

April 12, 2021

**SOLICITATION ADDENDUM NO. 2**

**ITB 20-0032**

**West Tualatin View Elementary Sewer Replacement**

**THE FOLLOWING CHANGES/ADDITIONS TO THE ABOVE CITED SOLICITATION ARE ANNOUNCED:**

This Addendum modifies the Invitation to Bid (ITB) document(s) only to the extent indicated herein. All other areas not changed or otherwise modified by this Addendum shall remain in full force and effect. This Addendum is hereby made an integral part of the ITB document. Bidder must be responsive to any requirements of this Addendum as if the requirements were set forth in the ITB. Failure to do so may result in Bid rejection. See the ITB regarding requests for clarification or change and protests of this Addendum, and the deadlines for the foregoing.

This addendum is to be acknowledged in the space provided on the Bidder Certification form supplied in the solicitation document. Failure to acknowledge receipt of this addendum may be cause to reject your offer.

The closing date **REMAINS UNCHANGED:**

**April 20, 2021 at 2:00 PM Pacific Time**

**CHANGES:**

- 1) The Revised Drawings attached to this Addendum 2 hereby replace any corresponding pages in ATTACHMENT J Drawings. If any pages in the Revised Drawings do not have a corresponding page in ATTACHMENT J Drawings, such pages are hereby added to ATTACHMENT J Drawings. Refer to the attached Engineer's Summary for a summary of any changes/additions to the Drawings.
- 2) The Revised Specifications attached to this Addendum 2 hereby replace any corresponding pages in ATTACHMENT K Specifications. If any pages in the Revised Specifications do not have a corresponding page in ATTACHMENT K Specifications, such pages are hereby added to ATTACHMENT K Specifications. Refer to the attached Engineer's Summary for a summary of any changes/additions Specifications.
- 3) ATTACHMENT B Bid Schedule is hereby replaced with the version of ATTACHMENT B Bid Schedule attached to this Addendum 2.
- 4) The Scoping Results are hereby added to the Solicitation for Bidders' information only. Bidders shall carefully review the Scoping Results and consider the information in preparing Bids, but the Scoping Results are not required to be returned with Bids. The Scoping Results can be accessed at the following link: [https://drive.google.com/drive/folders/1xFkJ0o9Qin\\_OJdPCf2mP33r0dXTvgPhB?usp=sharing](https://drive.google.com/drive/folders/1xFkJ0o9Qin_OJdPCf2mP33r0dXTvgPhB?usp=sharing)

**QUESTIONS AND ANSWERS:**

QUESTION: Will you upload the document with the survey results of the scoping?

ANSWER: See CHANGES 4) above. All photos/videos and layout of the scoping results ("Scoping Results") can be accessed via the following link:

[https://drive.google.com/drive/folders/1xFkJ0o9Qin\\_OJdPCf2mP33r0dXTvgPhB?usp=sharing](https://drive.google.com/drive/folders/1xFkJ0o9Qin_OJdPCf2mP33r0dXTvgPhB?usp=sharing)

QUESTION: Update the diameter of the existing sanitary piping?  
ANSWER: The diameter of the new piping to be installed has been added to civil drawing C200. Refer to the Revised Drawings attached to this Addendum 2 Reference CHANGES 1) noted above.

QUESTION: Would pipe bursting be considered if it is cost effective?  
ANSWER: Pipe Bursting will be considered as an Alternate. See the Revised Specifications attached to this Addendum 2 for pipe bursting requirements. A space to collect pricing for this Alternate has been added to the new version of the BID SCHEDULE that is attached to this Addendum 2. Reference Changes 2) and 3) noted above.

QUESTION: Did the scope show any bellies?  
ANSWER: Contractor is responsible for determining if there are any existing bellies in the site sanitary sewer piping, however none were detected in the District's initial scoping.

QUESTION: Will a pipe liner be considered?  
ANSWER: Pipe liner will not be acceptable in lieu of replacing with new piping or pipe bursting (if the pipe bursting alternate is selected by the District).

QUESTION: The main level on the civil drawings seem off in regards to the basement; please clarify.  
ANSWER: The piping was shown in the correct location. The fencing around the mechanical equipment was not shown in the correct location. Refer to the revised drawings C100 and C200 for revised fence locations. Reference CHANGES 1) noted above.

SECTION V – ATTACHMENTS  
ATTACHMENT B  
Solicitation No. ITB 20-0032**BID SCHEDULE**

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(Contractor)

TOTAL BASE BID: including the Work as defined in the Project Manual, Drawings and Addenda (if any), the TOTAL SUM OF:

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)

MADNATORY Unit Prices: Please provide Unit Prices for each of the below items. The provided estimated quantities are for Bid evaluation purposes only and are neither intended to guarantee nor limit the actual number of units that may be purchased via any applicable change orders.

| <b>Hazardous Materials Unit Abatement Cost</b>                 | <b>Unit Type</b> | <b>Estimated Quantity</b> | <b>Unit Price</b> |
|--|------------------|---------------------------|-------------------|
| Thermal System Pipe Insulation (Elbows)                        | Each             | 8                         | \$/ each:         |
| Thermal System Pipe Insulation (Runs)                          | Linear Foot      | 1500                      | \$/ln. ft.:       |
| Transite Pipe  | Linear Foot      | 600                       | \$/ln. ft.:       |
| Gypsum Board and Joint Compound                                | Square Foot      | 75                        | \$/sq. ft.:       |
| Mobilization Cost Associated with Follow-up Abatement Services | Mobilization     | 1                         | \$/Mob.:          |

| <b>Rock Excavation</b>             | <b>Unit Type</b> | <b>Estimated Quantity</b> | <b>Unit Price</b> |
|------------------------------------|------------------|---------------------------|-------------------|
| Rock Excavation per Specifications | \$/yard          | 20                        | \$/yard :         |

OPTIONAL Add/Deduct Alternate:

Provide the net change to the TOTAL BASE BID amount for providing pipe bursting instead of the specified pipe replacement for the sanitary sewers. Pipe bursting shall be as described in the Revised Specifications attached to this Addendum 2. If this Alternate would result in a net increase to the TOTAL BASE BID listed above, present the LUMP SUM COST as a positive number. If this Alternate would result in a net decrease to the TOTAL BASE BID, present the LUMP SUM COST as a negative number. If the District selects this Alternate, it may select it either before or after Contract Award. If the District selects this Alternate before Contract Award, the Alternate will be considered in Bid Evaluation in accordance with the Solicitation.

LUMP SUM COST (for Alternate)\_\_\_\_\_ DOLLARS

(\$\_\_\_\_\_)

**NOTE: Contractor will be required to develop a schedule of values for payment and accounting purposes prior to the initial request for payment in a form acceptable to the District.**

**NOTES:**

- If any information submitted on this form is contradictory, words prevail over numbers.
- The Contract is intended to be awarded to a single Contractor.

## Engineer's Summary

Beaverton School District  
West TV Sewer Replacement  
Addendum  
April 9, 2021

This addendum is issued to modify, clarify, or amend the original Project Drawings and Specifications and is hereby made part of the Contract Documents. The Contractor shall be responsible for incorporating items in this Addendum to the Work. The following shall take precedence over anything to the contrary in the Drawings or Specifications.

### Civil Specifications:

1. Section 33 31 00 – SANITARY SEWER PIPING:
  - a. **MODIFY** specification language to include pipe bursting. Refer to attached specification section 33 31 00.

### Civil Drawings:

1. Drawing C100 – CIVIL SITE PLAN:
  - a. **MODIFY** the location of the fencing around the mechanical equipment.
  - b. Refer to attached revised C100 drawing.
2. Drawing C200 – UTILITY PLAN:
  - a. **ADD** pipe diameters to proposed sewer lines.
  - b. **MODIFY** the location of the fencing around the mechanical equipment.
  - c. Refer to the attached revised C200 drawing.

### Architectural Drawings:

1. Drawing AD-203 – DEMOLITION BASEMENT FLOOR PLAN – AREA E
  - a. **MODIFY** keynote DF 1 to read “(E) Kitchen sinks to be removed, salvaged, and protected during construction.”
  - b. **ADD** keynote DF 9 “(E) Freezer, Prep Station, Range Hood to be protected during construction.”
  - c. Refer to attached full size sheet AD-203.
2. Drawing A-203 – DEMOLITION BASEMENT FLOOR PLAN – AREA E
  - a. **MODIFY** keynote F 9 to read “(E) Freezer, Prep Station, Range Hood to be protected during construction.”
  - b. Refer to attached full size sheet A-203.

