IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01.09.20

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

Heating Hot Water Replacement Parking Lot 10

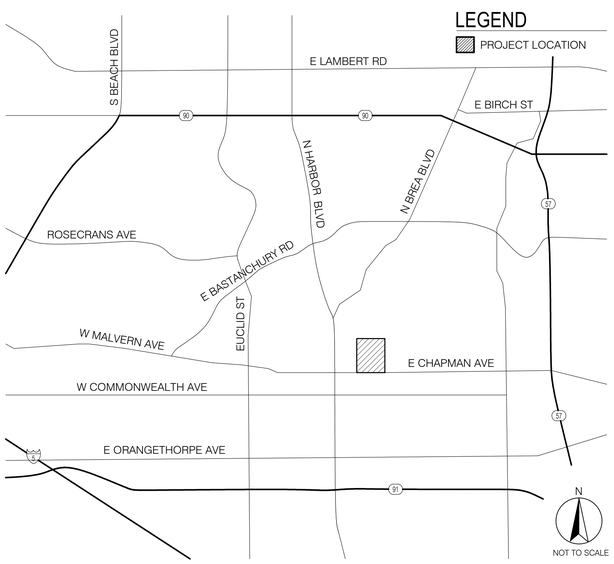
DSA Back Check
January 8, 2020

MECHANICAL
P2S Inc.
Long Beach, CA 90815
562.497.2999

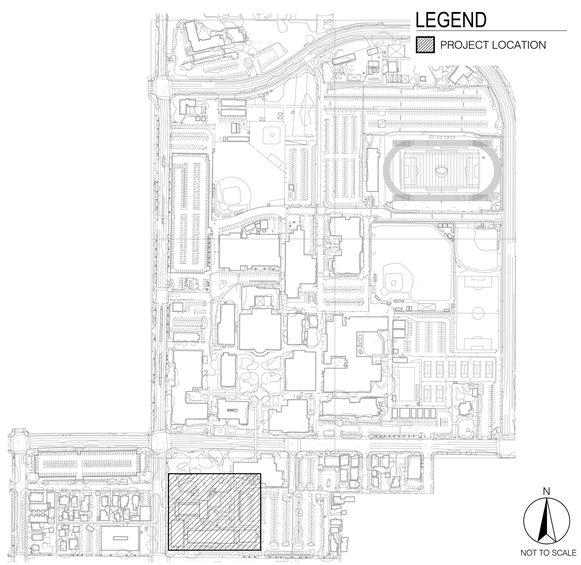
STRUCTURAL
MHP Structural Engineers
Long Beach, CA 90808
562.985.3200

REGISTERED PROFESSIONAL ENGINEER
STEVEN MYERS
No. 20917
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/6/2020

VICINITY MAP



SITE MAP



APPLICABLE CODES

LIST OF CALIFORNIA CODE OF REGULATIONS (C.C.R.):

PART 1	2019 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24 C.C.R.
PART 2	2016 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R. (2015 INTERNATIONAL BUILDING CODE VOL. 1-2 AND 2016 CALIFORNIA AMENDMENTS)
PART 2.5	2016 CALIFORNIA ELECTRICAL CODE, TITLE 24 C.C.R. (2015 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
PART 4	2016 CALIFORNIA MECHANICAL CODE, TITLE 24 C.C.R. (2015 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
PART 5	2016 CALIFORNIA PLUMBING CODE, TITLE 24 C.C.R. (2015 UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)
PART 6	2016 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.
PART 9	2016 CALIFORNIA FIRE CODE, TITLE 24 C.C.R. (2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
PART 9	2016 CALIFORNIA FIRE CODE, TITLE 24 C.C.R. - CHAPTER 33: FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.
PART 11	2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE), TITLE 24 C.C.R.
PART 12	2016 CALIFORNIA REFERENCED STANDARDS CODE, TITLE 24 C.C.R.

REFERENCED STANDARDS LISTED IN CHAPTER 35 CALIFORNIA BUILDING CODE 2016, VOLUME 2 REFERENCE STANDARDS CITED IN APPLICABLE PROVISIONS OF THE CBC SHALL APPLY TO THE EXTENT REFERENCED THEREIN AND ARE INCORPORATED IN THIS MANUAL AS IF SIMILARLY CITED. CALIFORNIA CODE OF REGULATIONS (C.C.R.), TITLE 8 INDUSTRIAL RELATIONS.

PROJECT NOTES

ALL WORK SHALL CONFORM TO 2016 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION, OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH THE TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILED AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24 CCR)

GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS, AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

SHEET INDEX

GENERAL

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PG NO.2	G001	AREA OF WORK MAP
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PG NO.4	G003	PEDESTRIAN ACCESS MAP SOUTH

STRUCTURAL

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PG NO.6	S601	SECTIONS AND DETAILS

MECHANICAL

PG NO.7	M001	GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
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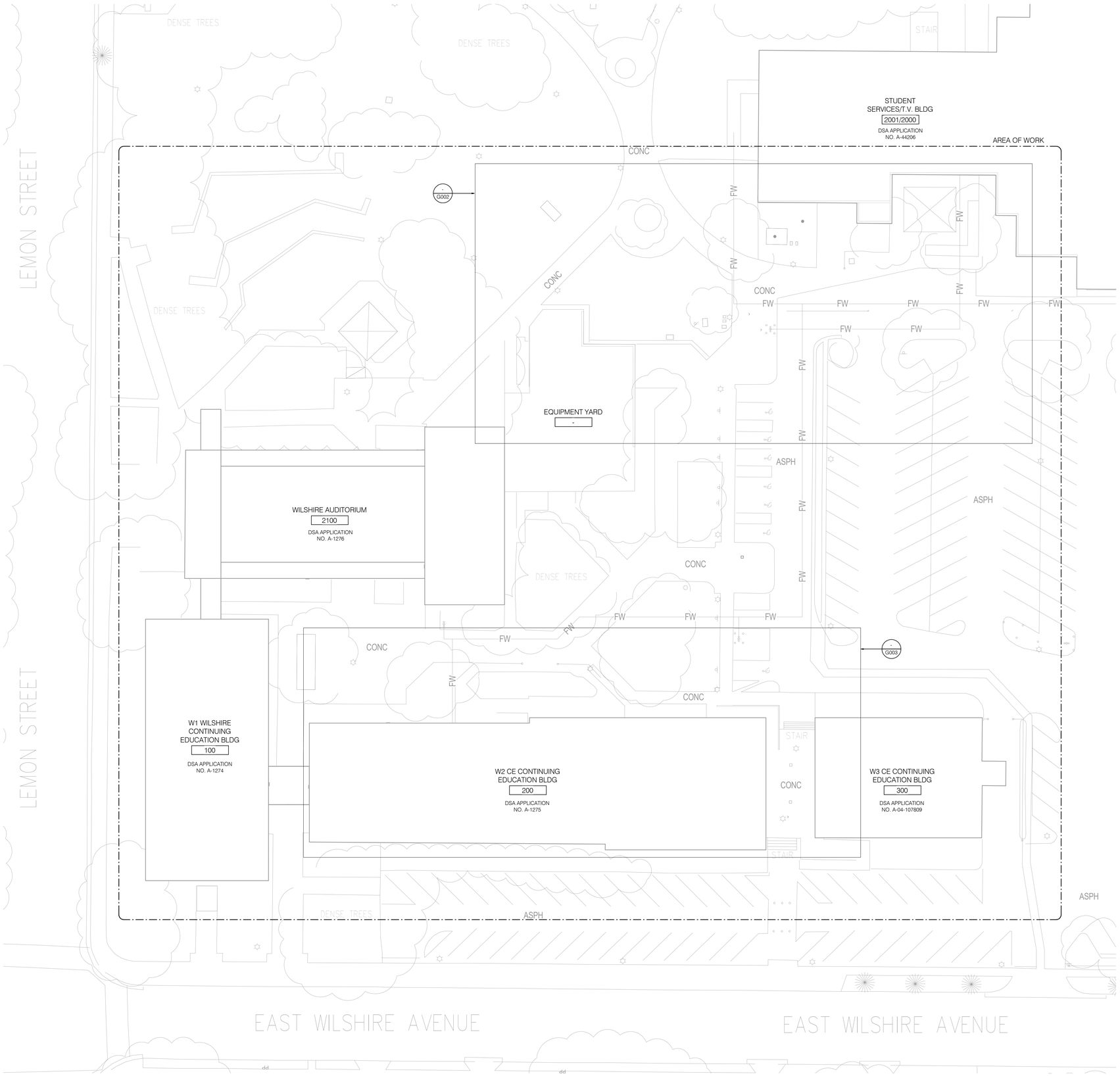
PG NO.9	M201	ENLARGED SITE PLAN
PG NO.10	M202	ENLARGED SITE PLAN
PG NO.11	M203	ENLARGED SITE PLAN
PG NO.12	M204	ENLARGED SITE PLAN
PG NO.13	M205	WILSHIRE AUDITORIUM BUILDING 2100 - BASEMENT
PG NO.14	M211	CONNECTION PLAN BUILDING 2100
PG NO.15	M212	CONNECTION PLAN BUILDING 2001/2000
PG NO.16	M213	CONNECTION PLAN BUILDING 200 AND BUILDING 300
PG NO.17	M301	NORTH TRENCH REPAIR AND PAVING PLAN
PG NO.18	M302	SOUTH TRENCH REPAIR AND PAVING PLAN
PG NO.19	M401	ISOMETRIC VIEWS
PG NO.20	M601	DETAILS
PG NO.21	M602	DETAILS
PG NO.22	MD201	ENLARGED SITE PLAN DEMOLITION
PG NO.23	MD202	ENLARGED SITE PLAN DEMOLITION
PG NO.24	MD203	ENLARGED SITE PLAN DEMOLITION
PG NO.25	MD204	ENLARGED SITE PLAN DEMOLITION
PG NO.26	MD205	BUILDING 2100 - BASEMENT DEMOLITION
PG NO.27	MD211	DEMOLITION PLAN BUILDING 2100
PG NO.28	MD212	DEMOLITION PLAN BUILDING 2001/2000

TOTAL: 28

SCOPE OF WORK

THIS PROJECT WILL REPLACE AND REROUTE CAMPUS HEATING HOT WATER DISTRIBUTION PIPES TO REMEDY EXISTING UNDERGROUND LEAKAGE CONCERNS. SCOPE OF WORK INCLUDES: UNDERGROUND PIPING FROM BUILDING 2100 TO BUILDING 2001/2000; REPLACEMENT ROOF MOUNTED PIPING ON BUILDING 2100; ADDITIONAL ROOF MOUNTED PIPING ON BUILDING 2100, BUILDING 100, BUILDING 200, AND BUILDING 300; AND REPLACEMENT CEILING HUNG PIPING IN BUILDING 2100 BASEMENT. A UTILITY SEARCH TO IDENTIFY EXISTING OBSTRUCTIONS SHALL BE PERFORMED PRIOR TO BEGINNING DEMOLITION. THE HHW SYSTEM CHANGEOVER SHALL OCCUR WITHOUT DISRUPING THE HOT WATER DISTRIBUTION DURING THE CAMPUS' OPERATING HOURS.



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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
No. 21321
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	1" = 20'

Sheet Title

Area of Work Map

Sheet Number

G001

P2S No. 9570

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GENERAL NOTES

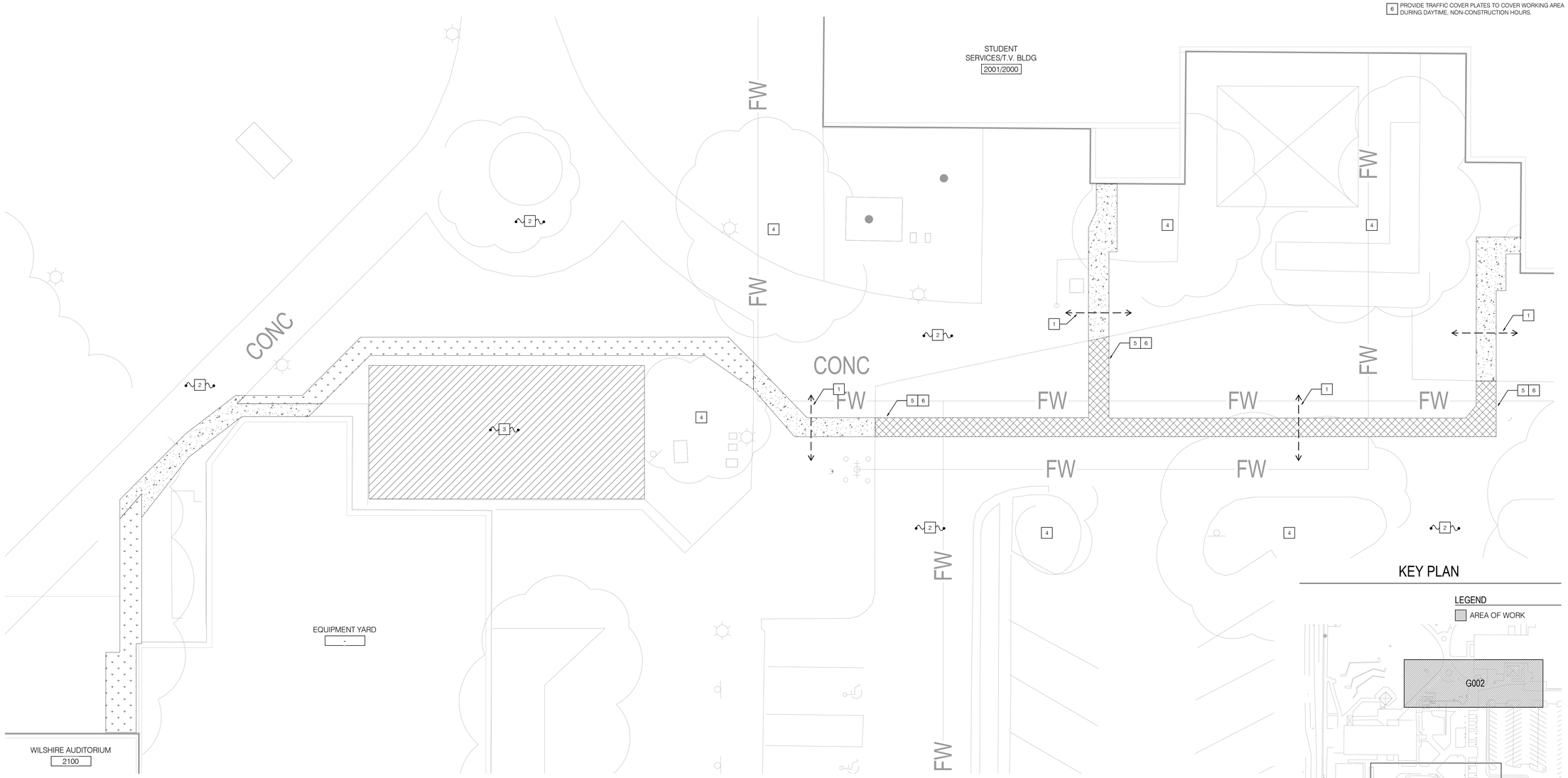
1. CONTRACTOR SHALL PROVIDE A WORK PLAN FOR PEDESTRIAN AND VEHICULAR CONTROLS FOR THE PROJECT. PEDESTRIAN WORK PLAN SHALL SHOW LIMITS OF FENCING, CROSSINGS, DETAIL SCHEDULE, AND PHASING OF PEDESTRIAN CROSSINGS - WITH SCHEDULE. CAMPUS REPRESENTATIVE SHALL REVIEW AND APPROVE OF THE PLAN PRIOR TO IMPLEMENTATION.

