

FIRST FLOOR FIRE PROTECTION PLAN - WEST

Project No.: 4665.01 Checked by: BT

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GENERAL NOTES:

1. PROVIDE SPRINKLER SPACING FOR LIGHT HAZARD OCCUPANCY THROUGHOUT UNLESS NOTED OTHERWISE.

KEYED NOTES:

1. PROVIDE SPRINKLER SPACING FOR ORDINARY HAZARD, GROUP 1 OCCUPANCY WITHIN THIS AREA.
2. PROVIDE COMPLETE SPRINKLER COVERAGE IN ALL STAIR WELLS, INCLUDING BENEATH STAIRS AND INTERMEDIATE LANDINGS. SEE DETAILS OF STAIRS ON ARCHITECTURAL SHEETS. PIPING SHALL BE ROUTED WITHIN GYPSUM CAVITY BENEATH THE STAIRS (TYPICAL FOR ALL FLOORS).

1 SECOND FLOOR FIRE PROTECTION PLAN - EAST
1/8" = 1'-0"

6/23/2017 10:08:43 AM

Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

PUBLIC BUILDING COMMISSION OF CHICAGO
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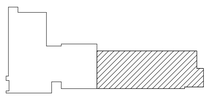

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KEY PLAN

Drawing Title:

SECOND FLOOR FIRE PROTECTION PLAN - EAST

Project No.: 4665.01 Checked by: BT

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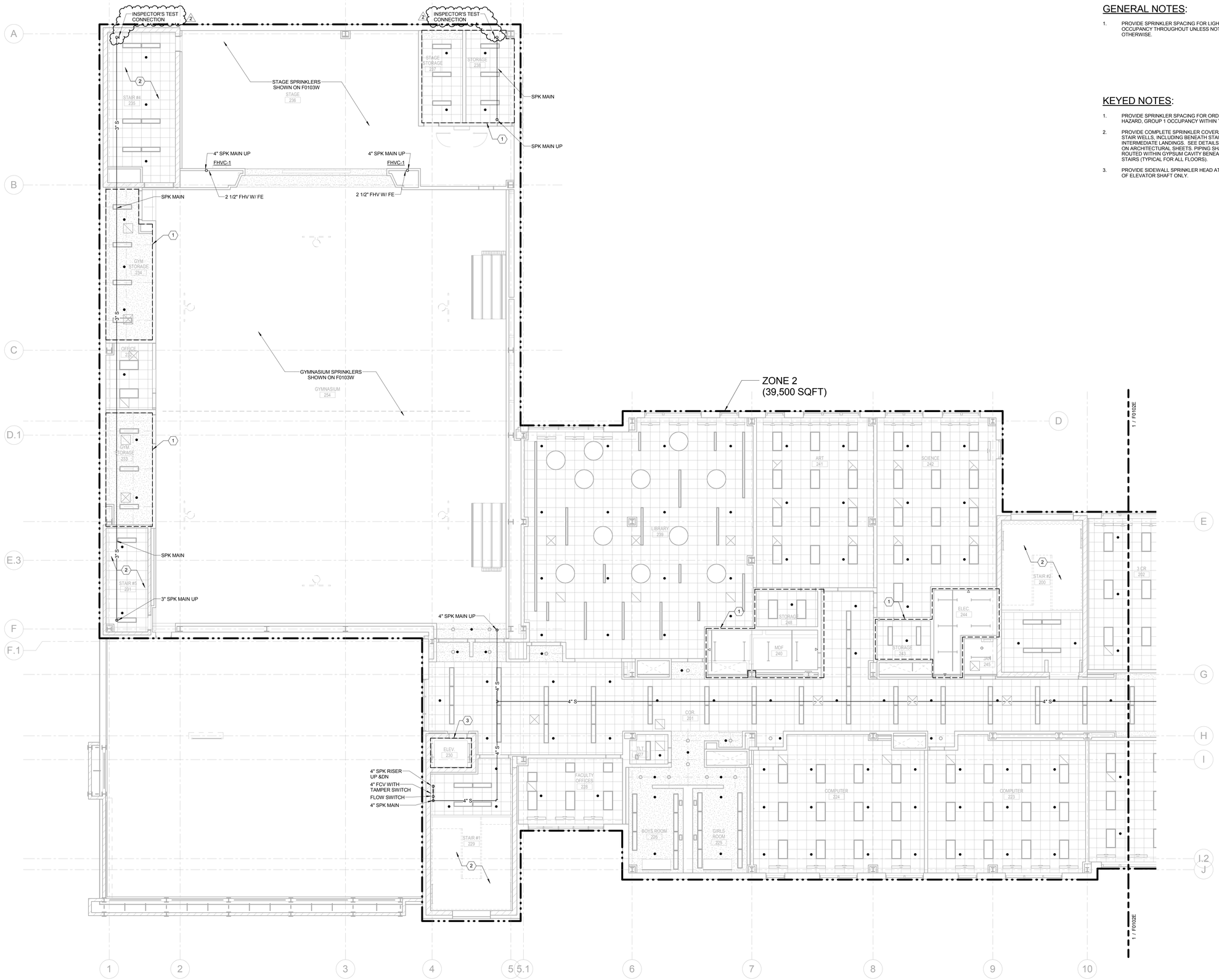
16'-0" 0'-0" 8'-0" 16'-0" 32'-0" 1/16" = 1'-0"
8'-0" 0'-0" 4'-0" 8'-0" 16'-0" 1/8" = 1'-0"
4'-0" 0'-0" 2'-0" 4'-0" 8'-0" 1/4" = 1'-0"
2'-0" 0'-0" 1'-0" 2'-0" 4'-0" 1/2" = 1'-0"
1'-0" 0'-0" 0'-6" 1'-0" 2'-0" 1" = 1'-0"
0'-0" 0'-6" 1'-0" 2'-0" 1-1/2" = 1'-0"
0'-0" 0'-3" 0'-6" 0'-9" 1'-0" 3" = 1'-0"
0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6" 6" = 1'-0"