### Plumbing Drawings:

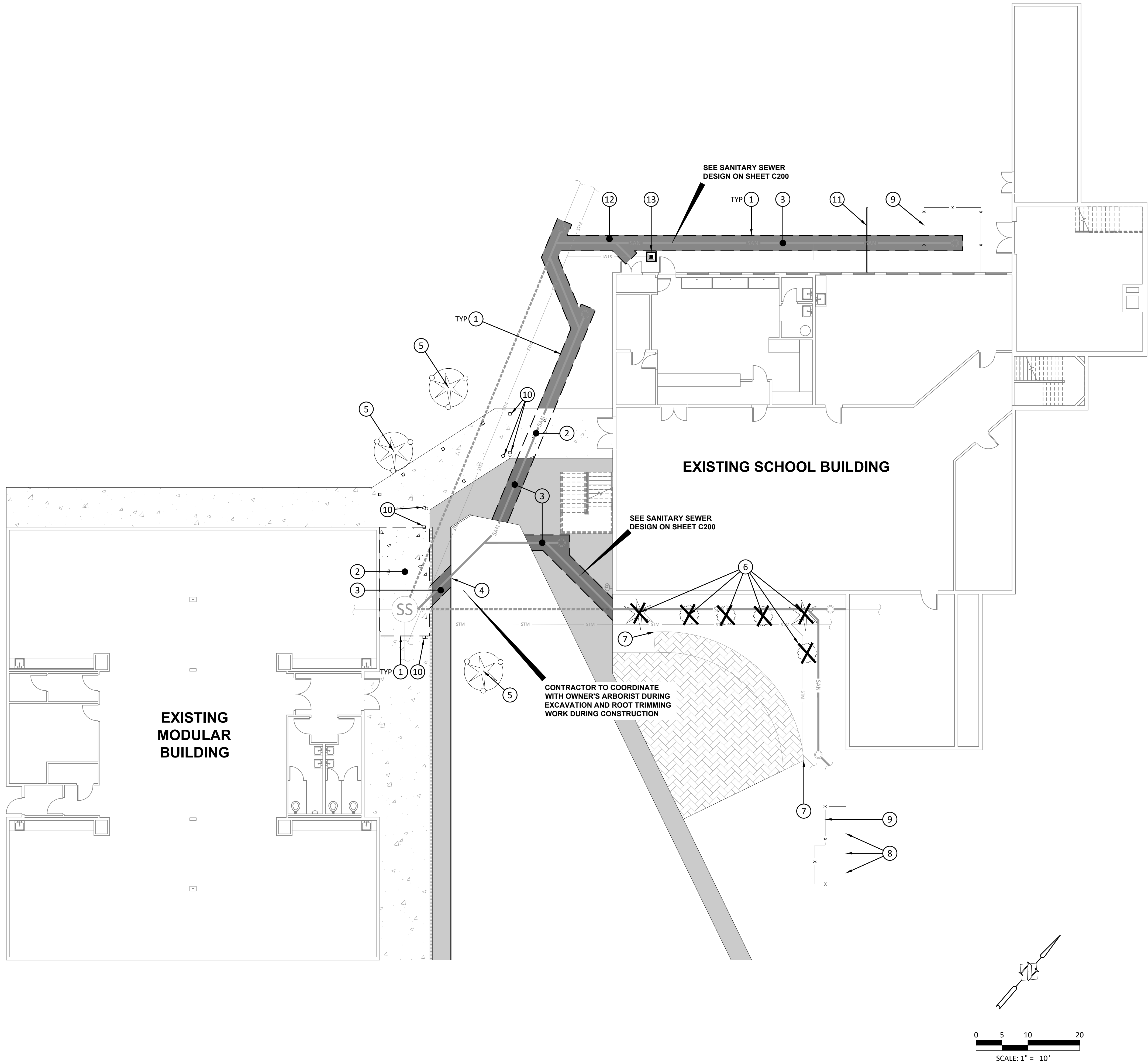
CONSULTING ENGINEERS

Mechanical  
Electrical  
Plumbing  
Lighting  
Technology

1. Drawing P201 – PLUMBING PLAN – BASEMENT AREA E
  - a. **ADD** floor drain FD-1 and trap primer TP-1 in the CAN RM adjacent to the kitchen.
  - b. **DELETE** the reference to keynote 4 in the CAN RM.
  - c. **ADD** the plumbing fixture schedule with FD-1 and TP-1 requirements.
  - d. **ADD** keynote 7 to read, “INSTALL TRAP PRIMER AT LEAST 12” ABOVE FINISH FLOOR. CONNECT TO NEAREST COLD WATER LINE IN THE STORAGE ROOM.”
  - e. **ADD** a reference to keynote 7 at the new TP-1 in the CAN RM.
  - f. **ADD** keynote 8 to read, “DEMOLISH EXISTING FLOOR DRAIN IN THIS LOCATION. PROVIDE NEW FD-1 FLOOR DRAIN.”
  - g. **ADD** a reference to keynote 8 at the new FD-1 in the CAN RM.
  - h. Refer to attached revised drawing P201.



Revised Drawings



CONSTRUCTION NOTES:

- 1 SAWCUT CLEAN LINE AND MATCH EXISTING CONCRETE SIDEWALK AND/OR ASPHALT PAVEMENT. RECONSTRUCT EXISTING AS NEEDED IF DAMAGED DURING CONSTRUCTION. CONSTRUCT SIDEWALK TO NEAREST EXISTING PANEL.
- 2 CONSTRUCT CONCRETE SIDEWALK PER DETAIL 1 ON SHEET C300. MATCH EXISTING SLOPES AND ELEVATIONS. CROSS SLOPE NOT TO EXCEED 2%. CONTRACTOR TO NOTIFY ENGINEER IF ANY PROPOSED SLOPES EXCEED 2% PRIOR TO CONSTRUCTION.
- 3 CONSTRUCT AC PAVEMENT SECTION PER DETAIL 2 ON SHEET C300, OR MATCH EXISTING, WHICHEVER IS THICKER. MATCH EXISTING SLOPES AND ELEVATIONS.
- 4 REMOVE AND REINSTALL WOODEN CURB. INSTALL 1/2" DIAMETER 2'-6" LONG GALV. STEEL PIPE AT 4'-0" ON CENTER WITH TWO PER TIMBER MINIMUM.
- 5 PROTECT EXISTING TREE. INSTALL TREE PROTECTION FENCING PER DETAIL 9 ON SHEET C300.
- 6 REMOVE TREE.
- 7 REMOVE EXISTING 2' RETAINING WALL AS REQUIRED FOR SANITARY SEWER TRENCHING. CONTRACTOR TO REINSTALL RETAINING WALL BLOCKS TO EXISTING CONDITIONS.
- 8 PROTECT EXISTING MECHANICAL EQUIPMENT AND CONCRETE PADS.
- 9 REMOVE AND REINSTALL FENCING AS REQUIRED.
- 10 PROTECT EXISTING COLUMN AND FOOTING.
- 11 REMOVE AND REINSTALL BIKE RACK.
- 12 REINSTALL CROSSWALK STRIPING PAINT WITHIN SAWCUT LIMITS TO MATCH EXISTING COLOR AND WIDTH.
- 13 INSTALL INLET PROTECTION PER DETAIL 8 ON SHEET C300.

GENERAL NOTES:

CONTRACTOR SHALL OBTAIN RIGHT-OF-WAY PERMIT PRIOR TO GRADING IN THE RIGHT-OF-WAY.

THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL CONSTRUCTION WITH OWNER AND OWNER'S FACILITIES DEPARTMENT. CONTRACTOR TO PROVIDE OWNER WITH AN ACCESS PLAN THAT FACILITATES 24 HOUR EMERGENCY, VEHICLE, AND PEDESTRIAN ACCESS TO THE CAMPUS.

WORK SHALL CONFORM WITH WASHINGTON COUNTY STANDARDS, THE INTERNATIONAL BUILDING CODE (IBC), OREGON PLUMBING SPECIALTY CODE (OPSC) AND THE UNIFORM PLUMBING CODE (UPC). IT IS CONTRACTOR'S RESPONSIBILITY TO ENSURE WORK IS PERFORMED IN COMPLIANCE WITH LOCAL CODE AND REGULATIONS.