SURFACE FINISH LEGEND

- CONCRETE SIDEWALK.
- ASPHALT PARKING LOT.
- GRASS LANDSCAPE.
- DESIGNATED LAYDOWN SPACE

NOTES

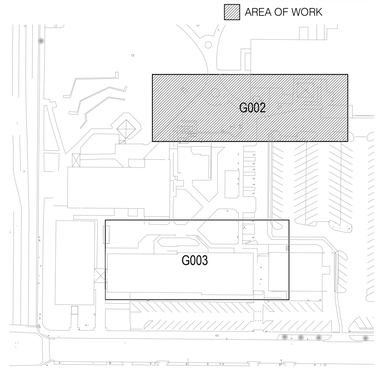
1. PEDETRIAN CROSSING ACCESS. SAFE PEDESTRIAN ACCESS MUST BE MAINTAINED AT ALL TIMES. ALL ACCESS MUST BE ADA COMPLIANT. ANY INTERRUPTION TO ACCESS SHALL BE APPROVED BY THE CAMPUS REPRESENTATIVE 7 DAYS IN ADVANCE.
2. MAINTENANCE DURING CONSTRUCTION - CLEANING OF SIDEWALKS AND PARKING AREAS: CONTRACTOR SHALL KEEP PUBLIC AND PRIVATE RIGHTS-OF-WAY AND PARKING AREAS CLEAR OF CONSTRUCTION-CAUSING SOILING, DUST, AND DEBRIS, ESPECIALLY DEBRIS HAZARDOUS TO VEHICLE TIRES. CONTRACTOR SHALL INSPECT AND PERFORM CLEANING HOURLY TO ENSURE ENTIRE PUBLIC COMMONS AREAS, SIDEWALKS, HAUL ROUTES, AND PARKING LOTS ARE FREE OF ALL DEBRIS. CONTRACTOR SHALL PROVIDE TWO DEDICATED LABORERS AND EQUIPMENT TO ENSURE AREAS ARE KEPT NEAT AND CLEAN DURING EACH DAY OF THE CONTRACT.
3. THE INDICATED SPACE IS AVAILABLE FOR CONTRACTOR AND CAMPUS TRAILERS AND LAYDOWN SPACE. CONTRACTOR SHALL FENCE SITE WITH 8' CHAINLINK FENCE AND SHADE CLOTH. CONTRACTOR IS RESPONSIBLE TO RESTORE DIRT, GRASS, REMOVE DEBRIS, AND RESTORE IRRIGATION SYSTEM AT THE CONCLUSION OF THE PROJECT. CONTRACTOR SHALL RE-WORK IRRIGATION SYSTEM TO ENSURE AREA OUTSIDE OF THE LAYDOWN AREA IS PROPERLY IRRIGATED.
4. EXISTING TREES SHALL BE PROTECTED IN PLACE.
5. DEMOLITION OF THE PARKING LOT AREA IS RESTRICTED TO NIGHTTIME HOURS AND/OR WEEKEND DAYS. WEEKEND WORK SHALL BE COORDINATED WITH THE CAMPUS ACADEMIC AND BUSINESS SCHEDULE. EXCEPTIONS FOR DAYTIME CONSTRUCTION ARE SUBJECT TO CAMPUS APPROVAL. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CAMPUS REPRESENTATIVE REGARDING DEMOLITION TIMES AND HOURS.
6. PROVIDE TRAFFIC COVER PLATES TO COVER WORKING AREA DURING DAYTIME, NON-CONSTRUCTION HOURS.



KEY PLAN

LEGEND

AREA OF WORK



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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
No. 28027
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

Pedestrian Access Map
North

Sheet Number

G002

P2S No. 9570

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GENERAL NOTES

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SURFACE FINISH LEGEND

CONCRETE SIDEWALK.

PLANT LANDSCAPE.

NOTES

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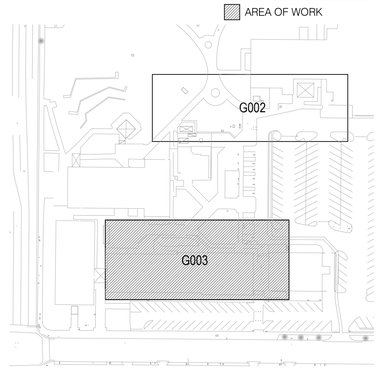
KEY PLAN

LEGEND

AREA OF WORK



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San Diego San Jose

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Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
No. 20000
Exp: 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date January 8, 2020

Submittal DSA Back Check

Scale 1/8" = 1'-0"

Sheet Title

Pedestrian Access Map South

Sheet Number

G003

P2S No. 9570

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ABBREVIATIONS:

CODES/INSTITUTIONS/ASSOCIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
AF&PA	(NDS) AMERICAN FOREST & PAPER ASSOCIATION (NDS)
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
APA-EWA	APA-ENGINEERED WOOD ASSOCIATION
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
CBC	CALIFORNIA BUILDING CODE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
DSA	DIVISION OF THE STATE ARCHITECT
IBC	INTERNATIONAL BUILDING CODE
NDS	NATIONAL DESIGN SPECIFICATIONS
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
SDI	STEEL DECK INSTITUTE
SJI	STEEL JOIST INSTITUTE
SSMA	STEEL STUD MANUFACTURERS ASSOCIATION

SYMBOLS

#	POUND, NUMBER, QUANTITY	MANUF	MANUFACTURER
@	AT	MAX	MAXIMUM
<	LESS THAN	MECH	MECHANICAL
>	GREATER THAN	MHP	MHP STRUCTURAL ENGINEERS
±	PLUS OR MINUS	MID	MIDDLE
°	DEGREE	MIN	MINIMUM
Ø	DIAMETER		

ABBREVIATIONS

AB	ANCHOR BOLT	(N)	NEW
ADDL	ADDITIONAL	N/A	NOT APPLICABLE
ADJ	ADJACENT	NTS	NOT TO SCALE
ALT	ALTERNATE	NWT	NORMAL-WEIGHT
APPROX	APPROXIMATE, APPROXIMATELY	OC	ON CENTER
ARCH	ARCHITECT, ARCHITECTURAL	OP	OPERATING
		PERP	PERPENDICULAR
BLKG	BLOCKING, BLOCK	PL	PLATE, PROPERTY LINE
BM	BEAM	PLF	POUNDS PER LINEAR FOOT
BOT	BOTTOM	PSI	POUNDS PER SQUARE INCH
BTWN	BETWEEN	PSL	PARALLAM
CALCS	CALCULATIONS	QTY	QUANTITY
CG	CENTER OF GRAVITY		
CL	CENTERLINE	REINF	REINFORCING
CLR	CLEAR, CLEARANCE	REQD	REQUIRE, REQUIRED
CMU	CONCRETE MASONRY UNIT		
COL	COLUMN		
CONC	CONCRETE	SCHED	SCHEDULE
CONN	CONNECT, CONNECTION	SEOR	STRUCTURAL ENGINEER OF RECORD
CONT	CONTINUOUS	SHTG	SHEATHING
		SIM	SIMILAR
db	BAR DIAMETER (REBAR)	SMS	SHEET METAL SCREW
DBL	DOUBLE	SQ	SQUARE
DIA	DIAMETER	SS	STAINLESS STEEL
DIAG	DIAGONAL	STAGG	STAGGER
DIM	DIMENSION	STIFF	STIFFEN, STIFFENER
DWG	DRAWING	STIRR	STIRRUP
		STRUC	STRUCTURAL
(E)	EXISTING	SYM	SYMMETRICAL
EA	EACH		
EF	EACH FACE	T&B	TOP & BOTTOM
ELEC	ELECTRICAL	THK	THICK, THICKNESS
EMBED	EMBED, EMBEDDED, EMBEDMENT	THRU	THROUGH
EOR	ENGINEER OF RECORD	TRANS	TRANSVERSE
EQ	EQUAL	TYP	TYPICAL
EQUIP	EQUIPMENT		
EW	EACH WAY	UNO	UNLESS NOTED OTHERWISE
EXP	EXPANSION		
EXT	EXTERIOR	VERT	VERTICAL
		VIF	VERIFY IN FIELD
FDN	FOUNDATION		
FTG	FOOTING	W/	WITH
		W/O	WITHOUT
GA	GAUGE	WP	WORK POINT
GALV	GALVANIZE	WT	WEIGHT
HEX	HEXAGONAL	STRUCTURAL STEEL SHAPES	
HORIZ	HORIZONTAL	Cx	STANDARD CHANNEL
		HSS	HOLLOW STRUCTURAL SECTIONS
ID	INSIDE DIAMETER	Lx	ANGLE
INFO	INFORMATION	MCx	MISCELLANEOUS CHANNEL
IOR	INSPECTOR OF RECORD	Mx	M SHAPES
		STD PIPE	STANDARD PIPE
K	KIPS (1000#)	Sx	S SHAPES
KB3	HILTI KWIK BOLT 3 (ANCHOR)	WTx, STx	STRUCTURAL TEES
KB-TZ	HILTI KWIK BOLT TZ (ANCHOR)	Wx	W SHAPES
KSF	KIPS PER SQUARE FOOT	X-STRG	EXTRA STRONG PIPE
KSI	KIPS PER SQUARE INCH	XX-STRG	DBL EXTRA STRONG PIPE
LBS	POUNDS		
ld	DEVELOPMENT LENGTH		
ldh	HOOK DEVELOPMENT LENGTH		
LL	LIVE LOAD		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LOCS	LOCATIONS		
LONG	LONGITUDINAL		
ls	LAP SPLICE LENGTH		
LVL	LAMINATED VENEER LUMBER		
LTWT	LIGHT-WEIGHT		
LWT	LIGHT-WEIGHT		

GENERAL STRUCTURAL NOTES:

DESIGN CRITERIA:
CODE OF RECORD: 2016 EDITION, CALIFORNIA BUILDING CODE

DESIGN LOADS:
BASIC WIND SPEED _____ 115 MPH (3-SECOND GUST)
WIND EXPOSURE CATEGORY _____ C
ANALYSIS PROCEDURE _____ SEISMIC DESIGN FOR NONSTRUCTURAL COMPONENTS (ASCE 7-10, CHAPTER 13)
RISK CATEGORY _____ III
SEISMIC SITE CLASS _____ D
SEISMIC DESIGN CATEGORY _____ D
SPECTRAL RESPONSE ACCELERATIONS _____ S_S = 1.762g. S_{DS} = 1.175g
SEISMIC IMPORTANCE FACTOR, I_p _____ 1.0

PIPES:
COMPONENT AMPLIFICATION FACTOR _____ a_p = 2.5
COMPONENT RESPONSE MODIFICATION FACTOR _____ R_p = 6.0
OVERSTRENGTH FACTOR _____ Ω_0 = 2.5

1. GOVERNING CODE AUTHORITY FOR THIS PROJECT: DIVISION OF THE STATE ARCHITECT (DSA) AND IS REFERRED TO AS "THE GOVERNING AGENCY" IN THESE AND OTHER STRUCTURAL NOTES SECTIONS.
2. GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY TO ALL PARTS OF THE JOB, EXCEPT WHERE THEY MAY DIFFER WITH DETAILS AND NOTES ON OTHER SHEETS, IN WHICH CASE THE DETAILS AND NOTES ON OTHER SHEETS SHALL GOVERN. DETAIL MARKS WITH "SIM" NOTED INDICATES THAT DETAIL CONTAINS MODIFIED INFORMATION APPLICABLE TO THE CONDITION REFERENCED.
3. SEE MECHANICAL, ELECTRICAL OR PLUMBING (MEP) DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS (EXCEPT AS NOTED), INSERTS, FINISHES, ETC., FOR DETAILS (EXCEPT AS SHOWN), AND FOR DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS. WHERE DIMENSIONS DIFFER BETWEEN PLANS, NOTIFY SEOR AND AWAIT DIRECTION PRIOR TO PROCEEDING WITH WORK.
4. DO NOT INSERT MECHANICAL, ELECTRICAL OR PLUMBING (MEP) SLEEVES, PIPES OR CONDUIT IN CONCRETE WITHOUT PRIOR APPROVAL OF THE SEOR, TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
5. OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE SEOR PRIOR TO PROCEEDING WITH ANY WORK INVOLVED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE SEOR AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.
7. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST CURRENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THE[Y SHALL BE REFERRED TO THE SEOR SO THAT THE PROPER REVISION MAY BE MADE. MODIFICATIONS OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE SEOR.
8. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING BUT NOT LIMITED TO BRACING, SHORING AND LAYDOWN OF CONSTRUCTION MATERIALS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY CONSTRUCTION LOADING, INCLUDING LOADING FROM EQUIPMENT SUCH AS SKIP LOADERS, SCISSOR LIFTS, ETC., ON ALL PORTIONS OF THE STRUCTURE, WHETHER ELEVATED OR ON-GRADE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE PATH-OF-TRAVEL FOR MOVING PERMANENT EQUIPMENT TO ITS FINAL LOCATION; INCLUDING THE EFFECTS OF TEMPORARY LOADING AS THE EQUIPMENT IS INSTALLED. THE CONTRACTOR MAY USE THE "DESIGN LOADS" INFORMATION PROVIDED ABOVE WHEN CONSIDERING TEMPORARY CONSTRUCTION LOADING CONDITIONS.
10. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT/SEOR SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OF THE CONSTRUCTION PROCEDURES. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT/SEOR DURING THE CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED SPECIAL INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT/SEOR, WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED PRIOR TO, DURING OR AFTER COMPLETION OF CONSTRUCTION, ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE, AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
11. ASTM DESIGNATIONS AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS.
12. WHEN THE ALLOWANCE FOR SUBSTITUTION OF A SPECIFIED MATERIAL OR PRODUCT DESIGNATION IS IMPLIED ON THE DESIGN DRAWINGS BY THE USE OF THE WORDS "OR APPROVED EQUAL", APPROVAL SHALL BE OBTAINED FROM THE SEOR AND THE GOVERNING AGENCY PRIOR TO FABRICATION OR INSTALLATION OF THE SUBSTITUTED MATERIAL OR PRODUCT.
13. DIMENSIONS SHALL GOVERN OVER SCALES SHOWN ON DRAWINGS.
14. INCLUDE FOR DSA PROJECTS ONLY: IN ADDITION TO THE INSPECTION PROVIDED BY INSPECTOR OF RECORD (IOR), OR WHERE THE IOR CANNOT PERFORM CONTINUOUS SPECIAL INSPECTIONS, THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION WHEN SO SPECIFIED ON THE CONTRACT DRAWINGS AND SPECIFICATIONS FOR CERTAIN TYPES OF WORK. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE HIS COMPETENCE, TO THE SATISFACTION OF THE GOVERNING AGENCY, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE DESIGN DRAWINGS AND SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE SEOR AND TO THE GOVERNING AGENCY. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE SEOR AND TO THE GOVERNING AGENCY. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF HIS KNOWLEDGE, IN CONFORMANCE WITH THE DESIGN DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISION OF THE CODE AND OTHER APPLICABLE REGULATIONS IDENTIFIED ON THE PLANS OR IN THE PROJECT SPECIFICATIONS.
15. UNLESS SPECIFICALLY SHOWN ON THESE PLANS, NO STRUCTURAL MEMBER (BEAM, COLUMN, SHEARWALL, GRADE BEAM, ETC.) SHALL BE CUT, DRILLED OR NOTCHED WITHOUT PRIOR AUTHORIZATION FROM THE SEOR AND THE GOVERNING AGENCY.
16. DIMENSIONS OF EQUIPMENT ANCHOR/ MOUNTING LOCATIONS SHOWN ON PLANS AND/OR DETAILS ARE TO BE COORDINATED WITH ACTUAL EQUIPMENT TO BE INSTALLED. CONTRACTOR TO VERIFY THE EXACT SIZE AND LOCATION OF ALL EQUIPMENT ANCHOR/ MOUNTING HOLES PRIOR TO INSTALLATION. WHERE ACTUAL EQUIPMENT DIMENSIONS DO NOT FALL WITHIN THE MINIMUM OR MAXIMUM DIMENSIONS PROVIDED ON PLANS AND/OR DETAILS, NOTIFY SEOR AND AWAIT DIRECTION PRIOR TO PROCEEDING WITH WORK.