GENERAL NOTES:

1. PROVIDE SPRINKLER SPACING FOR LIGHT HAZARD OCCUPANCY THROUGHOUT UNLESS NOTED OTHERWISE.

KEYED NOTES:

1. PROVIDE SPRINKLER SPACING FOR ORDINARY HAZARD, GROUP 1 OCCUPANCY WITHIN THIS AREA.
2. PROVIDE COMPLETE SPRINKLER COVERAGE IN ALL STAIR WELLS, INCLUDING BENEATH STAIRS AND INTERMEDIATE LANDINGS. SEE DETAILS OF STAIRS ON ARCHITECTURAL SHEETS. PIPING SHALL BE ROUTED WITHIN GYPSUM CAVITY BENEATH THE STAIRS (TYPICAL FOR ALL FLOORS).
3. PROVIDE SIDEWALL SPRINKLER HEAD AT BOTTOM OF ELEVATOR SHAFT ONLY.

1 SECOND FLOOR FIRE PROTECTION PLAN - WEST
1/8" = 1'-0"

6/23/2017 10:06:53 AM

Date of Issue: June 28, 2017
PBC: Dore Elementary School New Construction Project - Addendum No. 1

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Chicago Public Schools

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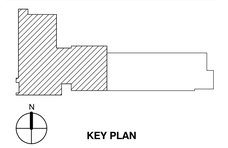
No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017



KEY PLAN

Drawing Title:

SECOND FLOOR FIRE PROTECTION PLAN - WEST

Project No.: 4665.01 Checked by: BT

F0102W

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32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

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

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

GENERAL NOTES:

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KEYED NOTES:

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1 THIRD FLOOR FIRE PROTECTION PLAN - EAST
1/8" = 1'-0"

6/23/2017 10:07:04 AM

Date of Issue: June 28, 2017
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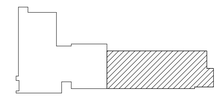

N

KEY PLAN

Drawing Title:

THIRD FLOOR FIRE PROTECTION PLAN - EAST

Project No.: 4665.01 Checked by: BT

F0103E

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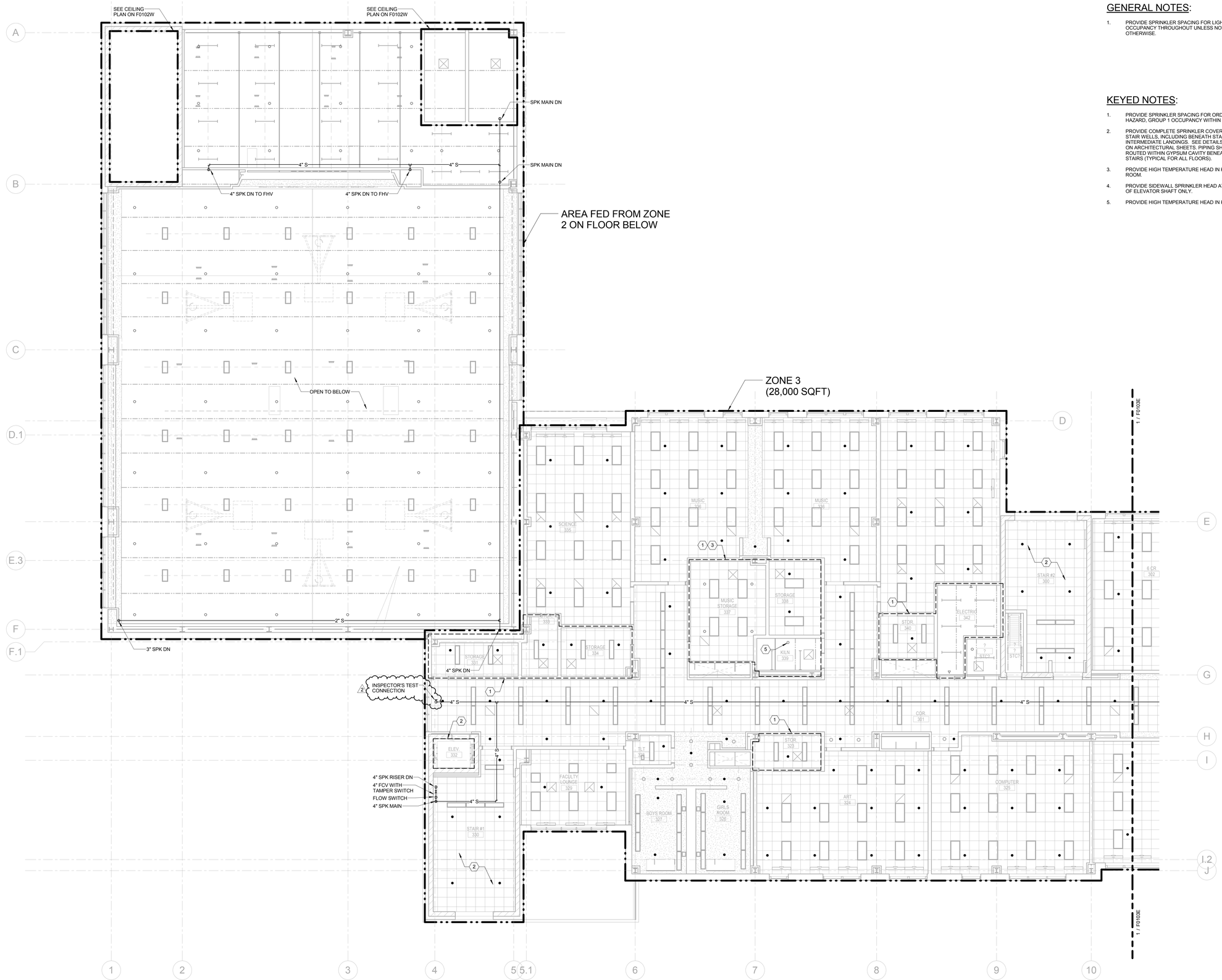
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



1 THIRD FLOOR FIRE PROTECTION PLAN - WEST
1/8" = 1'-0"

GENERAL NOTES:

1. PROVIDE SPRINKLER SPACING FOR LIGHT HAZARD OCCUPANCY THROUGHOUT UNLESS NOTED OTHERWISE.

KEYED NOTES:

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3. PROVIDE HIGH TEMPERATURE HEAD IN KILN ROOM.
4. PROVIDE SIDEWALL SPRINKLER HEAD AT BOTTOM OF ELEVATOR SHAFT ONLY.
5. PROVIDE HIGH TEMPERATURE HEAD IN KILN ROOM.