THE CONTRACTOR SHALL PROVIDE ALL WORK ILLUSTRATED ON THE DRAWINGS AND ALL INCIDENTAL WORK CONSIDERED NECESSARY TO COMPLETE THE PROJECT IN A MANNER ACCEPTABLE TO THE OWNER INCLUDING MITIGATING CONFLICTS WITH EXISTING UTILITIES, CONNECTING EXISTING UTILITIES TO PROPOSED FACILITIES, AND FIELD VERIFYING EXISTING UTILITIES PRIOR TO PROJECT COMPLETION.

THE CONTRACTOR SHALL KEEP AN APPROVED AND UPDATED SET OF DRAWINGS ON THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL KEEP A SET OF PLANS MARKED UP WITH AS-BUILT CONDITIONS AND CHANGES FOR FUTURE AS-BUILT RECORD DRAWINGS.

EXISTING CONDITIONS SHOWN ON THE PLAN ARE COMPILED FROM EXISTING AS-BUILTS AND SITE VISITS PERFORMED BY HHPR. THE ENGINEER, COUNTY, AND UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY NOR THE COMPLETENESS OF SUCH RECORDS. THE ENGINEER MAKES NO GUARANTEE, OR WARRANTY, THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, WHETHER ACTIVE OR ABANDONED. THE CONTRACTOR IS RESPONSIBLE TO POT-HOLE AND VERIFY CRITICAL UTILITY CROSSINGS AND CONFLICTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER IN A TIMELY MANNER IF CONFLICTS ARISE. CONTRACTOR ASSUMES ALL RISK AND SCHEDULE DELAYS IF THE CONTRACTOR DOES NOT POT-HOLE PRIOR TO CONSTRUCTION AND COORDINATE WITH ENGINEER.

THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OR ORS 757.541 TO 757.571. THE CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY AT LEAST 48 BUSINESS-DAY HOURS PRIOR TO EXCAVATING, BORING, OR POTHOLING. ALL UTILITY CROSSINGS SHALL BE POTHOLED AS NECESSARY PRIOR TO EXCAVATING OR BORING TO ALLOW THE CONTRACTOR TO PREVENT GRADE OF ALIGNMENT CONFLICTS.

THE CONTRACTOR SHALL EXPOSE AND VERIFY BOTH THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL CONNECT AND/OR MATCH EXISTING UTILITIES AND PROPOSED IMPROVEMENTS IN CONFORMANCE WITH THE INTENT OF THESE PLANS TO PROVIDE COMPLETE AND FULLY OPERATIONAL SYSTEMS.

PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THESE DRAWINGS, SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AS INCIDENTAL TO THE CONTRACT. EXISTING UTILITIES ARE LIKELY TO REQUIRE CONNECTION TO THE PROPOSED IMPROVEMENTS. COORDINATE WITH OWNERS FACILITIES DEPARTMENT. THE SCHOOL WILL REQUIRE UNINTERRUPTED WATER SERVICE AND THE IRRIGATION SYSTEM MUST REMAIN FULLY OPERATIONAL. CONTRACTOR TO COORDINATE WITH FACILITIES.

CONTRACTOR SHALL CONFIRM ALL REQUIRED PERMITS AND LICENSES HAVE BEEN ISSUED BEFORE STARTING CONSTRUCTION

CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE WASHINGTON COUNTY INSPECTOR 48 HOURS BEFORE INSPECTION.

CONSTRUCTION VEHICLES ARE NOT ALLOWED TO BE STAGED IN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR APPROVAL.

ANY ALTERATION OR VARIANCE FROM THESE PLANS, EXCEPT MINOR FIELD ADJUSTMENTS NEEDED TO MEET EXISTING FIELD CONDITIONS, SHALL FIRST BE APPROVED BY THE APPLICABLE AGENCY REPRESENTATIVE. ANY ALTERATION OR VARIANCE FROM THESE PLANS SHALL BE DOCUMENTED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE PROJECT ENGINEER.

CONTRACTOR SHALL PROVIDE THE NECESSARY EROSION PROTECTION TO MINIMIZE EROSION AND IMPACT TO ADJACENT PROPERTIES.

OPEN TRENCHES SHALL BE STRICTLY LIMITED TO A MAXIMUM OF 100 FEET UNLESS LIMITED TO A LESSER AMOUNT BY PERMIT. NO TRENCHES WILL BE ALLOWED TO REMAIN OPEN AT NIGHT.

CONTRACTOR SHALL MAINTAIN AND COORDINATE ACCESS TO THE MAIN BUILDING AT ALL TIMES AS PRACTICAL. OWNER SHALL BE NOTIFIED 24-HOURS IN ADVANCE OF ANY ACCESS CLOSURES.

AT THE END OF EACH WORK DAY THE CONTRACTOR SHALL CLEAN UP THE PROJECT AREA AND LEAVE IT IN A NEAT AND SECURED MANNER. UPON COMPLETION, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.

CONTRACTOR SHALL PROTECT EXISTING WATER SERVICE LINES. ALL DISTURBED WATER SERVICE LINES SHALL BE REPAIRED AS DIRECTED BY ENGINEER.

ALL MATERIAL SUPPLIERS SHALL SUBMIT TO THE ENGINEER PROOF OF MATERIAL(S) TESTED IN ACCORDANCE WITH SPECIFICATIONS. BY ACCEPTANCE OF THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR CERTIFIES THAT ALL MATERIALS DELIVERED TO THE JOB SITE WILL MEET OR EXCEED THOSE SPECIFICATIONS. ANY MATERIAL NOT CONFORMING SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST TO THE OWNER.

ALL SURVEY MONUMENTS OF RECORD MUST BE PRESERVED. IN THE EVENT A MONUMENT IS DISTURBED, CONTRACTOR IS RESPONSIBLE TO SECURE THE SERVICES OF A REGISTERED PROFESSIONAL LAND SURVEYOR TO REFERENCE AND REPLACE THE MONUMENT.

GENERAL SITE PREPARATION:

ALL EARTHWORK, EXCAVATION, BACKFILL TO FOLLOW REQUIREMENTS OUTLINED IN CURRENT PROJECT SPECIFICATIONS.

PRIOR TO BEGINNING CONSTRUCTION, ALL AREAS OF THE SITE THAT WILL RECEIVE FOUNDATIONS, STRUCTURAL FILL, FLOOR SLABS, OR PAVEMENT SHOULD BE STRIPPED OF TOP SOIL, ROOTS, UNSUITABLE FILLS, I.E. AND EXCAVATED TO NON-ORGANIC, NATIVE UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL.

THE CONTRACTOR SHALL PRUNE ALL VEGETATION, AS NECESSARY, AWAY AND UP FROM THE AREA OF WORK. THE CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPING THAT IS TO REMAIN. ARBORIST SHALL BE CONTACTED IF SIGNIFICANT ROOTS ARE UNCOVERED.

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HHPR

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Stamp:

REGISTERED PROFESSIONAL  
ENGINEER  
77,944  
JAN. 5, 2011  
BEAU J. BRAMAN  
OREGON

EXPIRES: 12/31/2021

BEAVERTON SCHOOL DISTRICT  
BSD WEST TV SEWER

8800 SW LEAHY RD, PORTLAND, OR. 97225

Project No: 20160.01  
Date: 3/15/2021  
100% CONSTRUCTION DOCUMENTS  

| Revision     | Date     |
|--------------|----------|
| 1 Addendum 1 | 04/09/21 |