SHOP DRAWINGS:

A. SHOP DRAWINGS, INCLUDING CONCRETE MIX DESIGNS, SHALL BE SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO FABRICATION OR USE. A SCHEDULE FOR THE RELEASE OF SHOP DRAWING SUBMITTALS SHALL BE PREPARED BY THE CONTRACTOR AND REVIEWED BY THE ARCHITECT/SEOR PRIOR TO THE START OF FABRICATION OR CONSTRUCTION. THIS SUBMITTAL SCHEDULE SHALL PROPORTION THE NUMBER OF SHOP DRAWINGS TO BE REVIEWED IN EACH SUBMITTAL TO ALLOW SUFFICIENT TIME AS DEEMED REASONABLE IN THE PROFESSIONAL JUDGMENT OF THE ARCHITECT/SEOR TO PERMIT ADEQUATE REVIEW. SHOP DRAWINGS SHALL REFERENCE THE LATEST REVISION OF EACH STRUCTURAL DESIGN DRAWING USED TO DETAIL FROM. SUBMITTALS THAT DO NOT IDENTIFY THE LATEST REVISION OF STRUCTURAL PLANS SHALL BE RETURNED WITHOUT REVIEW, FOR THE DETAILER TO UPDATE AND RESUBMIT. THE DETAILING ON EACH SHOP DRAWING SHALL BE COMPLETE BEFORE RELEASING FOR REVIEW THE SUBMITTAL CONTAINING THAT SHOP DRAWING. IF THE SUBMITTAL MUST BE REVISED, IT SHALL IDENTIFY EACH REVISION AND/OR ADDITION TO EACH SHOP DRAWING BY CLOUDING OR OTHER MEANS, TO ENSURE THEIR IDENTIFICATION FOR REVIEW.

B. SHOP DRAWINGS AND CONCRETE MIX DESIGNS WILL NOT BE ACCEPTED BY THE SEOR DIRECTLY FROM THE PROJECT SUB-CONTRACTORS. SHOP DRAWINGS AND CONCRETE DESIGN MIXES WILL BE ACCEPTED FROM THE GENERAL CONTRACTOR ONLY AFTER THEY HAVE BEEN REVIEWED AND SIGNED BY THE GENERAL CONTRACTOR, INDICATING COMPLIANCE WITH HIS REQUIREMENTS AND THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. SHOP DRAWINGS NOT COMPLYING WITH THE INSTRUCTIONS IN BOTH NOTES A AND B WILL BE RETURNED BY THE SEOR WITHOUT REVIEW.

STRUCTURAL AND MISCELLANEOUS STEEL:

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (AISC 360), LATEST EDITION, AND SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS (AISC 341) LATEST EDITION.
2. ALL WELDING SHALL COMPLY WITH AWS SPECIFICATION D1.1/D1.1M.
3. WELDING PROCEDURE SPECIFICATIONS (WPS) SHALL BE SUBMITTED FOR REVIEW FOR EACH WELD TYPE, WELDING PROCESS, WELDING ELECTRODE CLASSIFICATION AND/OR BASE MATERIAL (WHERE ASTM GRADE OR ALLOY VARIES) SHOWN ON THE DRAWINGS IN CONFORMANCE WITH AWS D1.1/D1.1M, D1.4/D1.4M AND D1.8/D1.8M AS APPLICABLE. EACH WPS SHALL BE RECORDED ON FORMS RECOMMENDED BY THE APPLICABLE AWS STANDARD AND SHALL BE REVIEWED BY AN AWS SCWI CERTIFIED INSPECTOR AND SUBMITTED TO THE SEOR AND, IF THE PROJECT IS GOVERNED BY DSA OR OSHPD, THE INSPECTOR OF RECORD (IOR) FOR REVIEW. IF A WELD ASSEMBLY NOTED ON PLANS DOES NOT FALL WITHIN THE PREQUALIFIED CRITERIA, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A WELDING PROCEDURE QUALIFICATION RECORD FOR THE SPECIFIED WELD AS PART OF THE WPS SUBMITTAL.
4. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATION (UNLESS NOTED OTHERWISE):
   A. WIDE FLANGE SECTIONS (W,WT)_____ASTM A-992 FY=50KSI
   B. CHANNELS AND MISC SHAPES (C,MC,S,M)_____ASTM A-36 FY=36KSI
   C. ANGLES AND PLATES _____ASTM A-36 FY=36KSI
   D. PIPE (STD,X-STRG,XX-STRG)_____ASTM A-53 TYPE E, GR B____FY=35KSI
   E. HSS TUBE (SQ,RECTANG)_____ASTM A-500, GR C _____FY=50KSI
      SULFUR CONTENT SHALL BE LESS THAN OR EQUAL TO 0.05%
   F. HSS TUBE (ROUND)_____ASTM A-500, GR C_____FY=46KSI
      SULFUR CONTENT SHALL BE LESS THAN OR EQUAL TO 0.05%
5. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO FABRICATION AND ERECTION, IN ACCORDANCE WITH NOTE 12 OF GENERAL STRUCTURAL NOTES.
6. AFTER FABRICATION, ALL STEEL SHALL BE CLEANED FREE OF RUST, LOOSE MILL SCALE, AND OIL.
7. ALL STEEL EXPOSED TO MOISTURE OR WEATHER SHALL BE HOT-DIPPED GALVANIZED, UNLESS NOTED OTHERWISE. GALVANIZING SHALL BE IN CONFORMANCE WITH ASTM A123 AND A153. REPAIR GALVANIZING AFTER WELDING SHALL BE IN ACCORDANCE WITH ASTM A780.
8. WHERE CARBON STEEL IS IN CONTACT WITH STAINLESS STEEL OR WHERE EITHER CARBON OR STAINLESS STEEL IS IN CONTACT WITH ALUMINUM, PHENOLIC SHIM OR BREAK SHALL BE INSTALLED TO SEPARATE DISSIMILAR METALS.
9. BOLTS, THREADED RODS, AND WASHERS SHALL CONFORM TO THE FOLLOWING, UNO:
   A. MACHINE BOLTS_____ASTM A-307
   B. HIGH STRENGTH BOLTS_____ASTM A-325-N OR A-490
   C. THREADED RODS, UNO _____ASTM A-36
   D. WELDED HEADED STUDS_____ASTM A-108, GRADE 1010-1020
   E. WASHERS_____ASTM F-436
   F. WASHERS AT NON-SEISMIC/WIND-RESISTING-FRAME COLUMNS WHERE HOLES AT COLUMN BASE PLATE ARE OVER-SIZED, ONLY WHEN REQUIRED BY CONTRACTOR AND APPROVED BY SEOR:_____ASTM F-436 5/16" THICK
   G. ANCHOR BOLTS IN CONCRETE OR MASONRY_____ASTM F-1554, GR 36
   H. HIGH STRENGTH ANCHOR BOLTS IN CONCRETE_____ASTM F-1554, GR 105
10. ANCHOR BOLTS SHALL BE HEADED. J-BOLTS SHALL NOT BE USED.
11. BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO 3/4" DIAMETER BOLTS UNLESS SHOWN OTHERWISE.
12. UNLESS NOTED OTHERWISE, BOLTS SHALL BE INSTALLED "SNUG TIGHT". THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES OF THE JOINT ARE IN FIRM CONTACT. BOLTS OF SLOTTED CONNECTIONS SHALL BE INSTALLED "HAND TIGHT" ONLY, WITH THREADS SPOILED. THE HAND TIGHT CONDITION IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN THE PLATES BE BROUGHT AND BOLT HEAD ARE DEPRESSED AGAINST THE PLATE, AS EVIDENCED BY A FIRM CONTACT WITH HER OR SHEAR TAB WITH A SPUD WRENCH AND THE NUT IS THEN BACKED OFF ONE QUARTER OF A TURN. WHERE SLOTTED CONNECTIONS ARE INDICATED, THE WASHER SHALL BE PLACED OVER THE SLOTTED HOLE. BOLTS INDICATED AS SLIP-CRITICAL SHALL BE PRE-TENSIONED PER SECTION 8.2 OF SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS.
13. HOLES FOR BOLTED CONNECTIONS AND ANCHOR BOLTS SHALL BE AISC "STANDARD" HOLES LIMITED TO 1/16-INCH LARGER IN DIAMETER THAN NOMINAL BOLT DIAMETER FOR 7/8-INCH DIAMETER BOLTS AND SMALLER, AND 1/8-INCH LARGER IN DIAMETER THAN NOMINAL BOLT DIAMETER FOR 1-INCH AND LARGER BOLTS, UNLESS NOTED OTHERWISE. OVERSIZED AND SLOTTED HOLES REQUIRE THE APPROVAL OF THE SEOR, UNLESS SPECIFICALLY DETAILED ON THE APPROVED DRAWINGS.
14. PROVIDE BEVELED WASHERS WHERE JOINT FACE SLOPE IS GREATER THAN 1:20.
15. FLANGE STIFFENER PLATES SHALL BE ORIENTED SO THAT ROLLING DIRECTION OF PLATE IS PARALLEL WITH DIRECTION OF PRINCIPLE STRESS.
16. ALL STRUCTURAL STEEL WELDING SHALL BE PERFORMED WITH E70XX ELECTRODES.
17. WHERE FILLET WELD SYMBOL IS SHOWN WITHOUT INDICATION OF THROAT SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED BELOW:

TABLE J2.4
MINIMUM SIZE OF FILLET WELDS

MATERIAL THICKNESS OF THINNER PART JOINED	MINIMUM SIZE OF FILLET WELD
TO 1/4" (6MM) INCLUSIVE	1/8" (3MM)
OVER 1/4" (6MM) TO 1/2" (13MM)	3/16" (5MM)
OVER 1/2" (13MM) TO 3/4" (19MM)	1/4" (6MM)
OVER 3/4" (19MM)	5/16" (8MM)

18. WHERE LENGTH OF WELD IS NOT INDICATED, WELD SHALL BE FULL LENGTH OF JOINT.
19. ALL COMPLETE- AND PARTIAL-JOINT-PENETRATION GROOVE WELDS SHALL BE PERFORMED USING "INNERSHIELD" AND "ML-2" SEMI-AUTOMATIC EQUIPMENT.
20. SEE SPECIAL INSPECTION AND TESTING NOTES FOR INSPECTION AND TESTING REQUIREMENTS.

STRUT FRAMING SYSTEM (UNISTRUT):

1. ALL CHANNELS, BRACKETS AND FASTENERS SHOWN IN SECTIONS AND DETAILS NOTED AS "P####" ARE BY UNISTRUT. SIMILAR CHANNELS, BRACKETS AND FASTENERS (SAME SIZE, MATERIAL, GAGE, TYPE, AND WELDS) BY OTHER MANUFACTURER'S INCLUDING POWERSTRUT, B-LINE OR NU-STRUT MAY BE SUBSTITUTED; HOWEVER, DO NOT MIX COMPONENTS FROM DIFFERENT MANUFACTURERS.
2. STRUT SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
3. ALL CHANNELS SHALL HAVE PRE-PUNCHED HOLES WITH A WIDTH OF 9/16" AND LENGTH OF 1 1/8" UNLESS NOTED AS "UNPUNCHED". CHANNELS NOTED AS "UNPUNCHED" SHALL BE SOLID AND HAVE NO PRE-PUNCHED HOLES.
4. ALL STRUT CONNECTIONS WITH SPRING NUTS SHALL BE ATTACHED TO THE OPEN FACE OF THE CHANNEL UNLESS NOTED OTHERWISE. DO NOT INSTALL BOLTS THROUGH SLOTTED HOLES IN THE BACK OF THE CHANNELS UNLESS SPECIFICALLY NOTED ON THE DETAILS.
5. ALL BOLTS INTO SPRING NUTS SHALL MEET THE FOLLOWING TORQUE REQUIREMENTS:
   - 3/8" DIAMETER __19 FT-LBS
   - 7/16" DIAMETER__35 FT-LBS
   - 1/2" DIAMETER __50 FT-LBS
   - 3/4" DIAMETER __125 FT-LBS
6. ALL CHANNEL MEMBERS SHALL BE FABRICATED FROM STRUCTURAL GRADE STEEL CONFORMING TO ASTM A-1011 SS GR 33.
7. ALL FITTINGS SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A-575, A-576, A-635 OR A-36.
8. ALL CHANNEL NUTS SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A-1011 SS GR 45. ALL SCREWS SHALL CONFORM TO ASTM A-307. ALL NUTS AND HARDWARE SHALL BE ELECTRO-GALVANIZED IN CONFORMANCE WITH ASTM B-633 TYPE III SC1.
9. ALL SCREWS AND BOLTS SHALL BE FABRICATED FROM STEEL CONFORMING TO SAE J429 GRADE 2 OR ASTM A-307. ALL THREADED RODS SHALL CONFORM TO ASTM A-36.
10. ALL CHANNEL MEMBERS AND FITTINGS SHALL BE HOT-DIPPED GALVANIZED IN CONFORMANCE WITH ASTM A-123 AFTER ALL MANUFACTURING OPERATIONS ARE COMPLETE.
11. USE 1/2" DIAMETER MACHINE BOLTS OR SCREWS AT STRUT CONNECTIONS UNLESS NOTED OTHERWISE.
12. ALL WELDING SHALL BE DONE BY ELECTRIC ARC PROCESS WITH E70XX MATERIAL. ALL WELDING SHALL BE PERFORMED IN AN APPROVED FABRICATORS SHOP OR SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR APPROVED BY THE GOVERNING AGENCY.
13. ALL STRUCTURAL HSS TUBE SECTIONS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION. ALL STRUCTURAL HSS TUBES SHALL CONFORM TO ASTM A-500 GR C (FY = 50 KSI).