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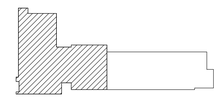

KEY PLAN

Drawing Title:

THIRD FLOOR FIRE PROTECTION PLAN - WEST

Project No.: 4665.01 Checked by: BT

F0103W

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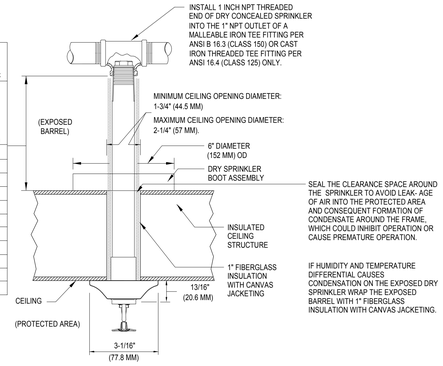
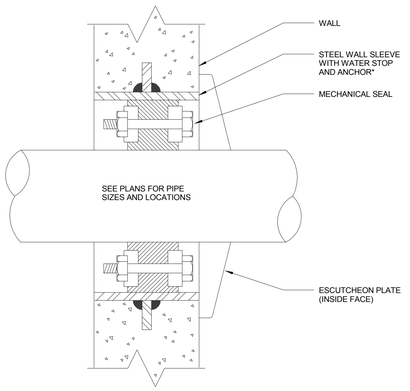
AMBIENT TEMPERATURE OF PROTECTED AREA* AT THE DISCHARGE END OF THE SPRINKLER	EXPOSED BARREL AMBIENT TEMPERATURE 40°F/4°C	50°F/10°C	60°F/16°C
	EXPOSED MINIMUM BARREL LENGTH** FACE OF TEE TO TOP OF THE CEILING (OR SURFACE OF THE WALL FOR DRY HSW SPRINKLERS)		
	IN. (MM)	IN. (MM)	IN. (MM)
40°F (4°C)	0	0	0
30°F (-1°C)	0	0	0
20°F (-7°C)	4 (100)	0	0
10°F (-12°C)	8 (203)	1 (25.4)	0
0°F (-18°C)	12 (305)	3 (76)	0
-10°F (-23°C)	14 (356)	4 (102)	1 (25.4)
-20°F (-29°C)	14 (356)	6 (152)	3 (76)
-30°F (-34°C)	16 (406)	8 (203)	4 (102)
-40°F (-40°C)	18 (457)	8 (203)	4 (102)
-50°F (-46°C)	20 (508)	10 (254)	6 (152)
-60°F (-51°C)	20 (508)	10 (254)	6 (152)

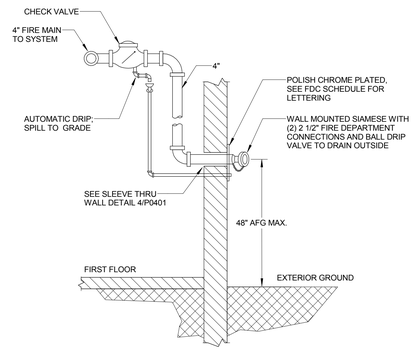


*THE PROTECTED AREA REFERS TO THE AREA WITHIN THE FREEZER/COOLER (FOR PENDENT SPRINKLERS). THE AMBIENT TEMPERATURE IS THE TEMPERATURE AT THE DISCHARGE END OF THE SPRINKLER. FOR PROTECTED AREA TEMPERATURES THAT OCCUR BETWEEN THE VALUES LISTED, USE THE NEXT COOLER TEMPERATURE.