Drawing Name:  
CIVIL SITE PLAN

Drawing #:  
C100

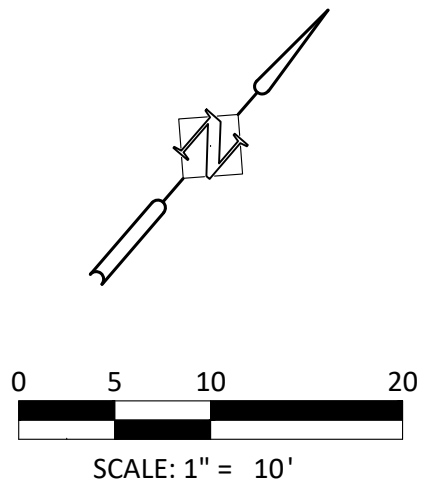
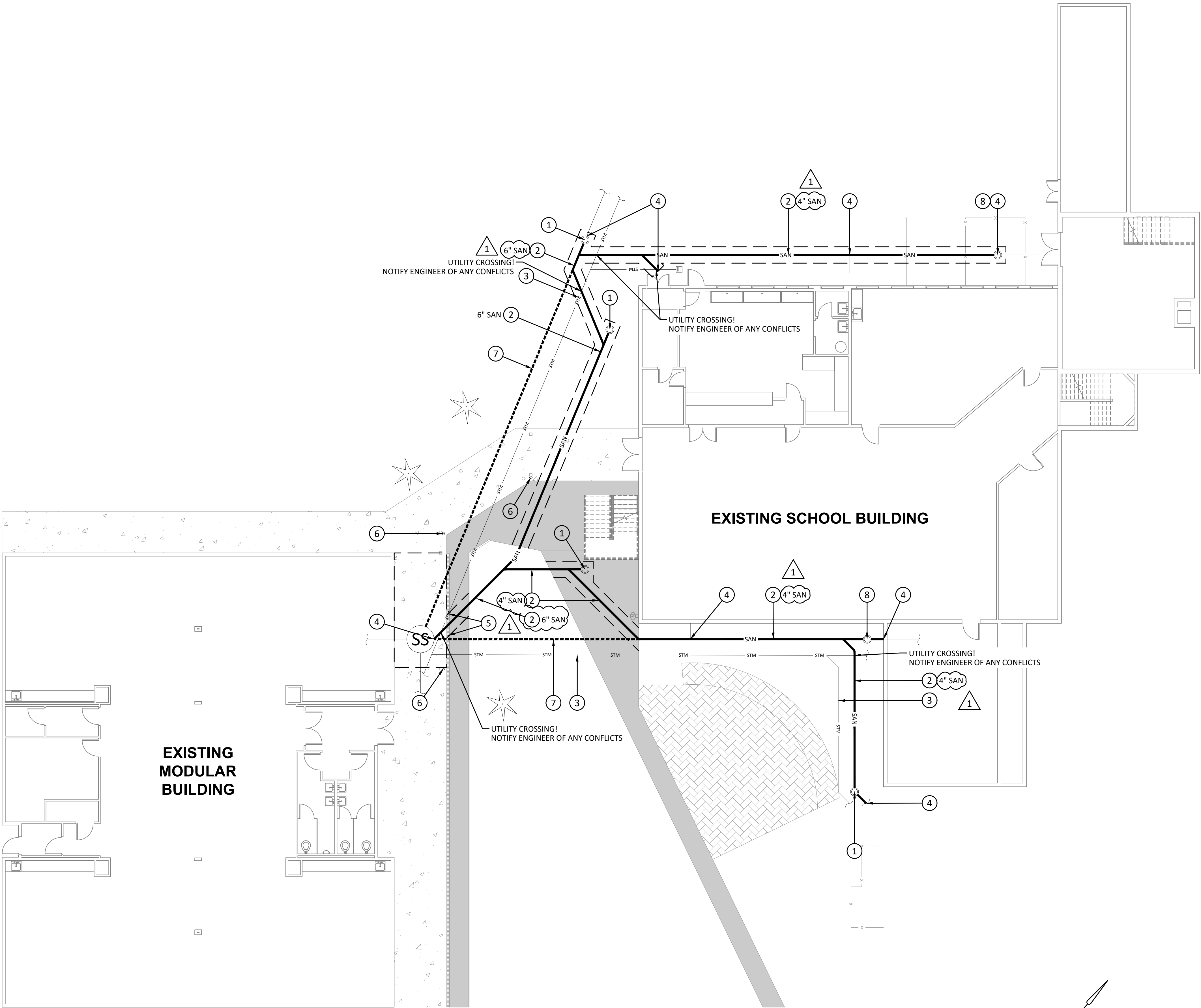
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Plot Date & Time:



Plot Date & Time:

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CONSTRUCTION NOTES:

1. INSTALL STANDARD CLEANOUT. SEE DETAIL 4 ON SHEET C300.
2. REMOVE AND REPLACE FAILED SANITARY SEWER PIPE IN LOCATION SHOWN ON PLANS. CONTRACTOR TO VERIFY POSITIVE DRAINAGE. BACKFILL TRENCH PER DETAIL 7 ON SHEET C300.
3. PROTECT EXISTING STORM SEWER.
4. CONNECT TO EXISTING SANITARY SEWER PER DETAIL 6 ON SHEET C300. CONTRACTOR TO VERIFY POSITIVE DRAINAGE.
5. REMOVE, PROTECT AND REINSTALL TRENCH DRAIN WITHIN SANITARY SEWER TRENCHING LIMITS. SEE DETAIL 3 ON SHEET C300.
6. PROTECT EXISTING ROOF DRAIN PIPING. RECONNECT TO EXISTING STORM SEWER IF DISRUPTED BY CONSTRUCTION.
7. ABANDON EXISTING SANITARY SEWER IN PLACE AND FILL WITH FLOWABLE CLSM (CONTROLLED LOW STRENGTH MATERIAL).
8. INSTALL TWO-WAY CLEANOUT. SEE DETAIL 5 ON SHEET C300.

GENERAL NOTES:

SANITARY SEWER:

ALL SANITARY SEWER CONSTRUCTION TO WITHIN THREE (3) FEET OF THE BUILDING SHALL BE PVC ASTM D3034 SDR 35 AND IN ACCORDANCE WITH WASHINGTON COUNTY, THE INTERNATIONAL BUILDING CODE (IBC) AND OREGON PLUMBING SPECIALTY CODE.

PRIVATE SANITARY SEWER PIPE WITHIN THREE (3) FEET OF THE BUILDING SHALL BE DRAIN WASTE VENT (DWV), IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE (IBC) AND OREGON PLUMBING SPECIALTY CODE.

HORIZONTAL LINES CONNECTING WITH OTHER HORIZONTAL LINES SHALL ENTER THROUGH 45 DEGREE WYE BRANCH. TEE BRANCH IS NOT ALLOWED.

WHERE SANITARY LINES CROSS WATER LINES, THE SYSTEMS NEED TO BE CONSTRUCTED SUCH THAT THE CROSSING WILL OCCUR AT THE CENTER OF A PIPE SEGMENT FOR BOTH LINES.

PRIOR TO TESTING AND INSPECTION OF THE SANITARY PIPELINE, ALL PARTS OF THE SYSTEM SHALL BE CLEANED OF ALL DEBRIS.

TESTING OF PRIVATE SANITARY PIPELINE SHALL BE IN ACCORDANCE WITH OREGON PLUMBING SPECIALTY CODE.

TRACER WIRE - 12-GAUGE STRANDED OR SOLID COPPER INSULATED HIGH MOLECULAR WEIGHT POLYETHYLENE (HMW-PE) TRACER WIRE. THE HMW-PE INSULATED COVER SHALL BE GREEN AND A MINIMUM 45 MIL THICK. THE WIRE SHALL BE RATED FOR 140 DEGREES FAHRENHEIT. INSTALL TRACER WIRE IN ALL TRENCHES FOR SANITARY SEWERS. PLACE THE TRACER WIRE DIRECTLY OVER THE PIPE CENTERLINE AND ON TOP OF THE PIPE ZONE MATERIAL, PARALLEL TO, AND ALONG THE ENTIRE LENGTH OF ALL NONMETALLIC PIPE.

CONTRACTOR IS TO DETERMINE AND PROVIDE ALL NECESSARY FITTINGS AND BENDS FOR UTILITY DESIGN.