FRAMING LUMBER:

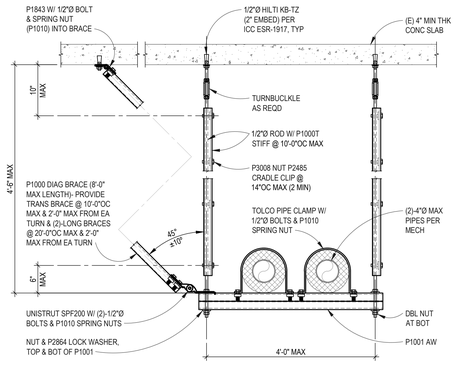
1. ALL STRUCTURAL LUMBER SHALL BE DOUGLAS FIR-LARCH, WEST COAST (WCDF) OF THE FOLLOWING MINIMUM GRADES (UNLESS NOTED OTHERWISE):
   A. PLATES, BLOCKING, 2x FRAMING AND 2x6 STUDS AND LARGER = No. 2
   B. 2x4 STUDDING = CONSTRUCTION GRADE
   C. BEAMS, HEADERS, POSTS AND OTHER 4X OR LARGER MEMBERS (UNO) = No. 1
2. STRUCTURAL PLYWOOD SHALL BE DOUGLAS FIR CONFORMING TO UNITED STATES PRODUCT STANDARD PS-1-09 EXTERIOR GRADE, MARKED STRUCTURAL I AND SHALL BE STAMPED BY AN APPROVED FABRICATOR.
3. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED OR APPROVED BY THE SEOR.
4. MAXIMUM MOISTURE CONTENT FOR 2X FRAMING SHALL NOT EXCEED 19 PERCENT (19%) AT TIME OF COVER-UP (COVER-UP INCLUDES APPLICATION OF PLYWOOD OR GYPBOARD). 2X FRAMING SHALL BE STAMPED "S-DRY" OR "KD".
5. BOLT HOLE DIAMETER SHALL BE THE DIAMETER OF BOLT PLUS 1/16" UNLESS NOTED OTHERWISE. PROVIDE WASHERS UNDER HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. ALL BOLTS SHALL BE RE-TIGHTENED JUST PRIOR TO COVER-UP.
6. PRESERVATIVE-TREATED WOOD (i.e. PROTECTED AGAINST DECAY OR INSECT ATTACK) SHALL BE USED FOR WOOD FRAMING MEMBERS WHICH FORM THE STRUCTURAL SUPPORTS OF BUILDINGS, BALCONIES, PORCHES OR SIMILAR PERMANENT BUILDING APPURTENANCES WHEN SUCH MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING TO PREVENT MOISTURE OR WATER ACCUMULATION ON THE SURFACE OR AT JOINTS BETWEEN MEMBERS. WHERE MEMBERS ARE FIELD CUT, DRILLED, NOTCHED OR OTHERWISE ALTERED IN THE FIELD, ALL AFFECTED SURFACES SHALL BE RE-TREATED.
7. WOOD FRAMING TO BE PRESERVATIVE-TREATED SHALL CONFORM TO THE REQUIREMENTS OF THE AWPA STANDARD U1 AND APPLICABLE AWPA UC STANDARDS FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. THESE WOOD MEMBERS SHALL BEAR THE QUALITY MARK OF AN INSPECTION AGENCY THAT MAINTAINS CONTINUING SUPERVISION, TESTING AND INSPECTION OVER THE QUALITY OF THE PRESERVATIVE-TREATED WOOD.
8. WHERE PRESERVATIVE-TREATED WOOD IS USED IN ENCLOSED LOCATIONS WHERE DRYING IN SERVICE CANNOT READILY OCCUR, SUCH WOOD SHALL BE AT A MOISTURE CONTENT OF 19 PERCENT (19%) OR LESS BEFORE BEING COVERED WITH INSULATION, INTERIOR WALL FINISH, FLOOR COVERING OR OTHER MATERIALS.
9. FRAMING HANGERS, CAPS, HOLDOWNS, POST BASES, ANCHORS, CONNECTORS, ETC., SHALL BE AS MANUFACTURED BY "SIMPSON COMPANY" OR APPROVED EQUAL TO BE SUBMITTED TO STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
10. FASTENERS USED FOR THE ATTACHMENT OF EXTERIOR WALL COVERINGS AND/OR PRESERVATIVE-TREATED WOOD MEMBERS WHERE APPLICABLE SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL (ASTM A-153), MECHANICALLY DEPOSITED ZINC-COATED STEEL (ASTM B-695), STAINLESS STEEL, SILICON BRONZE OR COPPER.
11. NAILS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F-1667. NAILS SHALL BE COMMON WIRE (UNO) AND THE NUMBER OF NAILS CONNECTING WOOD MEMBERS SHALL BE PER THE PLANS AND DETAILS BUT NOT LESS THAN THE AMOUNTS SET FORTH IN TYPICAL WOOD FASTENING SCHEDULE IN THE DRAWINGS. GALVANIZED COMMON NAILS SHALL BE USED FOR ALL EXPOSED EXTERIOR WOOD. COMMON NAILS SHALL CONFORM TO THE SPECIFICATIONS OF NAIL PROPERTIES SCHEDULE BELOW:

NAIL PROPERTIES SCHEDULE

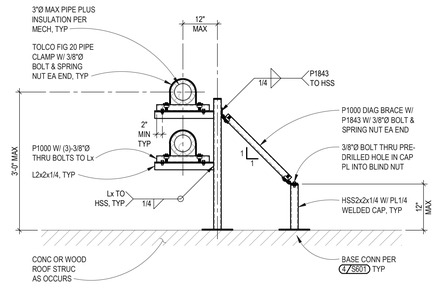
DESIGNATION	LENGTH	WIRE DIAMETER	HEAD DIAMETER
6d	2"	0.113"	0.266"
8d	2 1/2"	0.131"	0.281"
10d	3"	0.148"	0.312"
12d	3 1/4"	0.148"	0.312"
16d	3 1/2"	0.162"	0.344"
20d	4"	0.192"	0.406"

NOTE: 10d COMMON SHORT (2 1/8" LONG) MAY BE USED AT 1/2" AND THINNER PLYWOOD IN LIEU OF 10d COMMON (3") OR 8d COMMON (2 1/2" LONG). NAILING SHALL NOT BREAK THROUGH OUTER PLY OF PLYWOOD. IF PNEUMATIC GUNS ARE USED, THEY SHALL BE ADJUSTED TO SATISFY THE ABOVE CRITERIA.

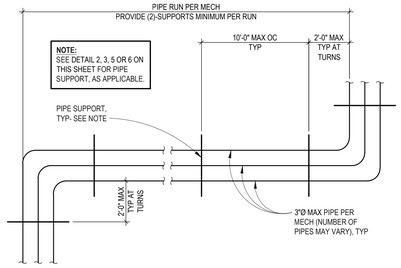
12. TOE NAILS SHALL BE DRIVEN AT AN ANGLE OF APPROXIMATELY 30 DEGREES WITH THE MEMBER AND STARTED APPROXIM



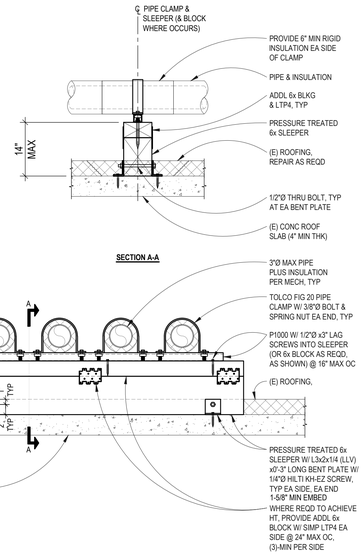
PIPE SUPPORT
AND BRACING TO CONCRETE SLAB (9 / S601)
SCALE: 1" = 1'-0"



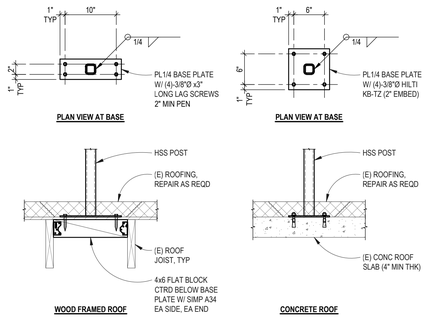
VERTICALLY STACKED PIPE SUPPORT STAND (3 / S601)
SCALE: 3/4" = 1'-0"



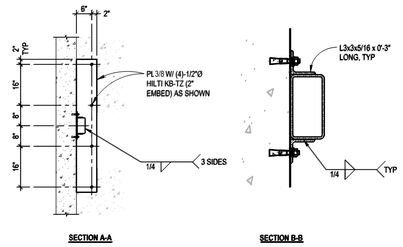
TYPICAL PIPE SUPPORT PLAN ON ROOF (A / S601)
SCALE: NONE

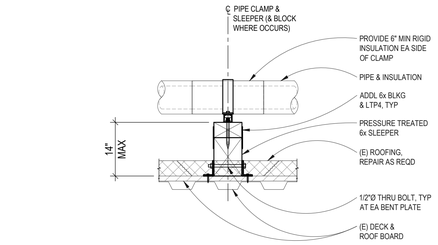


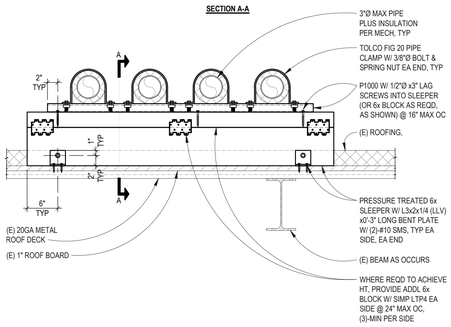
WOOD SLEEPER ON CONCRETE ROOF (6 / S601)
SCALE: 1" = 1'-0"



PIPE SUPPORT STAND BASE CONNECTIONS (4 / S601)
SCALE: 1" = 1'-0"

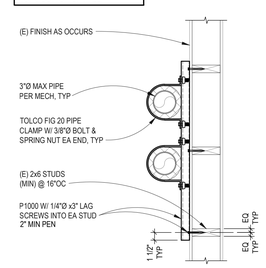






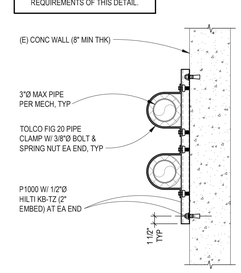
WOOD SLEEPER ON ROOF DECK (10 / S601)
SCALE: 1" = 1'-0"

NOTE:
PIPE SUPPORT SHALL BE PROVIDED @ 8'-0" MAX OC & 2'-0" MAX FROM TOP & BOTTOM OF WALL.

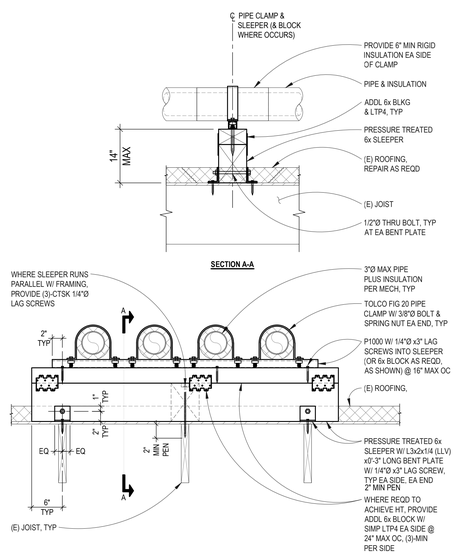


TYPICAL PIPE SUPPORT AT WOOD STUD WALL (7 / S601)
SCALE: 1" = 1'-0"

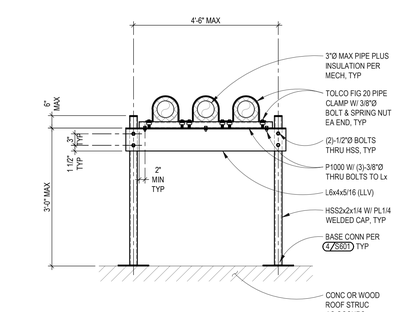
NOTES:
1. PIPE SUPPORT SHALL BE PROVIDED @ 8'-0" MAX OC & 2'-0" MAX FROM TOP & BOTTOM OF WALL.
2. EXISTING UNISTRUTS MAY BE UTILIZED WHERE THEY OCCUR, PROVIDED THEY MEET ALL OF THE REQUIREMENTS OF THIS DETAIL.



TYPICAL PIPE SUPPORT AT CONCRETE WALL (8 / S601)
SCALE: 1" = 1'-0"



WOOD SLEEPER ON WOOD ROOF (5 / S601)
SCALE: 1" = 1'-0"



ELEVATION (1 / S601)
SCALE: 1/2" = 1'-0"

TYPICAL PIPE SUPPORT STAND (2 / S601)
SCALE: 3/4" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
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Project Title
Heating Hot Water
Replacement Parking Lot 10

FULLERTON COLLEGE
321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TERRY FERNANDEZ
No. 2256
Exp. 12/31/21
STRUCTURAL
STATE OF CALIFORNIA
1/7/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	C Stone
Drawn	S Alvira
Checked	C Stone
Approved	T Fernandez
Date	January 8, 2020
Submittal	DSA Back Check
Scale	As Noted

Sheet Title
Sections and Details

Sheet Number
S601

P2S No. 9570

H:\2019\9500983_Drawings\Dwgs\0019-0098-00_S601 (Sections and Details).dwg PLOTTED BY: Shawn Alvira ON: January 7, 2020 AT: 12:19 PM

GENERAL LEGEND

SYMBOL	DESCRIPTION
	NOTE CALLOUT
	DETAIL CALLOUT - NUMBER ON TOP DENOTES DETAIL NUMBER - NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN
	MECHANICAL EQUIPMENT CALLOUT, SEE MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS
	SECTION CALLOUT
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	NEW LINEWORK
	EXISTING LINEWORK
	DEMOLITION LINEWORK
	DIRECTION OF FLOW

PIPING LEGEND

SYMBOL	DESCRIPTION
4" CHWR	NEW PIPING (SIZE-SERVICE)
(E) 4" CHWR	EXISTING PIPING (SIZE-SERVICE)
	ELBOW FACING AWAY FROM VIEWER
	ELBOW FACING TOWARD VIEWER
	TEE FACING AWAY FROM VIEWER
	TEE FACING TOWARD VIEWER
	PIPE CAP
	TRANSITION, ASYMMETRIC
	TRANSITION, SYMMETRIC
	EXPANSION JOINT (COMPENSATOR)
	PIPE GUIDE
	PIPE ANCHOR
	UNION, SCREWED
	BALL VALVE
	BALL VALVE W/ ACTUATOR
	BUTTERFLY VALVE
	BUTTERFLY VALVE W/ ACTUATOR
	GATE VALVE
	GATE VALVE W/ ACTUATOR
	GLOBE VALVE
	GLOBE VALVE W/ ACTUATOR
	THREE-WAY VALVE
S	AIR SEPARATOR

ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
(E)	EXISTING	HT	HEIGHT
AAV	AUTOMATIC AIR VENT	HZ	HERTZ
AFF	ABOVE FINISHED FLOOR	ID	INSIDE DIAMETER
AHU	AIR HANDLING UNIT	IN	INCHES
AP	ACCESS PANEL	KW	KILOWATTS
APD	AIR PRESSURE DROP	LAT	LEAVING AIR TEMPERATURE
BD	BLOWDOWN	LBS	POUNDS
BDD	BACK DRAFT DAMPER	LF	LINEAR FEET
BFC	BELOW FINISHED CEILING	LWT	LEAVING WATER TEMPERATURE
BFP	BACK FLOW PREVENTER	MAX	MAXIMUM
BHP	BREAK HORSEPOWER	MBH	THOUSAND BTU PER HOUR
BLDG	BUILDING	MC	MECHANICAL CONTRACTOR
BOB	BOTTOM OF BEAM	MCA	MINIMUM CIRCUIT AMPS
BOP	BOTTOM OF PIPE	MH	MANHOLE
BTU	BRITISH THERMAL UNIT	MIN	MINIMUM
CFM	CUBIC FEET PER MINUTE	MOCP	MAXIMUM OVERLOAD CIRCUIT PROTECTION
CHWR	CHILLED WATER RETURN		
CHWS	CHILLED WATER SUPPLY	NFA	NET FREE AREA
CI	CAST IRON	NIC	NOT IN CONTRACT
CL	CENTER LINE	NPSHR	NET POSITIVE SUCTION HEAD REQUIRED
CP	CONDENSATE PUMP	OA	OUTSIDE AIR
CT	COOLING TOWER	OAT	OUTSIDE AIR TEMPERATURE
CU	CONDENSING UNIT	OBD	OPPOSED BLADE DAMPER
CV	CONSTANT VOLUME BOX	OC	ON CENTER
CWFR	CONDENSER WATER FILTER RETURN	OD	OUTSIDE DIAMETER
CWFS	CONDENSER WATER FILTER SUPPLY	PD	PRESSURE DROP
CWR	CONDENSER WATER RETURN	PERF	PERFORATED
CWS	CONDENSER WATER SUPPLY	PH	PHASE
DB	DRY BULB	POD	POINT OF DISCONNECT
DEG	DEGREES	PR	PRESSURE RELIEF
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DL	DOOR LOUVER	PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
DN	DOWN	PSIG	POUNDS PER SQUARE INCH GAUGE
DX	DIRECT EXPANSION	PVC	POLYVINYL CHLORIDE
EA	EACH	RA	RETURN AIR
EAT	ENTERING AIR TEMPERATURE	RF	RETURN FAN
EC	ELECTRICAL CONTRACTOR	RLA	RATED LOAD AMPS
EFF	EFFICIENCY	RPM	REVOLUTIONS PER MINUTE
EL	ELEVATION	SA	SUPPLY AIR
ESP	EXTERNAL STATIC PRESSURE	SF	SUPPLY FAN
EWT	ENTERING WATER TEMPERATURE	SPEC	SPECIFICATION
FD	FIRE DAMPER	SS	STAINLESS STEEL
FG	FILTER GRILLE	STD	STANDARD
FLA	FULL LOAD AMPS	TAD	TRANSFER AIR DUCT
FLR	FLOOR	TDH	TOTAL DYNAMIC HEAD
FOB	FLAT ON BOTTOM	TEFC	TOTALLY ENCLOSED FAN COOLED
FOT	FLAT ON TOP	TSP	TOTAL STATIC PRESSURE
FPI	FINS PER INCH	TYP	TYPICAL
FPM	FEET PER MINUTE	UC	UNDERCUT
FSD	FIRE SMOKE DAMPER	V	VOLTS
FT	FEET OR FOOT	VAV	VARIABLE AIR VOLUME
FX	FLEXIBLE CONNECTION	VD	VOLUME DAMPER
GA	GAUGE	VFD	VARIABLE FREQUENCY DRIVE
GALV	GALVANIZED	VTR	VENT THRU ROOF
GC	GENERAL CONTRACTOR	W/	WITH
GPH	GALLONS PER HOUR	W/O	WITHOUT
GPM	GALLONS PER MINUTE	WB	WET BULB
HB	HOSE BIBB	WC	WATER COLUMN
HD	HEAD	WG	WATER GAUGE
HHWR	HEATING HOT WATER RETURN	WPD	WATER PRESSURE DROP
HHWS	HEATING HOT WATER SUPPLY	WT	WEIGHT
HP	HEAT PUMP	°F	DEGREES FAHRENHEIT
HP	HORSEPOWER		

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS AND OTHER STANDARD INDUSTRY CONVENTIONS.

CONTROL ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A	ALARM	PS	PRESSURE SWITCH
AFMS	AIRFLOW MONITORING STATIONS	PT	PRESSURE TRANSMITTER
AI	ANALOG INPUT	RH	RELATIVE HUMIDITY
AO	ANALOG OUTPUT	S	STATUS
CS	CURRENT SWITCH	SC	SPEED CONTROL
DI	DIGITAL INPUT	SI	SPEED INDICATOR
DO	DIGITAL OUTPUT	SP	SETPOINT
DP	DIFFERENTIAL PRESSURE	SS	START/STOP
FM	FLOW METER	T	TEMPERATURE
FS	FLOW SWITCH	TI	TEMPERATURE INDICATOR
HOA	HANDS-OFF-AUTO	VA	DAMPER/VALVE ACTUATOR
KW	KILOWATTS	VP	VELOCITY PRESSURE
LA	LEVEL ALARM	VSH	VIBRATION SWITCH
MOD	MOTOR OPERATED DAMPER	ZC	CLOSED END SWITCH
NC	NORMALLY CLOSED	ZI	POSITION INDICATOR
NO	NORMALLY OPEN	ZO	OPEN END SWITCH

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS AND OTHER STANDARD INDUSTRY CONVENTIONS.

SHEET INDEX

SHEET	DESCRIPTION
M001	GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
M100	SITE PLAN
M201	ENLARGED SITE PLAN
M202	ENLARGED SITE PLAN
M203	ENLARGED SITE PLAN
M204	ENLARGED SITE PLAN
M205	WILSHIRE AUDITORIUM BUILDING 2100 - BASEMENT
M211	CONNECTION PLAN BUILDING 2100
M212	CONNECTION PLAN BUILDING 2001/2000
M213	CONNECTION PLAN BUILDING 200 AND BUILDING 300
M301	NORTH TRENCH REPAIR AND PAVING PLAN
M302	SOUTH TRENCH REPAIR AND PAVING PLAN
M401	ISOMETRIC VIEWS
M601	DETAILS
M602	DETAILS
MD201	ENLARGED SITE PLAN DEMOLITION
MD202	ENLARGED SITE PLAN DEMOLITION
MD203	ENLARGED SITE PLAN DEMOLITION
MD204	ENLARGED SITE PLAN DEMOLITION
MD205	BUILDING 2100 - BASEMENT DEMOLITION
MD211	DEMOLITION PLAN BUILDING 2100
MD212	DEMOLITION PLAN BUILDING 2001/2000

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2016 EDITIONS OF THE CALIFORNIA BUILDING, MECHANICAL, PLUMBING, AND OTHER APPLICABLE FEDERAL, STATE, OR LOCAL CODES AS ADOPTED AND ENFORCED BY THE LOCAL JURISDICTION. IN CASE THE PLANS SHOW MORE STRINGENT REQUIREMENTS, THE PLANS SHALL GOVERN THE DESIGN, YET NOTHING ON THE DESIGN DOCUMENTS SHALL BE INTERPRETED AS AUTHORITY TO VIOLATE CODE(S) OR REGULATION(S).

2. SUBMISSION OF BID IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH THE CONTRACTOR WILL BE OBLIGATED TO OPERATE UNDER THIS CONTRACT. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.

3. WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".

4. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON DRAWINGS AND SPECIFICATIONS WITH CODE REQUIREMENTS, THE MORE STRINGENT STANDARD SHALL PREVAIL.

5. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.

6. NO PIPING, EQUIPMENT, ETC. SHALL BE REMOVED, DISCONNECTED OR SHUT DOWN WITHOUT PRIOR REVIEW WITH THE OWNER TO CONFIRM THAT AREAS TO REMAIN IN OPERATION WILL NOT BE AFFECTED. IF ANY AREAS NOT WITHIN THE SCOPE OF WORK ARE AFFECTED BY ANY SHUTDOWN, REMOVAL OR DISCONNECTION, SUFFICIENT ADVANCE NOTICE MUST BE GIVEN TO THE OWNER INDICATING WHICH AREAS WILL BE AFFECTED, WHEN THE PROPOSED SHUTDOWN WILL OCCUR, AND FOR HOW LONG A PERIOD OF TIME.

7. THE ARRANGEMENT OF EQUIPMENT AND PIPING SHOWN ON THE DRAWINGS IS BASED UPON INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF DESIGN AND IS NOT INTENDED TO SHOW EXACT DIMENSIONS. THIS CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE SITE MAKING FIELD MEASUREMENTS AND SHOP DRAWINGS NECESSARY FOR FABRICATION OR ERECTION OF HVAC SYSTEMS. MAKE ALLOWANCE FOR BEAMS, PIPES AND OTHER OBSTRUCTIONS IN BUILDING CONSTRUCTION. CHECK DRAWINGS SHOWING WORK OF OTHER TRADES AND CONSULT WITH THE OWNER'S REPRESENTATIVE IN THE EVENT OF POTENTIAL INTERFERENCE. SHOP DRAWINGS SHALL BE MINIMUM 1/4"=1'-0" SCALE, INDICATING FITTINGS, SIZES, WELDS AND CONFIGURATIONS AND SUBMITTED TO ENGINEER FOR REVIEW.

8. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION, PURCHASE AND/OR INSTALLATION OF ALL WORK.

9. EXISTING MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED IN NEW SYSTEMS, EXCEPT WHERE INDICATED AS BEING RELOCATED.

10. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

11. THIS CONTRACTOR SHALL NOT BORE, NOTCH, CUT, OR PENETRATE INTO A STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM A DESIGNATED STRUCTURAL ENGINEER AND THE OWNER.

12. ALL PIPE ELBOWS SHALL BE LONG RADIUS UNLESS OTHERWISE SPECIFICALLY NOTED ON THE DRAWINGS.

13. INSTALL MANUAL VOLUME DAMPERS WITHIN DUCT BRANCHES TO BALANCE AIRFLOW CFM. ON INSULATED DUCTS, MOUNT DAMPER REGULATOR ON 2" STAND-OFF BRACKET TO CLEAR INSULATION.

14. ALL MATERIAL EXPOSED WITHIN RA PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND SMOKE DEVELOPED INDEX NOT GREATER THAN 50. COMPLY WITH CMC-602.2.

15. COORDINATE ACCESS TO EQUIPMENT WITH WORK OF OTHER TRADES. PROVIDE DUCT ACCESS DOORS AND CEILING ACCESS DOORS TO ALLOW ACCESS FOR FILTER CHANGEOUT, CONTROLS ACCESS AND ACCESS TO SERVICE/REMOVE COMPONENTS INCLUDING, BUT NOT LIMITED TO, FANS, PULLEYS, SHEAVES, BELTS, ETC.

16. MECHANICAL COMPONENT ANCHORAGE NOTES:.

    ALL MECHANICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

    1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
    2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
    3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

    THE FOLLOWING MECHANICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT:

    A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
    B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

    FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR THE STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

17. PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTE:

    PIPING AND DUCTWORK DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.8, 13.6.7, 13.6.5.6, AND 2016 CBC SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

    THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE PIPING DISTRIBUTION SYSTEM ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS.THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

    MP ☑ MD ☑ - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

    MP ☐ MD ☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL OPM #_____

    MP ☐ MD ☐ - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.

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San Diego San Jose
p2sinc.com

Consultant

Project Title
Heating Hot Water Replacement Parking Lot 10

Owner
FULLERTON COLLEGE
321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER ANTHONY MUELLER No. M18000 Exp: 3/31/21 MECHANICAL STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
Date	January 8, 2020
Submittal	DSA Back Check
Scale	No Scale

Sheet Title
General Notes, Legend, Abbreviations and Sheet Index

Sheet Number
M001

P2S No. 9570

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GENERAL NOTES

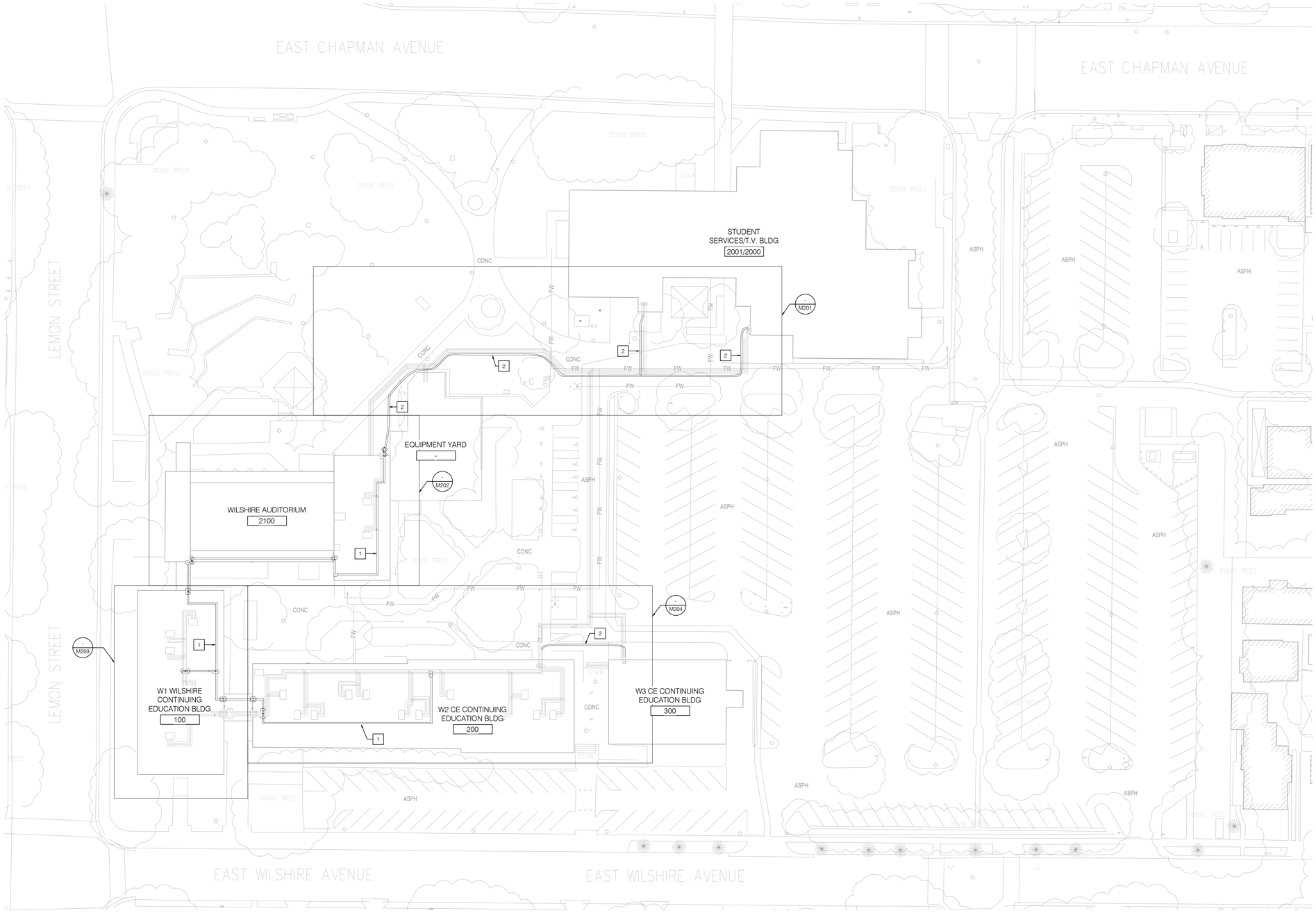
1. CUT-INS AND CHANGEOVERS SHALL BE COORDINATED TO MINIMIZE DOWNTIME OF THE HEATING HOT WATER DISTRUBUTION SYSTEM AS MUCH AS POSSIBLE AND WITHOUT DISRUPTING THE DISTRIBUTION OF HHW DURING THE CAMPUS' NORMAL HOURS OF OPERATION. ALL CUT-INS AND CHANGEOVERS SHALL OCCUR OVER THE WEEKEND AND WHEN WILSHIRE AUDITORIUM IS NOT IN USE. CONTRACTOR SHALL COORDINATE WITH THE CAMPUS TO SCHEDULE THE DOWNTIME.