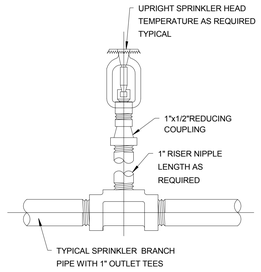
11 TYPICAL FREEZER/COOLER SPRINKLER HEAD DETAIL
NTS



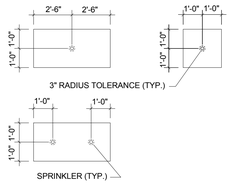
4 WATERTIGHT WALL SLEEVE DETAIL
NTS



3 FIRE DEPARTMENT CONNECTION1
NTS

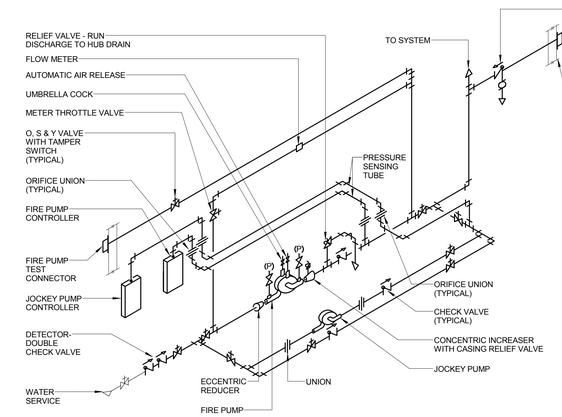


10 UPRIGHT SPRINKLER HEAD DETAIL
NTS

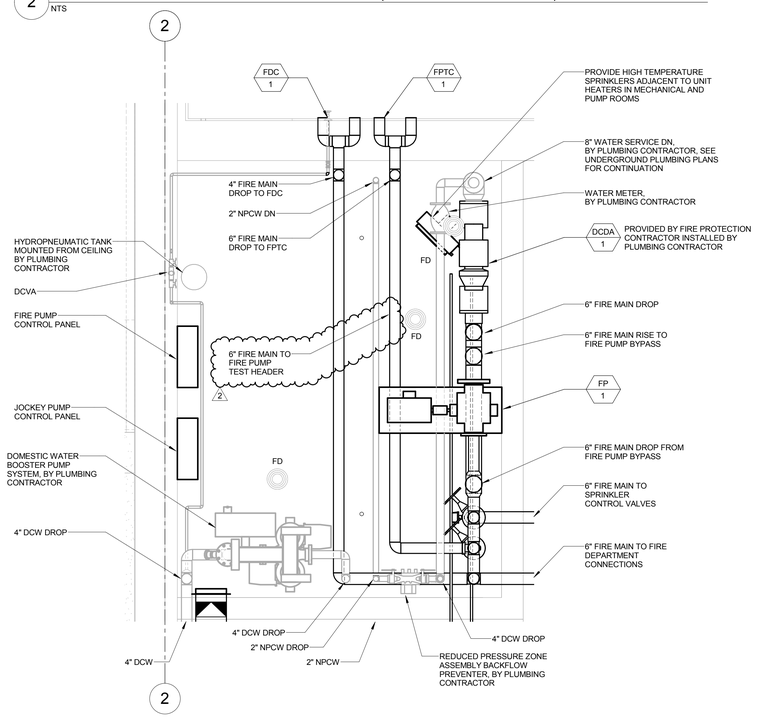


NOTE:
SPRINKLERS SHALL BE POSITIONED AS SHOWN WITH A 3" TOLERANCE. HOWEVER, SHOULD ANY PART OF THE TOLERANCE BE USED, THEN ALL THE SPRINKLERS IN THE ROW SHALL BE OFFSET BY THE SAME DISTANCE IN THE SAME DIRECTION.