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Stamp:



BEAVERTON SCHOOL DISTRICT  
BSD WEST TV SEWER  
8800 SW LEAHY RD, PORTLAND, OR. 97225

Project No: 20160.01

Date: 3/15/2021

100% CONSTRUCTION  
DOCUMENTS

| Revision     | Date     |
|--------------|----------|
| 1 Addendum 1 | 04/09/21 |

Drawing Name:  
UTILITY PLAN

Drawing #:

C200



SHEET NOTES - DEMOLITION PLAN

- A. All dimensions shown are to face of core U.N.O. Do not measure drawings to determine dimensions. Large scale details take precedence over smaller scale drawings.
- B. All areas of demolition shall be cleared and cleaned of all items and prepared to receive new construction, unless noted otherwise.
- C. Verify limits of demolition prior to commencing work.
- D. Contractor shall field verify all existing construction and related conditions prior to starting demolition or new construction.
- E. Contractor to inform architect of any discrepancies within drawings or between drawings and field conditions before commencement of affected work.
- F. For additional demolition information, see all consultant's drawings.
- G. Locate and verify existence and use of existing utilities. Take necessary measures to protect and preserve function and condition of any utilities to be repaired, replaced, or reused in new construction. Coordinate work with architect, consultants and owner.
- H. Coordinate with owner regarding any work that is to occur in the ceiling of the floor below so as not to disrupt the functions of the owner's occupied area. Contractor to replace ceiling to match existing adjacent construction and finish, unless noted otherwise.
- I. Removal of existing plumbing fixtures shall include capping of piping and waste lines. See plumbing drawings for more information.
- J. Contractor shall take proper measures to protect areas outside the area of work from dust, air particulates, and debris. Coordinate with Architect, Engineer and Owner to protect against infiltration of all of the above into the remaining occupied areas.
- K. Demolition Work to take place prior to interior improvements. Provide such measures as necessary to prevent property damage or bodily injury.
- L. All interior Patching and Repair shall occur as part of this scope of work, U.N.O. Contractor shall protect all existing exposed construction from damage resulting from or related to demolition and construction operations.
- M. Contractor shall repair or replace any existing construction to remain that is damaged in the course of the work to its original condition.
- N. Where interruption of the building's Life Safety System is required to perform the work as described in the Construction Documents, or to coordinate with owner's operations, the Contractor shall provide interim Life Safety measures to comply with local code and owner's requirements.
- O. Contractor is responsible for all waste removal and site clean up during performance of and at completion of the Work.

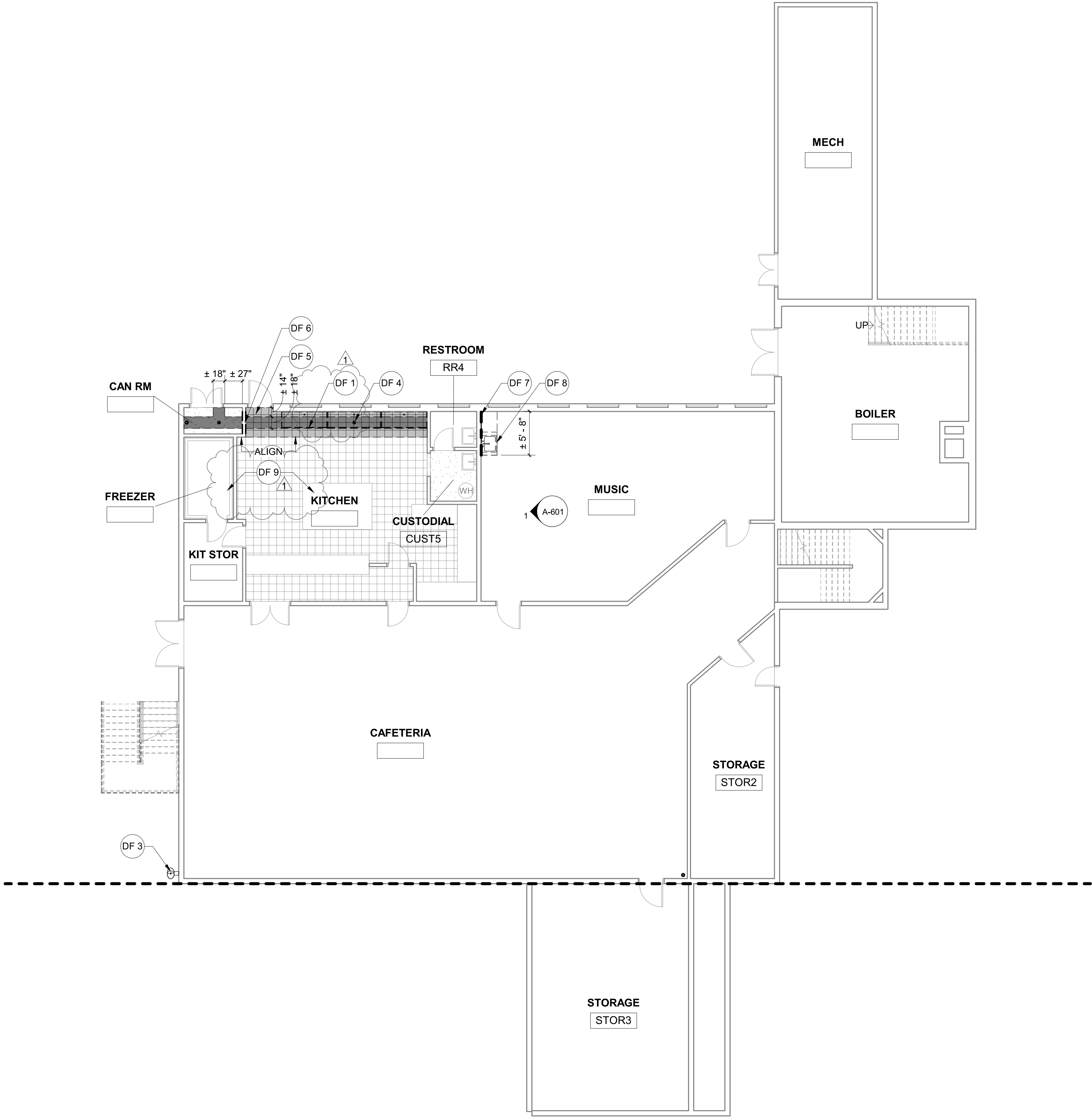
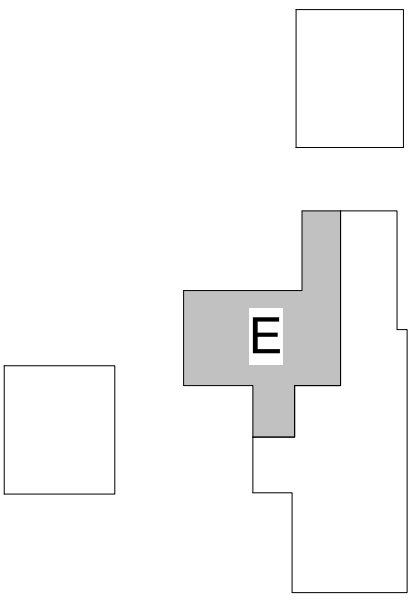
LEGEND - DEMOLITION PLAN

- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- SECTION OF GYPSUM WALL BOARD FINISH TO BE DEMOLISHED
- REMOVE FLOOR FINISH
- DEMOLISH AREA OF EXISTING CONCRETE SLAB
- (E) 1" CERAMIC TILE, PROTECT DURING CONSTRUCTION
- DEMOLISH AREA OF (E) 1" CERAMIC TILE AND AREA OF (E) CONCRETE SLAB BELOW

KEYNOTES - DEMOLITION PLAN

- DF 1 (E) Kitchen sinks to be removed, salvaged, and protected during construction.
- DF 2 Remove cabinet back and base panel as required for replacement of drain pipe. Protect (E) sink and adjacent conduit during construction. See Plumbing for detail.
- DF 3 Demolish drinking fountain and sanitary branch line. See plumbing for detail.
- DF 4 Demolish (E) floor drain.
- DF 5 Remove (E) door. Salvage and protect for reinstallation. Door frame to remain. Protect during construction.
- DF 6 (E) Concrete curb to be demolished to trench width. Preserve (E) hollow metal door frame. Salvage and protect (E) metal threshold.
- DF 7 Demolish portion of 5/8" gypsum wall board as required for replacement of sanitary drain pipe. See Plumbing for detail. See Sheet A-231 for ceiling demo scope.
- DF 8 Remove casework, plumbing fixture, and tackboard to allow for replacement of drain pipe above concrete slab. Salvage and protect for reinstallation.
- DF 9 (E) Freezer, prep station, and range hood to be protected during construction.

KEY PLAN







SHEET NOTES - FLOOR PLAN

- A. All dimensions are to face of finish, U.N.O.  
B. All dimensions to be field verified.  
C. Floor Plan Keynotes (F#) are consistent across all Floor Plan sheets. Not all keynotes are used on each sheet.  
D. See Enlarged Plans, where applicable, for wall types, notes, and dimensions.  
E. Coordinate all work with other trades.  
F. Contractor is responsible for maintaining slope to floor drain.