2. CONTRACTOR SHALL PERFORM A UTILITY SEARCH PRIOR TO THE START OF ANY CONSTRUCTION OR DEMOLITION IN ORDER TO IDENTIFY ANY EXISTING SYSTEMS OR OBSTRUCTIONS THAT MAY HINDER THE INSTALLATION OF THE DIRECT-BURIED PIPING. THE RESULTS OF THE UTILITY SEARCH MUST BE SUBMITTED TO BOTH THE CAMPUS' REPRESENTATIVE AND THE ENGINEER OF RECORD.

NOTES

1. PROVIDE ROOF MOUNTED STEEL PIPING AS SHOWN. PROVIDE ROUTING AS SHOWN TO FOLLOW ALONGSIDE EXISTING HHW PIPES.

2. PROVIDE PREINSULATED DIRECT BURIED PEX PIPING AS SHOWN. PROVIDE ROUTING AS SHOWN TO FOLLOW PLAN AND ELEVATION ROUTING ALONGSIDE EXISTING CHW PIPES. AIR VENTS SHALL BE PROVIDED FOR ALL PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.



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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	1" = 30'

Sheet Title

Site Plan

Sheet Number

M100

P2S No. 9570

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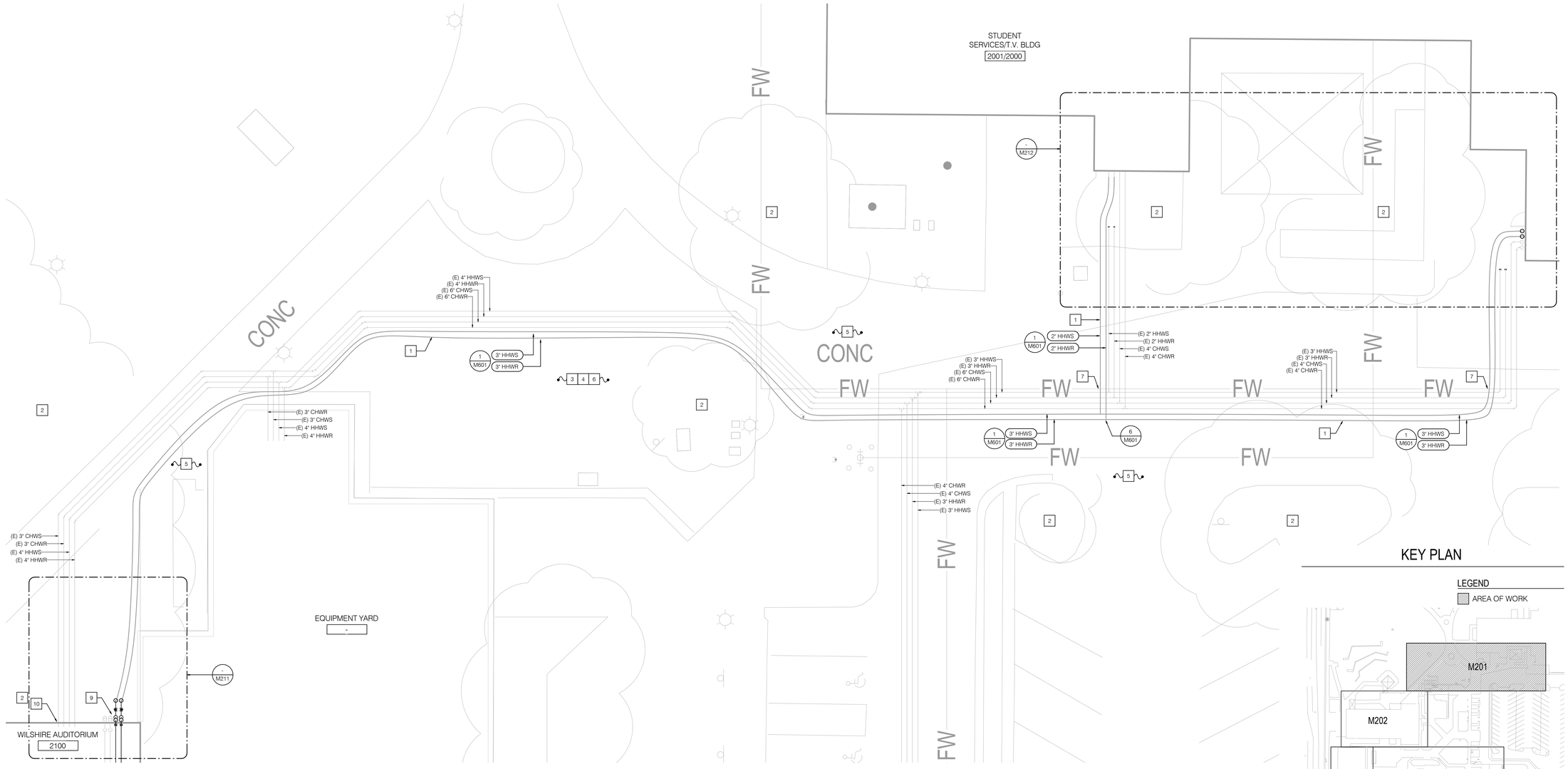
1/8/2020 5:42:29 PM

GENERAL NOTES

1. AUTOMATIC AIR VENTS SHALL BE PROVIDED FOR ALL DIRECT BURIED PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.

NOTES

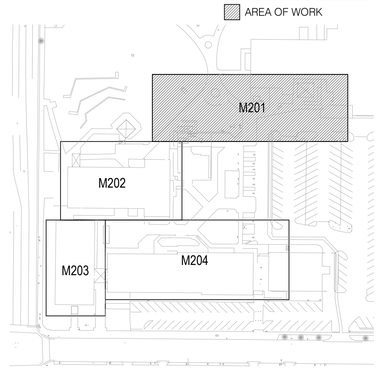
1. PEX PIPE ROUTING SHOWN ON PLANS IS APPROXIMATE. PEX IS A FLEXIBLE PIPE AND ACTUAL ROUTING SHALL BE DETERMINED IN FIELD. CONTRACTOR SHALL SUBMIT PROPOSED ROUTING TO IOR AND CAMPUS FOR APPROVAL. PIPE SHALL BE BURIED AT A MINIMUM OF 3 FEET DEEP.
2. EXISTING TREE SHALL BE PROTECTED IN PLACE.
3. ALL IRRIGATION REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED USING CAMPUS STANDARD IRRIGATION STANDARDS.
4. ALL LANDSCAPING IMPACTED BY UTILITY WORK WILL BE REPLACED IN KIND. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE CAMPUS STAFF ON EXISTING PLANT, SHRUB, AND TURN TYPE.
5. ALL HARDSCAPING FOR SIDEWALKS, PARKING LOTS, AND CURBS WHICH ARE IMPACTED BY UTILITY WORK WILL BE REPLACED IN KIND.
6. ALL EXISTING PLANTING NOT IMPACTED BY UTILITY WORK TO BE MAINTAINED IN GOOD GROWING CONDITION. CONTRACTOR SHALL MAINTAIN IRRIGATION TO REMAINING PLANTING DURING THE ENTIRE COURSE OF CONSTRUCTION.
7. EXISTING FIRE WATER PIPE 3'-0" DEEP. ROUTE PEX PIPING BELOW EXISTING FIRE PIPING WHEN CROSSING.



KEY PLAN

LEGEND

AREA OF WORK



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Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
No. 17280
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

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Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

Enlarged Site Plan

Sheet Number

M201

P2S No. 9570

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1/8/2020 5:45:31 PM

GENERAL NOTES

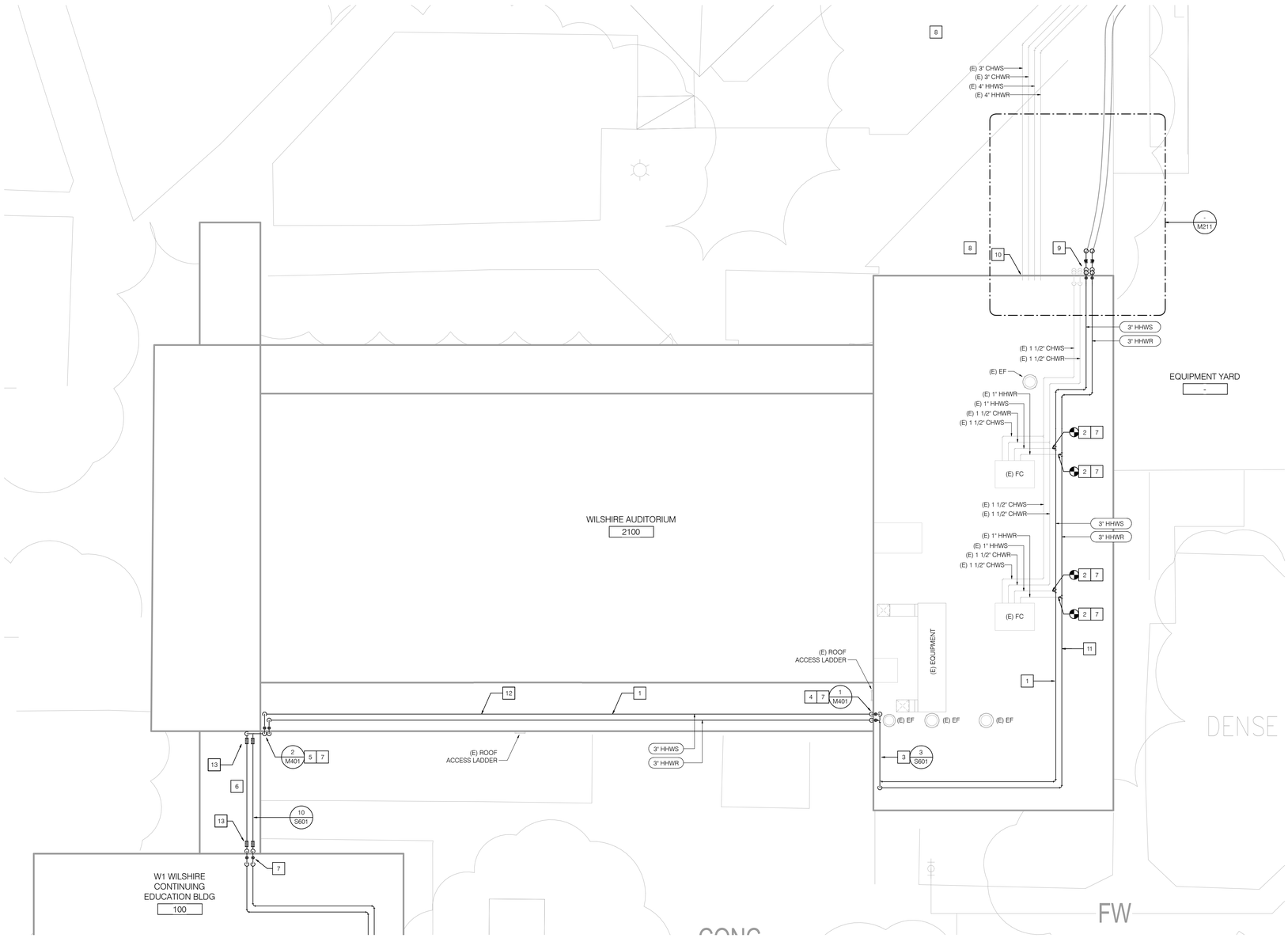
1. AUTOMATIC AIR VENTS SHALL BE PROVIDED FOR ALL DIRECT BURIED PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.

2. FOR PIPE SUPPORT INFORMATION, SEE THE FOLLOWING DETAILS:
   - A/S601 - TYPICAL PIPE SUPPORT AND SPACING
   - 2/S601 - TYPICAL PIPE SUPPORT STAND
   - 4/S601 - BASE CONNECTIONS FOR PIPE SUPPORT STANDS
   - 5/S601 - WOOD SLEEPER ON WOOD ROOF
   - 6/S601 - WOOD SLEEPER ON CONCRETE ROOF
   - 7/S601 - TYPICAL PIPE SUPPORT AT WOOD STUD WALL
   - 8/S601 - TYPICAL PIPE SUPPORT AT CONCRETE WALL

3. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WALL AND ROOF CONSTRUCTION TYPES AND APPLYING THE CORRECT STRUCTURAL ATTACHMENT AND SUPPORT DETAILS.

NOTES

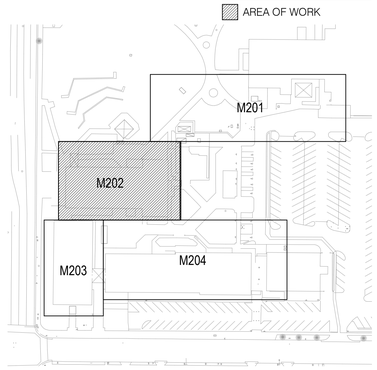
1. PROVIDE ROOF MOUNTED STEEL PIPING AS SHOWN.
2. RECONNECT EXISTING 1 INCH HHWS/R BRANCH PIPE TO 3 INCH MAIN PIPE.
3. STACK HHWR PIPE ABOVE HHWS PIPE AND ROUTE PIPES BETWEEN ROOF PARAPET AND EXISTING EXHAUST FAN. SEE ISOMETRIC VIEW 1/M401.
4. ROUTE HHWS/R PIPES DOWN HIGH EAST ROOF TO LOW SOUTH ROOF. SEE ISOMETRIC VIEW 1/M401.
5. ROUTE HHWS/R PIPES OVER PARAPET AND ALONG SOUTH BUILDING WALL TO THE BUILDING AWNING. PROVIDE STAINLESS STEEL HOUSING TO PREVENT VISIBILITY OF WALL MOUNTED PIPE TO PEDESTRIANS. COVER OPEN ENDS OF HOUSING WITH BIRD SCREEN. ATTACH USING 3/4" SS LAG SCREWS. PROVIDE GROUT AT SEAMS BETWEEN HOUSING AND BUILDING EXTERIOR. PROVIDE FINISH AND COLOR TO MATCH THAT OF THE BUILDING.
6. ROUTE 3" HHWS/R PIPES ACROSS EXISTING AWNING. SEE AWNING ISOMETRIC 2/M401.
7. PROVIDE AIR VENTS ON HHWS/R PIPES AT HIGH POINT IN PIPING AT THE INDICATED LOCATIONS.
8. EXISTING TREE SHALL BE PROTECTED IN PLACE.
9. HHW PIPES AND EXISTING CHW PIPES FROM ROOFTOP DOWN TO GRADE. HHW PIPES TEE OFF NORTH TO BUILDING 200/2000 AND SOUTH TO PENETRATE THROUGH EXTERIOR WALL TO WILSHIRE AUDITORIUM BASEMENT STORAGE ROOM. SEE SHEET M205.
10. EXISTING HHW AND EXISTING CHW PIPES PENETRATE THROUGH EXTERIOR WALL TO WILSHIRE AUDITORIUM BASEMENT STORAGE ROOM. SEE SHEET M205.
11. **SEE STRUCTURAL SUPPORT DETAIL 5/S601. SEE STRUCTURAL SUPPORT DETAIL 2/S601 FOR TALLER SUPPORT STAND WHERE APPLICABLE. REFER TO STRUCTURAL DETAIL A/S601 FOR PIPE SUPPORT SPACING.**
12. **SEE STRUCTURAL SUPPORT DETAIL 6/S601. SEE STRUCTURAL SUPPORT DETAIL 2/S601 FOR TALLER SUPPORT STAND WHERE APPLICABLE. REFER TO STRUCTURAL DETAIL A/S601 FOR PIPE SUPPORT SPACING.**
13. **PROVIDE FLEXIBLE BRAIDED HOSE BETWEEN ELBOW AND STRUCTURAL SUPPORT TO PROVIDE STRUCTURAL ISOLATION.**