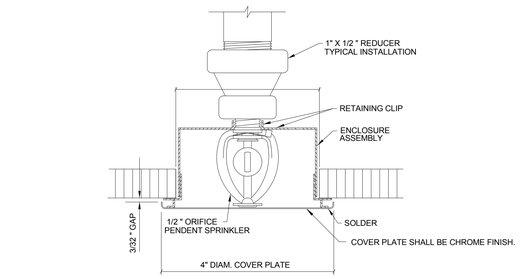
9 SPRINKLER SPACING DETAIL
NTS



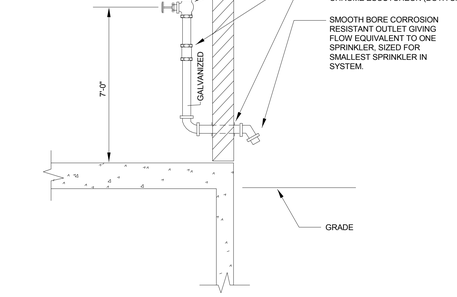
2 FIRE PUMP PIPING AND CONTROL DETAIL (W/ METERING DEVICE)
NTS



1 ENLARGED FIRE PUMP ROOM
1/2" = 1'-0"



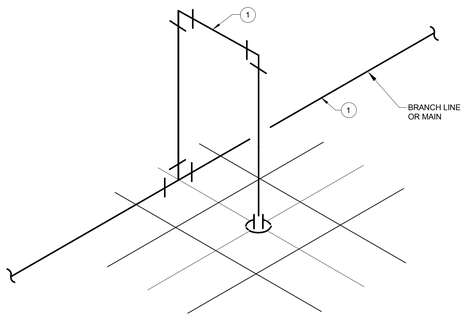
8 CONCEALED SPRINKLER HEAD DETAIL
NTS



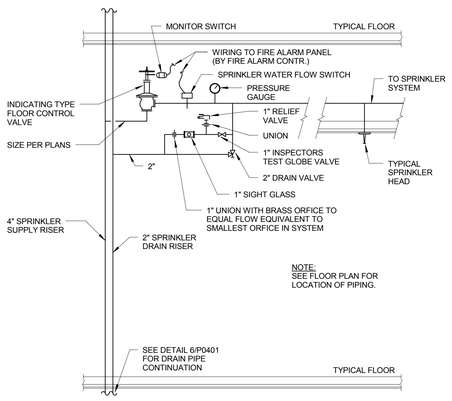
6 EXTERIOR TEST CONNECTION
NTS

1 SEE NFPA 313, 4-14.2.3.3 EXCEPTIONS 1 & 2 AND 4-14.2.3.4 EXCEPTION. PROVIDE RESTRAINED HANGER SUPPORTS ON ALL NEW END OF BRANCHLINES AND ARM-OVERS.

SPRINKLER MOUNTED IN CENTER OF SUSPENDED CEILING TILE



7 TYPICAL RETURN BEND DETAIL
NTS



5 TYPICAL VALVING FOR COMBINED SYSTEM
NTS

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Drawing Title:

ENLARGED PLANS & DETAILS

Project No.: 4665.01 Checked by: BT

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SPRINKLER HYDRAULIC DESIGN CRITERIA SCHEDULE

SPACE	HAZARD CLASS	OCCUPANCY	GROUP	DENSITY (GPM/SQFT)	AREA* (SQFT)	DESIGN ADJUSTMENT	SYSTEM	MAX AREA PER SPRINKLER	NOTES
1 CR, 2 CR, 3 CR, 4 CR, 5 CR, 6 CR, 7 CR, 8 CR, ADMIN., ART, BOYS ROOM, BOYS TOILET, BUSINESS OFFICE, CLO, COMPUTER, CONF, CONFERENCE, COR., CORRIDOR, COUNSEL, DINING, ELEV., ENG OFF, EXAM, FACULTY LOUNGE, FACULTY OFFICES, GIRLS ROOM, GIRLS TOILET, JAN, JAN., K CR, K. OFF, KILN, LIBRARY, MAIN LOBBY, MENS TOILET, MUSIC, NURSE'S OFFICE, NURSE'S SUITE, OFFICE, P/O, PRINCIPAL, RECEPTION, ROOF ACCESS, SCIENCE, SN / PO, SN/PO, STAGE, STAIR, TLT, TOILET, UNISEX TOILET, UNISEX TOILET/SHOWER, VAULT, VESTIBULE, WOMENS TOILET, WORK ROOM	LIGHT	CLASS C & E	--	0.12	1,500 SQFT	NONE	WET	225 SQFT	1, 2
GYMNASIUM	LIGHT	CLASS C	-	0.15	1,500 SQFT	NONE	WET	225 SQFT	1
FIRE PUMP RM, MDF, MECH, MECHANICAL	ORDINARY	HVAC	1	0.15	1,500 SQFT	NONE	WET	130 SQFT	1
FOOD PREP, GYM STORAGE, K. STORAGE, MUSIC STORAGE, SERVERY, STAGE STORAGE, STOR., STORAGE, TABLE STORAGE, YARD STORAGE	ORDINARY	CLASS F, G, & H (CEILING < 14')	--	0.20	2,000 SQFT	NONE	WET	130 SQFT	-
MAIN ELECTRICAL ROOM, ELEVATOR MECH, FREEZER (< 200 SQFT)	NO SPRINKLERS								