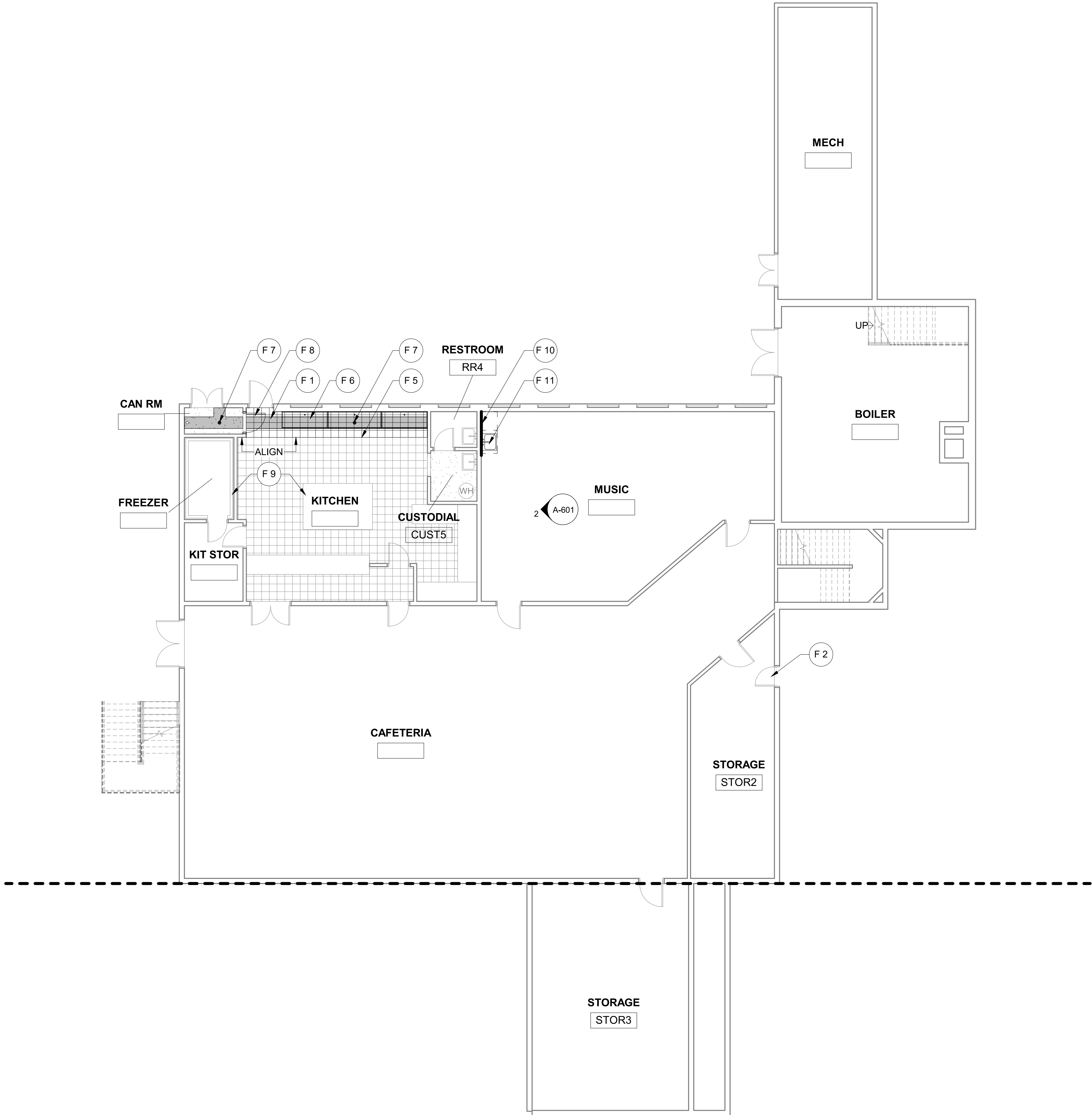
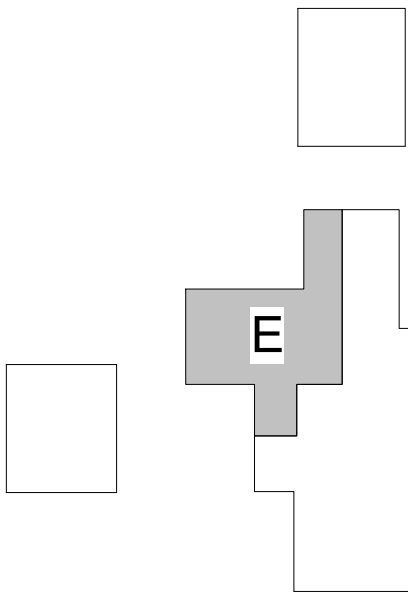
LEGEND - FLOOR PLAN

- EXISTING WALL TO REMAIN  
SECTION OF NEW GYPSUM WALL BOARD  
PATCH AND REPAIR CONCRETE WHERE NECESSARY  
(E) 1" SQ. CERAMIC TILE, PROTECT DURING CONSTRUCTION  
NEW 1" SQ. CERAMIC TILE

KEYNOTES - FLOOR PLAN

- F 1 New concrete slab - patch and repair flooring to match existing.  
F 2 (E) Crawl space access hatch.  
F 3 Install new cabinet back and base panel as required at sink. Protect (E) sink and adjacent conduit during construction. See Plumbing for detail.  
F 4 Access pipe replacement through crawl space below or exterior vent. See Plumbing, typ.  
F 5 New 1"x1" ceramic tile flooring to match existing. Tile replacement to start at (E) tile joint.  
F 6 Reinstall salvaged sinks.  
F 7 New floor drain at existing branch location. Slope concrete to drain.  
F 8 Reinstall salvaged door in (E) hollow metal frame. Reinstall salvaged aluminum transition. Patch tile on vertical face.  
F 9 (E) Freezer, prep station, range hood to be protected during construction.  
F 10 Patch and prepare surface to receive new wall finish to match (E) at sanitary drain pipe replacement. See Sheet A-231 for new ceiling scope.  
F 11 Reinstall casework and sink.

KEY PLAN



| MECHANICAL ABBREVIATIONS |                            |      |                     |
|--------------------------|----------------------------|------|---------------------|
| AD                       | ACCESS DOOR OR AREA DRAIN  | FS   | FLOOR SINK          |
| AFF                      | ABOVE FINISHED FLOOR       | FTG  | FOOTING             |
| AFG                      | ABOVE FINISHED GRADE       | GA   | GAGE                |
| CI                       | CAST IRON                  | GAL  | GALLON              |
| CL                       | CENTER LINE                | GALV | GALVANIZED          |
| COND                     | CONDENSATE                 | GC   | GENERAL CONTRACTOR  |
| CO                       | CLEAN OUT                  | GPH  | GALLONS PER HOUR    |
| CONC                     | CONCRETE                   | GPM  | GALLONS PER MINUTE  |
| CONTR                    | CONTRACTOR                 | HB   | HOSE BIBB           |
| CP                       | CONDENSATE PUMP/CIRC. PUMP | LAV  | LAVATORY            |
| CU                       | COPPER                     | MB   | MOP BASIN           |
| DN                       | DOWN                       | MH   | MANHOLE             |
| DR                       | DRAIN                      | NTS  | NOT TO SCALE        |
| DS                       | DOWNSPOUT                  | OD   | OVERFLOW ROOF DRAIN |
| EJ                       | EXPANSION JOINT            | PVC  | POLYVINYL CHLORIDE  |
| EQUIP                    | EQUIPMENT                  | SK   | SINK                |
| EX                       | EXISTING                   | SH   | SHOWER              |
| FD                       | FLOOR DRAIN                | SO   | STORM OVERFLOW      |
| FDC                      | FIRE DEPARTMENT CONNECTION | ST   | STORM               |
| FLR                      | FLOOR                      | TYP  | TYPICAL             |
|                          |                            | UR   | URINAL              |
|                          |                            | WC   | WATER CLOSET        |

| PIPING LEGEND - PLUMBING |                      |
|--------------------------|----------------------|
| SAN                      | SANITARY             |
| SAN                      | SANITARY BELOW FLOOR |

| FITTINGS |                                |
|----------|--------------------------------|
|          | ELBOW                          |
|          | ELBOW - DOUBLE BRANCH          |
|          | ELBOW - OUTLET DOWN            |
|          | ELBOW - OUTLET UP              |
|          | ELBOW - LONG RADIUS            |
|          | ELBOW - SHORT RADIUS           |
|          | 45° ELBOW                      |
|          | TEE - VENT                     |
|          | TEE - SANITARY                 |
|          | TEE - OUTLET DOWN              |
|          | TEE - OUTLET UP                |
|          | TEE - SIDE OUTLET DOWN         |
|          | TEE - SIDE OUTLET UP           |
|          | CROSS - VENT                   |
|          | CROSS - SANITARY               |
|          | LATERAL                        |
|          | TEE - SINGLE SWEEP "COMBO WYE" |
|          | REDUCER - CONCENTRIC           |
|          | REDUCER - ECCENTRIC            |
|          | CAPPED CONNECTION              |
|          | FLANGED CONNECTION             |