KEY PLAN

LEGEND

AREA OF WORK



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IDENTIFICATION STAMP
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APP. 04-118731 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01.09.20

P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
No. M 17 Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

Enlarged Site Plan

Sheet Number

M202

P2S No. 9570

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GENERAL NOTES

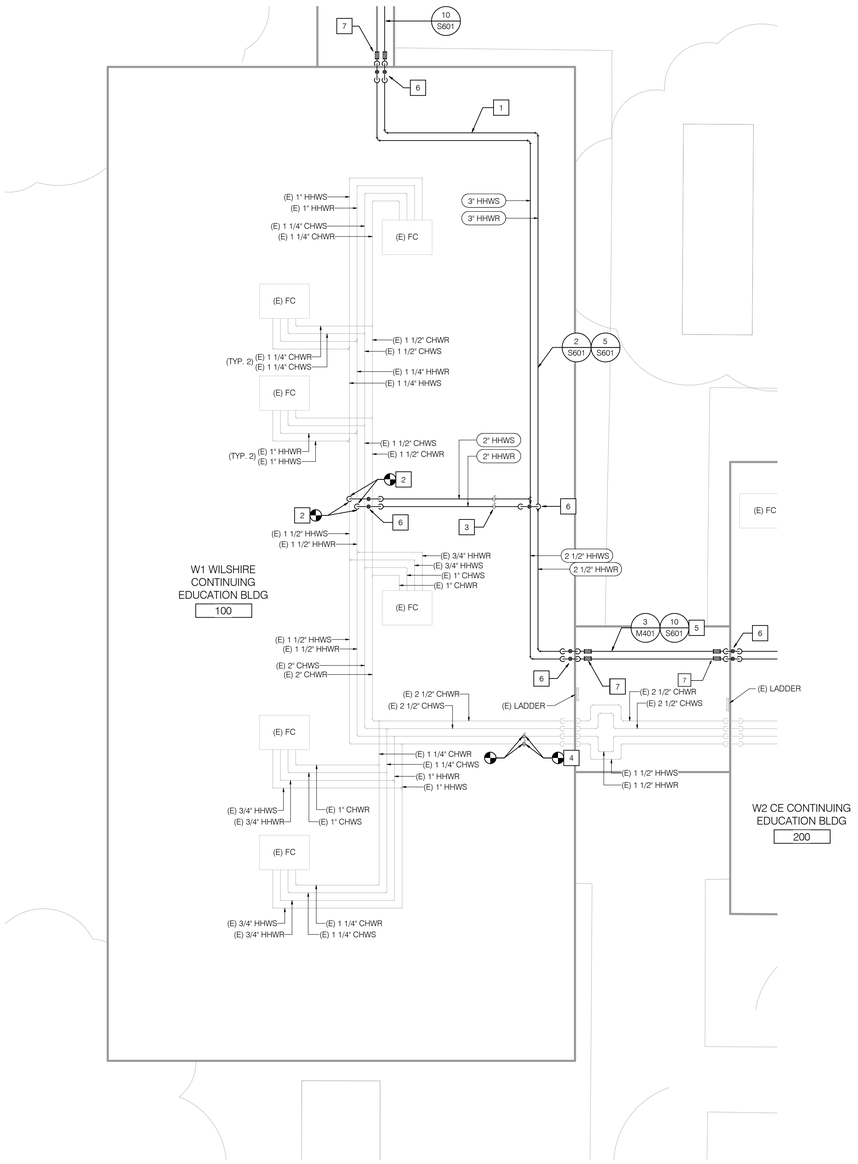
1. AUTOMATIC AIR VENTS SHALL BE PROVIDED FOR ALL DIRECT BURIED PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.

2. FOR PIPE SUPPORT INFORMATION, SEE THE FOLLOWING DETAILS:
   - A/S601 - TYPICAL PIPE SUPPORT AND SPACING
   - 2/S601 - TYPICAL PIPE SUPPORT STAND
   - 4/S601 - BASE CONNECTIONS FOR PIPE SUPPORT STANDS
   - 5/S601 - WOOD SLEEPER ON WOOD ROOF
   - 6/S601 - WOOD SLEEPER ON CONCRETE ROOF
   - 7/S601 - TYPICAL PIPE SUPPORT AT WOOD STUD WALL
   - 8/S601 - TYPICAL PIPE SUPPORT AT CONCRETE WALL

3. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WALL AND ROOF CONSTRUCTION TYPES AND APPLYING THE CORRECT STRUCTURAL ATTACHMENT AND SUPPORT DETAILS.

NOTES

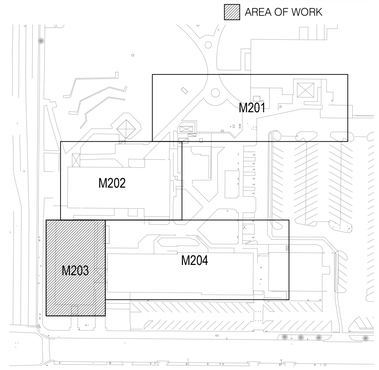
1. PROVIDE ROOF MOUNTED STEEL PIPING AS SHOWN.
2. CUT IN AND PROVIDE 2 INCH TEE AND REDUCERS TO CONNECT TO EXISTING 1-1/2 INCH HHWS AND HHWR PIPES.
3. PROVIDE 2 INCH BUTTERFLY VALVES ON HHWS/R PIPES AS INDICATED FOR ISOLATION OF BUILDING 100.
4. CUT IN AND PROVIDE 1-1/2 INCH FULL PORT BALL VALVE ON HHWS/R PIPES AS INDICATED FOR ISOLATION OF BUILDING 100 OR BUILDING 200.
5. ROUTE 3" HHWS/R PIPING ACROSS EXISTING BUILDING AWNING.
6. PROVIDE AIR VENTS ON HHWS/R PIPES AT HIGH POINT IN PIPING AT THE INDICATED LOCATIONS.
7. PROVIDE FLEXIBLE BRAIDED HOSE BETWEEN ELBOW AND STRUCTURAL SUPPORT TO PROVIDE STRUCTURAL ISOLATION.



KEY PLAN

LEGEND

AREA OF WORK



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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
Date	January 8, 2020
Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

Enlarged Site Plan

Sheet Number

M203

P2S No. 9570

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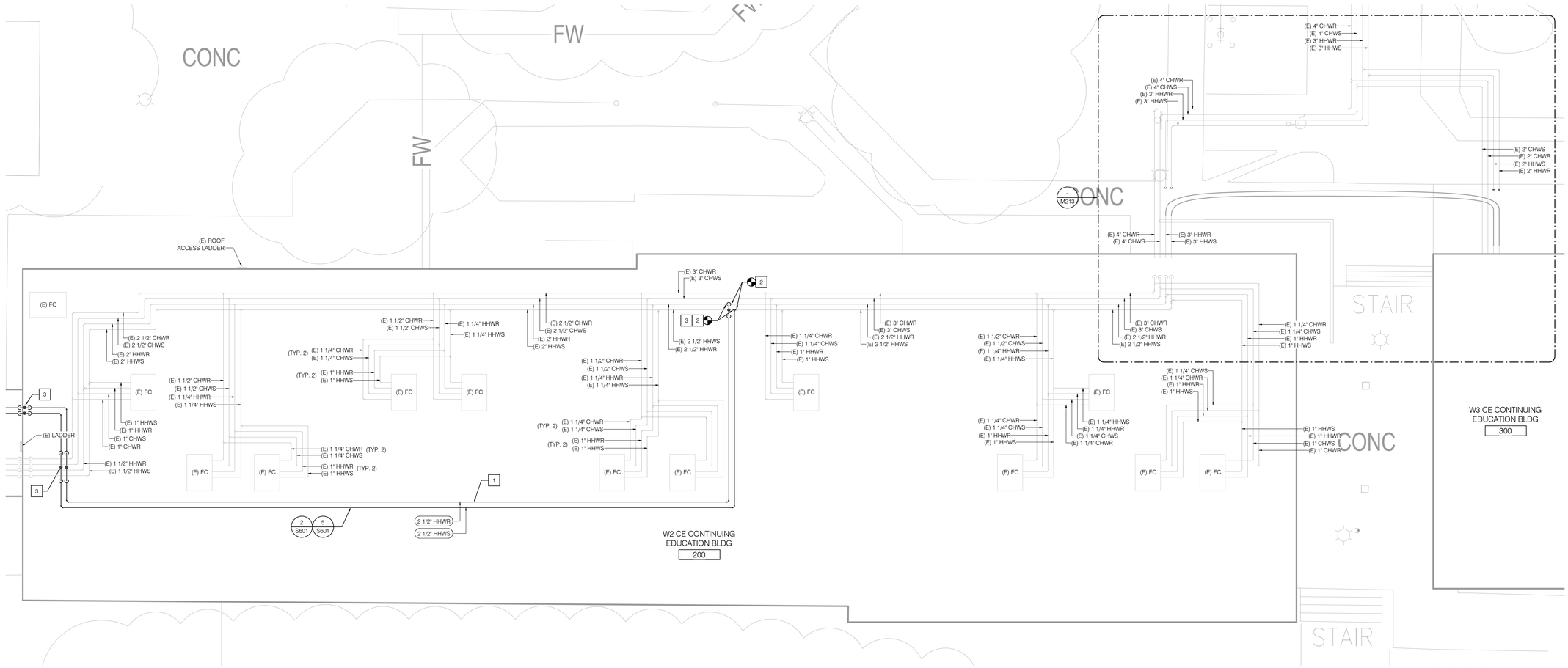
GENERAL NOTES

1. AUTOMATIC AIR VENTS SHALL BE PROVIDED FOR ALL DIRECT BURIED PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.
2. FOR PIPE SUPPORT INFORMATION, SEE THE FOLLOWING DETAILS:
   - A/S601 - TYPICAL PIPE SUPPORT AND SPACING
   - 2/S601 - TYPICAL PIPE SUPPORT STAND
   - 4/S601 - BASE CONNECTIONS FOR PIPE SUPPORT STANDS
   - 5/S601 - WOOD SLEEPER ON WOOD ROOF
   - 6/S601 - WOOD SLEEPER ON CONCRETE ROOF
   - 7/S601 - TYPICAL PIPE SUPPORT AT WOOD STUD WALL
   - 8/S601 - TYPICAL PIPE SUPPORT AT CONCRETE WALL
3. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WALL AND ROOF CONSTRUCTION TYPES AND APPLYING THE CORRECT STRUCTURAL ATTACHMENT AND SUPPORT DETAILS.

NOTES

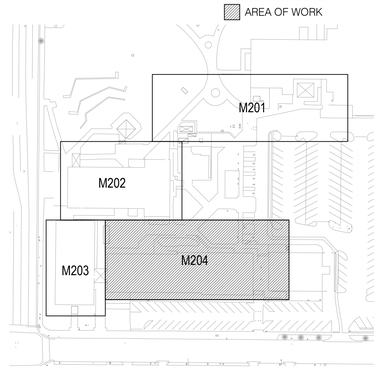
1. PROVIDE ROOF MOUNTED STEEL PIPING AS SHOWN.
2. CONNECT 2-1/2 INCH HHWS AND HHWR PIPE TO EXISTING 2-1/2 INCH HHWS AND HHWR PIPES.
3. PROVIDE AIR VENTS ON HHWS/R PIPES AT HIGH POINT IN PIPING AT THE INDICATED LOCATIONS.



KEY PLAN

LEGEND

AREA OF WORK



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P2S ENG

Long Beach | Los Angeles
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Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
No. M 18463
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
Date	January 8, 2020
Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

Enlarged Site Plan

Sheet Number

M204

P2S No. 9570

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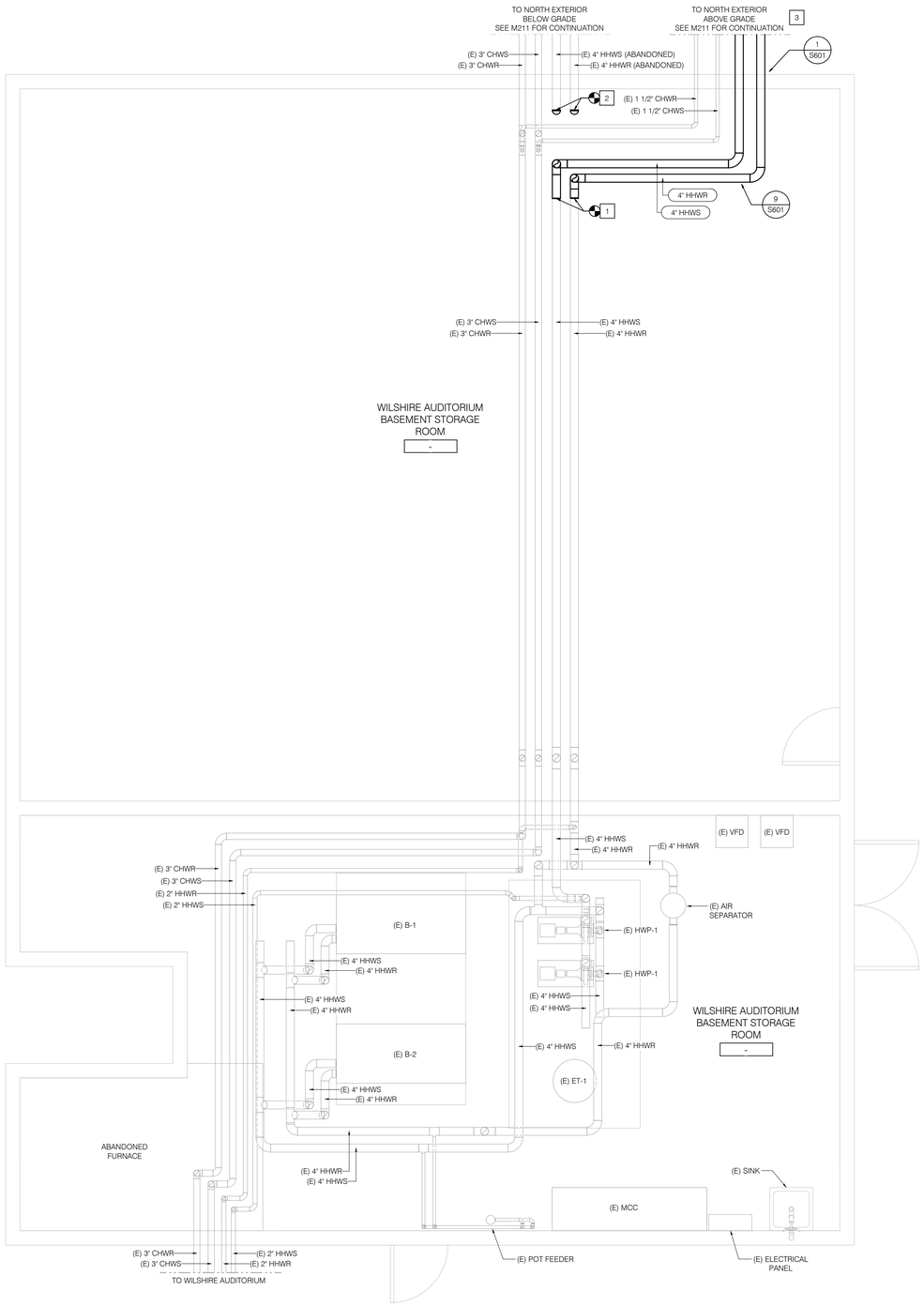
NOTES

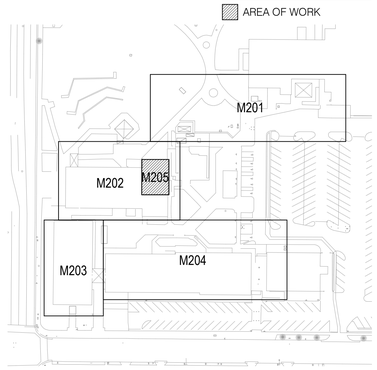
1. CONNECT 4" HHWS/R PIPES TO EXISTING 4" HHWS/R PIPES. REMOVE EXISTING PIPE SUPPORTS AND REPLACE. SEE STRUCTURAL DETAILS ON SHEET S601.
2. CAP (E) HHWS/R PIPES AND ABANDON IN PLACE. REFER TO PIPE SIZES INDICATED ON THE PLANS.
3. 3" HHWS/R PIPING INSTALLATION CONTINUES ON NORTH EXTERIOR OF WILSHIRE AUDITORIUM. SEE SHEET M211 FOR CONTINUATION.