NOTES: 1. DENSITY PER CPS GUIDELINES.
2. PROVIDE HIGH TEMPERATURE SPRINKLER HEAD IN KILN AND ELECTRICAL CLOSETS.

* NO ADJUSTMENT PERMITTED FOR 'QUICK' RESPONSE SPRINKLERS.
** ANY STORAGE OVER 12' IN HIGHT SHALL HAVE A MAX-AREA SPRINKLER OF 100 SQFT.

SPRINKLER SYSTEM ZONE SCHEDULE

ZONE	FLOOR	AREA / NAME	TYPE	COVERAGE	PIPING	SUB SYSTEM	SCV LOCATION	CALC. RED'D
1	FIRST	ENTIRE FIRST FLOOR	WET	42,600 SQFT	PER SPEC	-	FIRST FLOOR STAIR #1	YES
2	SECOND	ENTIRE SECOND FLOOR	WET	39,500 SQFT	PER SPEC	-	SECOND FLOOR STAIR #1	YES
3	THIRD	ENTIRE THIRD FLOOR	WET	28,000 SQFT	PER SPEC	-	THIRD FLOOR STAIR# 1	YES

FIRE PUMP AND JOCKEY PUMP SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	PUMP PRESSURE (PSI)	FLOW (GPM)	POWER (HP)	VOLTAGE	RPM	REMARKS
FP 1	ITT-AC FIRE PUMP 4X4X9.5F 1580 SERIES	100	500	40	480/3	3550	1
JP 1	ITT-GOULDS GB5	110	5	1.5	480/3 2	3450	2

NOTES: 1. - WYE DELTA, CLOSED TYPE STARTER. FIRE PUMP CONTROLLER SHALL HAVE A WITHSTAND RATING OF 65K AMPS MINIMUM
2. - ACROSS THE LINE TYPE STARTER. JOCKEY PUMP CONTROLLER SHALL HAVE A WITHTAND RATING OF 65 K AMPS MINIMUM.

FIRE DEPARTMENT AND FIRE PUMP TEST CONNECTION SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	PROJECTION	SIZE	FINISH	LETTERING	REMARKS
FDC 1	POTTER-ROEMER 5023-D	FLUSH TYPE	4" X (2) 2-1/2"	POLISHED CHROME PLATED	AUTO. SPKR.	PROVIDE WITH CAPS AND CHAINS, THREADS TO MATCH CHICAGO FIRE DEPARTMENT
FPTC 1	POTTER-ROEMER 5863-D-7	FLUSH TYPE	4" X (2) 2-1/2"	POLISHED CHROME PLATED	PUMP TEST CONNECTION	COMPLETE W/ MALE SNOOTS, CAPS, AND CHAINS, THREADS TO MATCH CHICAGO FIRE DEPARTMENT

SPRINKLER SYSTEM PIPING & HANGER SCHEDULE [1]

PIPE DIAMETER	MIN. PIPE SIZE [2]	HANGER TYPE	MIN. ROD SIZE	ATTACHMENT METHOD	MIN TRAPEZE SIZE [3]	MAX SPACING [4, 5]	MAX. EOBL UNSUPPORTED LENGTH [6, 7]
1" - 1-1/4"	SCH. 40	SWIVEL	3/8"	C-CLAMP/ ANCHOR BOLT	2"	12'-0"	3'-0" & 4'-0"
1-1/2" - 2"	SCH. 40	SWIVEL	3/8"	C-CLAMP/ ANCHOR BOLT	2"	15'-0"	5'-0"
2-1/2" - 4"	SCH. 10	SWIVEL	3/8"	C-CLAMP/ ANCHOR BOLT	2-1/2"	15'-0"	5'-0"
5" - 6"	SCH. 10	CLEVIS	1/2"	C-CLAMP/ ANCHOR BOLT	3"	15'-0"	N/A
8" - 10"	SCH. 10	CLEVIS	1/2"	C-CLAMP/ ANCHOR BOLT	3-1/2"	15'-0"	N/A