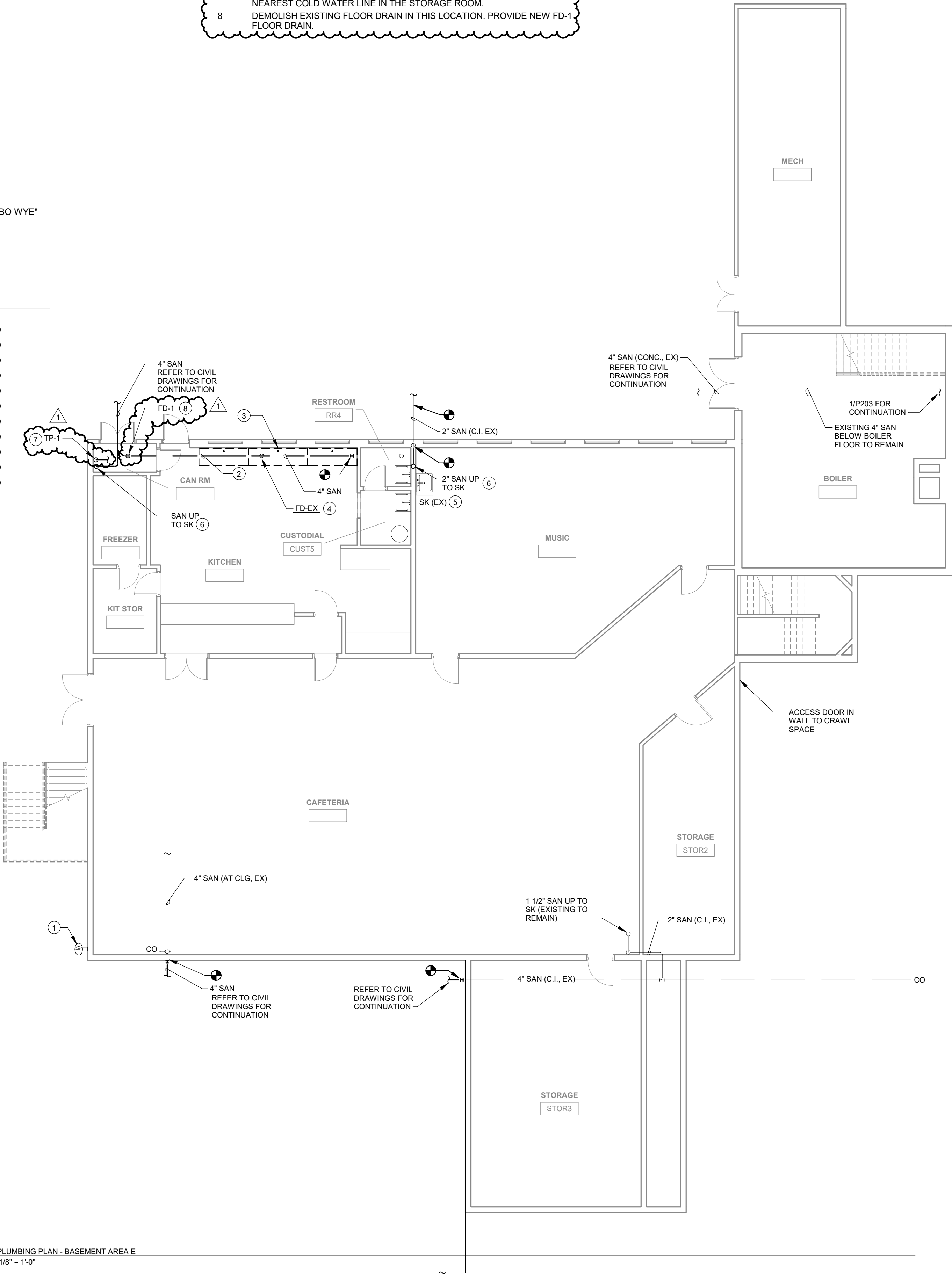
KEYNOTES

- DEMOLISH DRINKING FOUNTAIN AND SANITARY BRANCH LINE.
- REPLACE EXISTING SAN PIPING WHERE SHEAR FAILURE HAS OCCURRED WITH NEW ABS SANITARY PIPING. RECONNECT EXISTING FLOOR SINKS AND EXISTING VENT PIPING BELOW THE FLOOR.
- DISCONNECT SINK IN KITCHEN TO ACCOMMODATE SEWER WORK. RECONNECT AFTER FLOOR PATCHING IS COMPLETE.
- RECONNECT EXISTING FLOOR SINK TO REPLACED SAN UNDER FLOOR.
- REPLACE 1 1/2" GALVANIZED SANITARY WASTE FROM THE TRAP OUTLET TO WHERE THE PIPE PENETRATES THE FLOOR SLAB. PROVIDE A CLEANOUT UNDER THE SINK.
- REPLACE 1 1/2" GALVANIZED SAN WITH 2" ABS SAN.
- INSTALL TRAP PRIMER AT LEAST 12" ABOVE FINISH FLOOR. CONNECT TO NEAREST COLD WATER LINE IN THE STORAGE ROOM.
- DEMOLISH EXISTING FLOOR DRAIN IN THIS LOCATION. PROVIDE NEW FD-1 FLOOR DRAIN.

GENERAL NOTES:

- REFER TO P201 FOR GENERAL NOTES & SYMBOLS.
- EXISTING CONDITIONS SHOWN IN THE DRAWINGS ARE FROM EXISTING DRAWINGS AND NON-DESTRUCTIVE SITE OBSERVATION. FIELD VERIFY EXISTING CONDITIONS. REPORT SIGNIFICANT DEVIATIONS TO ENGINEER AND MARK ON RED-LINED AS-BUILTS.

| PLUMBING FIXTURE SCHEDULE |                             |        |  |
|---------------------------|-----------------------------|--------|--|
| REFERENCE                 | MFR                         | MODEL  | DESCRIPTION  |
| FD-1                      | ZURN                        | Z415B  | CAST IRON BODY FLOOR DRAIN, TYPE "B" 8" ROUND POLISHED NICKEL BRONZE STRAINER. 3" OUTLET, TRAP PRIMER CONNECTION. APPROVED MANUFACTURERS: ZURN, JOSAM, JR SMITH, WATTS |
| TP-1                      | PRECISION PLUMBING PRODUCTS | PO-500 | FLOOR DRAIN TRAP PRIMER VALVE, BODY, CHECK VALVE RETAINER PLATE, FLOAT, COVER, STAINLESS STEEL CHECK VALVE. APPROVED MANUFACTURERS: PPP, SIOUX CHIEF, WATTS            |



1 PLUMBING PLAN - BASEMENT AREA E  
1/8" = 1'-0"

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Stamp:



BEAVERTON SCHOOL DISTRICT  
WEST TUALATIN VIEW ELEMENTARY  
SEWER REPLACEMENT

8800 SW Leahy Rd, Portland, OR 97225

Project No: 20160

Date: 03/15/21

100% CONSTRUCTION  
DOCUMENTS

| Revision     | Date     |
|--------------|----------|
| 1 Addendum 1 | 04/09/21 |

Drawing Name:  
PLUMBING PLAN -  
BASEMENT AREA E

Drawing #:

P201

# Revised Specifications

100% Construction Documents  
03/15/2021

## SECTION 33 31 00 – SANITARY SEWER PIPING

### PART 1 GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Applicable sections of the current Oregon Plumbing Specialty Code and Washington County and Beaverton School District Construction Standards.
- C. All work shall be done in accordance with these specifications and in conformity with the plans.
- D. Related sections:
  - 1. Section 31 23 17 "Trenching"
  - 2. Section 33 39 00 "Sanitary Sewer Structures"