NOTES: 1. - SCHEDULE IS TYPICAL - APPROVED DEVIATIONS ARE PERMITTED ONLY IF ALLOWED BY AUTHORITY HAVING JURISDICTION.
2. - GALVANIZED PIPING: SCH. 40 ONLY AND/OR FM APPROVED FOR 300 PSI & ASTM A653.
3. - BASED ON 6'-0" MAXIMUM SPAN FOR TRAPEZE MEMBER & FOLLOWS MINIMUM SPEC. PIPE SCHEDULE.
4. - EXPANSION SHIELDS IN CONCRETE MAXIMUM SPACING IS 10'-0" FOR PIPE SIZES > 4"
5. - LIMITED TO PER PIPE SECTION AND PER TWO BRANCH LINES MAXIMUM.
6. - MAXIMUM UNSUPPORTED ARMOVER LENGTH IS 24", COPPER 12".
7. - IF SPRINKLER PRESSURE > 100 PSI:
- MAXIMUM END OF BRANCH LINE (EOBL) UNSUPPORTED LENGTH IS 12" STEEL PIPE; COPPER 6".
- VERTICAL RESTRAINT REQUIRED AT EOBL (PROVIDE DETAIL).
- MAXIMUM UNSUPPORTED ARMOVER LENGTH IS 12", COPPER 6".
- HANGER SHALL BE WITHIN 12" OF LAST SPRINKLER FOR EOBL AND ARMOVERS.

AUTOMATIC SPRINKLER SCHEDULE

SYMBOL	MANUFACTURER & MODEL NO.	TYPE	COVERAGE	TEMPERATURE	SPRINKLER FINISH	CANOPY FINISH	REMARKS
●	TYCO RFII SIN TY3551	CONCEALED PENDENT	STANDARD	155 F	BRASS	CHROME COVERPLATE	1
✹	TYCO DS-C SIN TY3535	DRY CONCEALED PENDENT	STANDARD	155 F	BRASS	CHROME COVERPLATE	1
○	TYCO TY-L SIN TY3111	UPRIGHT	STANDARD	155 F	BRASS	--	1, 2
∅	TYCO DS-1 SIN TY3255	DRY PENDENT PLAIN BARREL	STANDARD	155 F	CHROME	--	1, 2, 3
▷	TYCO TY-L SIN TY3311	HORIZONTAL SIDEWALL	STANDARD	155 F	CHROME	--	1, 2, 3
▷D	TYCO DS-1 SIN TY3355	DRY HORIZONTAL SIDEWALL	STANDARD	155 F	CHROME	--	1, 2

NOTES: 1. - UL/FM APPROVED, QUICK RESPONSE.
2. - PROVIDE GUARDS ON ANY SPRINKLERS SUBJECT TO MECHANICAL INJURY.
3. - INSTALL IN WALK-IN COOLERS AND FREEZERS.
4. - PROVIDE INTERMEDIATE TEMPERATURE RATED SPRINKLER IN ELECTRICAL SPACES (TYPICAL).

BACKFLOW PREVENTER SCHEDULE

SYBMOL	MANUFACTURER & MODEL NO.	LOCATION	SIZE	SYSTEM	STRAINER	REMARKS
DCDA 1	WATTS 774DCDA	FIRE PUMP ROOM 177	6"	FIRE	YES	PROVIDED BY FIRE PROTECTION CONTRACTOR, INSTALLED BY PLUMBING CONTRACTOR

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NOT FOR CONSTRUCTION

No.	Description	Date
2	ADDENDUM 1	JUNE 23, 2017
1	ISSUED FOR BID	JUNE 7, 2017

Drawing Title:

SCHEDULES

Project No.: 4665.01 Checked by: BT

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