#### 1.2 SUMMARY

- A. This section specifies requirements for sanitary sewer pipe for a gravity flow sewerage system.
- B. **This section includes rehabilitation of existing sanitary sewers through the use of a Pipe Bursting System. Pipe bursting is a process by which a bursting unit splits and / or fractures the existing pipe while simultaneously installing new pipe of the same or larger size into the annulus created by the bursting tool's forward movement of the bursting tool. (ADDENDUM – 04/12/2021)**

#### 1.3 SUBMITTALS

- A. Product Data.
- B. **For Pipe Bursting: (ADDENDUM – 04/12/2021)**
  - a. **Verifications of training by the pipe bursting systems manufacturer stating that the operators have been fully trained in the use of the proposed pipe bursting equipment by an authorized representative of the equipment manufacturer (ADDENDUM – 04/12/2021)**
  - b. **Detailed construction procedures, and layout plans to include sequence of construction. (ADDENDUM – 04/12/2021)**
  - c. **Methods of construction, reconnection and restoration of existing service laterals (ADDENDUM – 04/12/2021)**
  - d. **Detailed procedures for the installation and bedding of pipe in launching and receiving pits. (ADDENDUM – 04/12/2021)**
  - e. **Manufacturer's technical data containing complete information on material composition, physical properties and dimensions of the new pipe and fittings. Manufacturer's recommendations for transport, handling, storage, and repair of pipe and fittings shall be included. (ADDENDUM – 04/12/2021)**

- f. **Contingency plans for the following potential conditions: (ADDENDUM – 04/12/2021)**
- i. **Unforeseen obstruction(s) causing burst stoppage, such as unanticipated change(s) in host pipe material, repair section(s), concrete encasement(s) or cradle(s), buried or abandoned manhole(s) or changes in direction not depicted on maps provided by the Contracting Authority. (ADDENDUM – 04/12/2021)**
  - ii. **Substantial surface heave occurring due to depth of the existing pipe vs. the amount of upsizing. (ADDENDUM – 04/12/2021)**
  - iii. **Damage to existing service connections and replacement pipeline's structural integrity and methods of repair. (ADDENDUM – 04/12/2021)**
  - iv. **Damage to other existing utilities. (ADDENDUM – 04/12/2021)**
  - v. **Loss of and return to line and grade. (ADDENDUM – 04/12/2021)**
  - vi. **Soil heaving or settlement. (ADDENDUM – 04/12/2021)**

#### 1.4 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other marking or specified testing agency.
- B. Comply with NSF/ANSI 14, "Plastic Piping System Components and Related Materials," for plastic piping components. Include marking with "NSF-drain" for plastic drain piping and "NSF-sewer for plastic sewer piping.
- C. **The Contractor shall be verified by the pipe bursting system manufacturer as a fully trained user of the proposed pipe bursting system. The pipe bursting system shall be operated by personnel trained by a qualified representative of the pipe bursting system manufacturer. The Contracting Authority may require the Contractor to provide certificates of training for any employee directly involved in the supervision or operation of the pipe bursting system. The Contractor is solely responsible for quality assurance during the length of the project. The contractor is responsible for any costs associated with corrective measures required to replace or repair items not meeting the quality standards specified by the Contracting Authority. (ADDENDUM – 04/12/2021)**

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not store plastic pipe and fittings in direct sunlight.
- B. Protect pipe, pipe fittings and seals from dirt and damage.

#### 1.6 PROJECT CONDITIONS



- A. Interruption of Existing Sanitary Sewer Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
  - 1. Notify Owner no fewer than two days in advance of proposed interruption of sanitary sewer service.
  - 2. Do not proceed with interruption of sanitary sewer service Owner's written permission.

## **PART 2 PRODUCTS**

### **2.1 PUBLIC SANITARY SEWER PIPE**

- A. Public Sanitary Sewer Pipe shall conform to Washington County Construction Standards.

### **2.2 SANITARY SEWER PIPING 4 INCH AND LARGER WITH GREATER THAN 3 FEET OF COVER, BEYOND 5 FEET OF THE BUILDING**

- A. PVC Pipe and Fittings
  - 1. Pipe: Shall conform to the requirements of ASTM D3034, SDR 35.
  - 2. Fittings: All fitting shall be of the same materials as the pipe unless otherwise approved. Conform to the requirements of ASTM D3034, PVC.
  - 3. Gaskets: Shall conform to the requirements of ASTM F 477, elastomeric seals and ASTM 3212.
- B. ABS (Acrylonitrile Butadiene Styrene) Pipe and Fittings
- C. **Polyethylene Plastic Pipe shall be high-density polyethylene pipe and meet the applicable requirements of ASTM F714 Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter or AWWA C906, ASTM D1248 and ASTM D3350. (ADDENDUM – 04/12/2021)**
- D. Cast Iron Pipe and Fittings
- E. Shall be American Manufactured.

### **2.3 SANITARY SEWER PIPING 4 INCH AND LARGER WITH 3 FEET OR LESS OF COVER, BEYOND 5 FEET OF THE BUILDING**

- A. Cast Iron Pipe and Fittings
  - 1. Shall be American Manufactured.
- B. C900 Pipe and Fittings
  - 1. All C900 Pipe and Fittings shall conform to the requirements of ASTM C-900 D-1784.
  - 2. Shall be American Manufactured.

### **2.4 SANITARY SEWER PIPING WITHIN 5 FEET OF THE BUILDING**

- A. PVC DWV, Solid-Wall PVC Pipe shall conform to the requirements of ASTM D 2665, and plumbing code requirements.

### PART 3 EXECUTION

#### 3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in section 312317 Trenching.

#### 3.2 PIPING INSTALLATION

- A. General location and arrangements: Drawing plans and details indicate general location and arrangement of underground sanitary sewer piping. Location and arrangement of piping layout tack into account design considerations. Install pipe as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream, Install gaskets, seals, sleeves and couplings according to manufacturer's written instruction for using lubricants, cements, and other installation requirements.
- C. Clear interior of piping and manholes of dirt and superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is complete. Place plug in end of incomplete piping at end of day and when work stops.
- D. **Pipe Bursting: The most commonly used methods for pipe bursting utilize static or impact force. Static systems are hydraulic, while impact systems generally involve a combination of pneumatic and hydraulic technology. The primary difference between these methods is the manner in which the force is generated and transferred to the host pipe during the bursting operation. (ADDENDUM – 04/12/2021)**  
**The pipe bursting tool shall be designed and manufactured to force its way through existing pipe materials by fragmenting the pipe and compressing the old pipe sections into the surrounding soil as it progresses. The bursting unit shall generate sufficient force to burst and compact the existing pipeline. See manufacturer's specifications for tool sizes recommended for various pipe diameters as well as parameters associated with tool sizes for allowable upsize percentages. (ADDENDUM – 04/12/2021)**  
**The pipe bursting tool shall be pulled through the sewer by a cable or rods located at the machine pit. The bursting unit shall pull the pipe with it as it moves forward from the insertion pit. The bursting head shall incorporate a shield/expander to prevent collapse of the hole ahead of the new pipe insertion. The pipe bursting unit shall be remotely controlled. Sectional replacement pipe shall be pushed as well as pulled behind the bursting head.**  
**The bursting action of the tool shall increase the external dimensions sufficiently to break the existing pipe and simultaneously expand the surrounding ground sufficiently to permit pulling the new pipe through the annular space (ADDENDUM – 04/12/2021)**

#### 3.3 CONNECTIONS

- A. Pothole prior to construction to verify location, size and depth of existing piping. Notify Engineer if location, size or depth of existing pipe is different than shown on the plans.

### **3.4 FIELD QUALITY CONTROL**

- A. Inspection and testing shall be per Washington County requirements.

### **3.5 CLEANING**

- A. Clean dirt and superfluous material from interior of piping prior to testing.

### **3.6 RESTORATION OF PITS (ADDENDUM – 04/12/2021)**

- A. The Contractor shall restore all lateral pits, launching pits and associated surface areas to their original condition. (ADDENDUM – 04/12/2021)
- B. Prior to backfilling lateral and launching pits the Contractor shall ensure that the new pipe is properly supported and on the required grade. (ADDENDUM – 04/12/2021)

### **3.6 TESTING AND ACCEPTANCE**

- A. Testing shall be in conformance with Beaverton School District and Washington County requirements and Oregon Plumbing Specialty Code.

**END OF SECTION**