KEY PLAN

LEGEND

AREA OF WORK



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San Diego San Jose

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Consultant

Project Title

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Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

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Date	January 8, 2020
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Sheet Title

Wilshire Auditorium Building 2100 - Basement

Sheet Number

M205

P2S No. 9570

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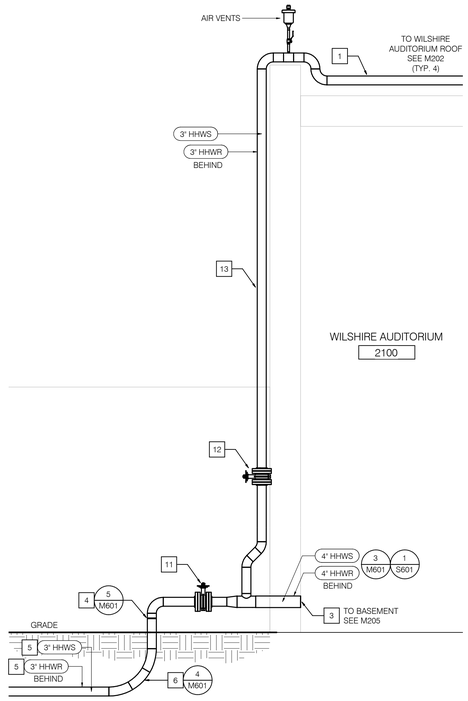
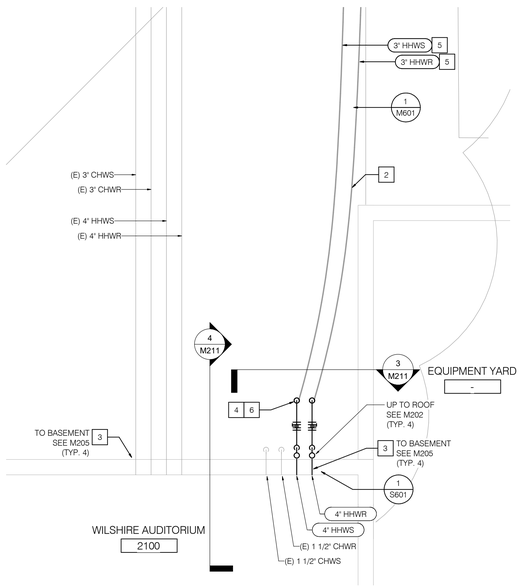


4 BUILDING 2100 CONNECTION - WEST SECTION

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

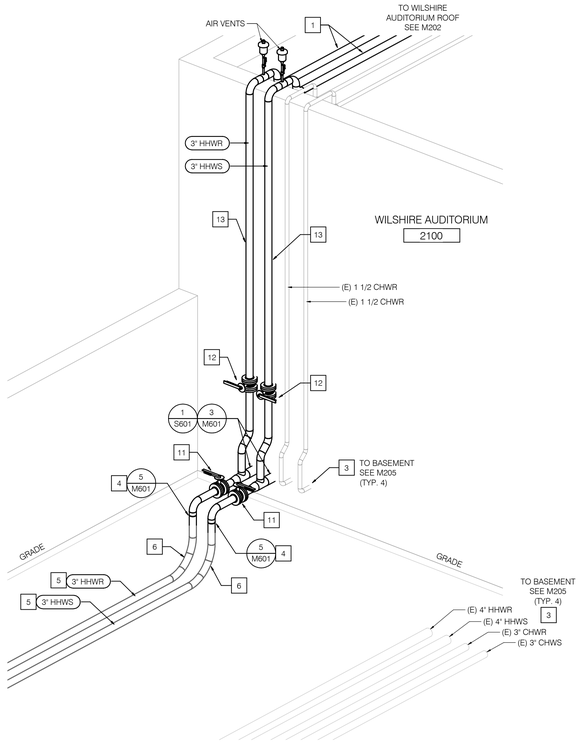


2 BUILDING 2100 CONNECTION PLAN - GROUND LEVEL

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

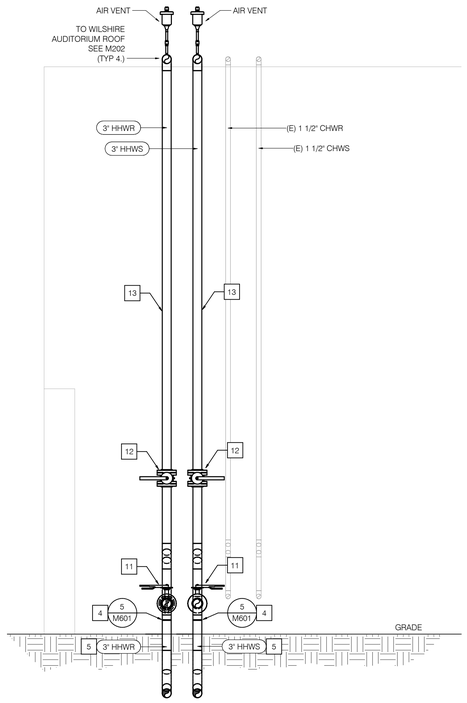
NOTES

1. PROVIDE ROOF MOUNTED STEEL PIPING AS SHOWN.
2. PROVIDE PREINSULATED DIRECT BURIED PEX PIPING AS SHOWN. PROVIDE ROUTING AS SHOWN TO FOLLOW PLAN AND ELEVATION ROUTING ALONGSIDE EXISTING CHW PIPES. AUTOMATIC AIR VENTS SHALL BE PROVIDED FOR ALL DIRECT BURIED PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.
3. EXISTING PIPES PENETRATE EXTERIOR WALL AND CONTINUE INTO WILSHIRE AUDITORIUM BASEMENT STORAGE ROOM. FOR CONTINUATION, SEE M205. EXPAND CORES IN CONCRETE WALL TO ACCOMMODATE LARGER HHWS/R PIPE. SEE 1/S601 FOR STRUCTURAL ELEVATION.
4. TRANSITION HHWS/R PIPE FROM STEEL TO PEX PRIOR TO PIPE PENETRATION INTO THE GROUND. SEE DETAIL 5/M601.
5. PEX PIPE ROUTING SHOWN ON PLANS IS APPROXIMATE. PEX IS A FLEXIBLE PIPE AND ACTUAL ROUTING SHALL BE DETERMINED IN FIELD. CONTRACTOR SHALL SUBMIT PROPOSED ROUTING TO IOR AND CAMPUS FOR APPROVAL. PIPE SHALL BE BURIED AT A MINIMUM OF 3 FEET DEEP. AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS PER DETAIL 2/M602.
6. PEX PIPING ELBOWS TO BE LAID AT NO MORE THAN A MINIMUM BEND RADIUS OF 4.0 FEET.
7. ALL IRRIGATION REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED USING CAMPUS STANDARD IRRIGATION STANDARDS.
8. ALL LANDSCAPING IMPACTED BY UTILITY WORK WILL BE REPLACED IN KIND. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE CAMPUS STAFF ON EXISTING PLANT, SHRUB, AND TURN TYPE.
9. ALL HARDSCAPING FOR SIDEWALKS, PARKING LOTS, AND CURBS WHICH ARE IMPACTED BY UTILITY WORK WILL BE REPLACED IN KIND.
10. ALL EXISTING PLANTING NOT IMPACTED BY UTILITY WORK TO BE MAINTAINED IN GOOD GROWING CONDITION. CONTRACTOR SHALL MAINTAIN IRRIGATION TO REMAINING PLANTING DURING THE ENTIRE COURSE OF CONSTRUCTION.
11. PROVIDE 3 INCH BUTTERFLY VALVE FOR ISOLATION OF THE NORTH HHW LOOP.
12. PROVIDE 3 INCH BUTTERFLY VALVE FOR ISOLATION OF THE SOUTH HHW LOOP. **MAX HEIGHT OF 4 FEET ABOVE**
13. SEE STRUCTURAL DETAIL 8/S601 FOR PIPE SUPPORT AT CONCRETE WALL.
14. EXISTING TREE SHALL BE PROTECTED IN PLACE.



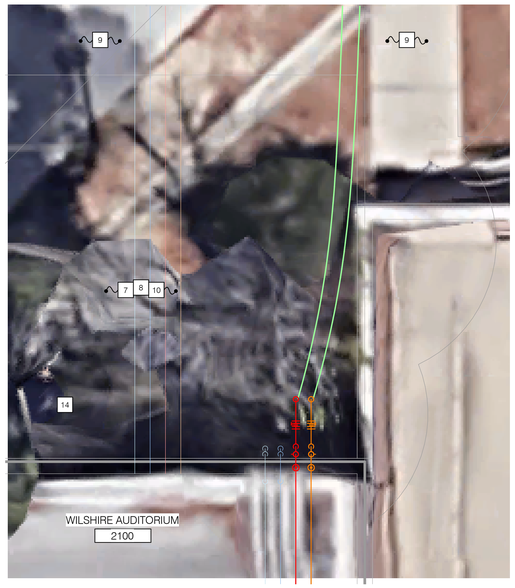
5 BUILDING 2100 CONNECTION PLAN ISOMETRIC

SCALE: NONE



3 BUILDING 2100 CONNECTION - NORTH SECTION

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



1 BUILDING 2100 SURFACE FEATURE PLAN

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

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Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
No. 20000
Exp: 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	As Noted

Sheet Title

Connection Plan Building 2100

Sheet Number

M211

P2S No. 9570

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GENERAL NOTES

1. AUTOMATIC AIR VENTS SHALL BE PROVIDED FOR ALL DIRECT BURIED PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.

NOTES

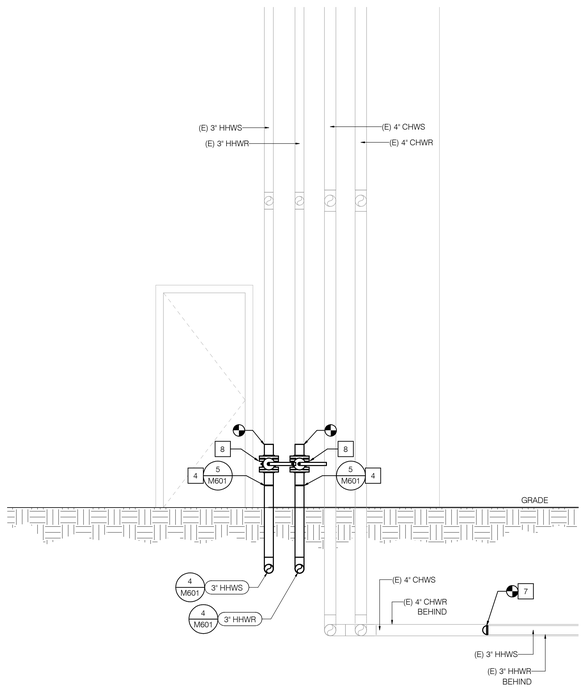
1. PROVIDE PREINSULATED DIRECT BURIED PEX PIPING AS SHOWN. PROVIDE ROUTING AS SHOWN TO FOLLOW PLAN AND ELEVATION ROUTING ALONGSIDE EXISTING CHW PIPES.
2. PEX PIPING ELBOWS TO BE LAID AT NO MORE THAN A MINIMUM BEND RADIUS OF 4.0 FEET.
3. PEX PIPE ROUTING SHOWN ON PLANS IS APPROXIMATE. PEX IS A FLEXIBLE PIPE AND ACTUAL ROUTING SHALL BE DETERMINED IN FIELD. CONTRACTOR SHALL SUBMIT PROPOSED ROUTING TO IOR AND UNIVERSITY FOR APPROVAL. PIPE SHALL BE BURIED AT A MINIMUM OF 3 FEET DEEP.
4. CONNECT 3" HHWS/R PEX PIPE TO EXISTING 3" HHWS/R STEEL PIPE ABOVE GRADE. SEE DETAIL 5/M601.
5. DIRECT BURIED CONNECTION. CONNECT 2" HHWS/R PEX PIPE TO EXISTING 2" HHWS/R STEEL PIPE SEE DETAIL 5/M601.
6. ALL HARDSCAPING FOR SIDEWALKS, PARKING LOTS, AND CURBS WHICH ARE IMPACTED BY UTILITY WORK WILL BE REPLACED IN KIND. SEE M301 FOR PAVING FINISH INFORMATION.
7. CAP (E) HHWS/R PIPES AND ABANDON IN PLACE. REFER TO PIPE SIZES INDICATED ON THE PLANS.
8. PROVIDE 3 INCH BUTTERFLY VALVE ON STEEL SEGMENT BETWEEN PEX PIPING TRANSITION AND STEEL POINT OF CONNECTION FOR THE ISOLATION OF BUILDING 2001/2000 EAST WING.
9. EXISTING SHUTOFF VALVES FOR BUILDING 2001/2000 WEST WING LOCATED ON EXISTING RISERS IN STORAGE ROOM.
10. EXISTING TREE SHALL BE PROTECTED IN PLACE.

2 BUILDING 2001/2000 CONNECTION PLAN

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

3 BUILDING 2001/2000 SURFACE FEATURE PLAN

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



1 BUILDING 2001/2000 - EAST CONNECTION

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

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Replacement Parking Lot 10

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321 East Chapman Avenue
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REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

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Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
Date	January 8, 2020
Submittal	DSA Back Check
Scale	As Noted

Sheet Title
Connection Plan Building
2001/2000

Sheet Number
M212

P2S No. 9570

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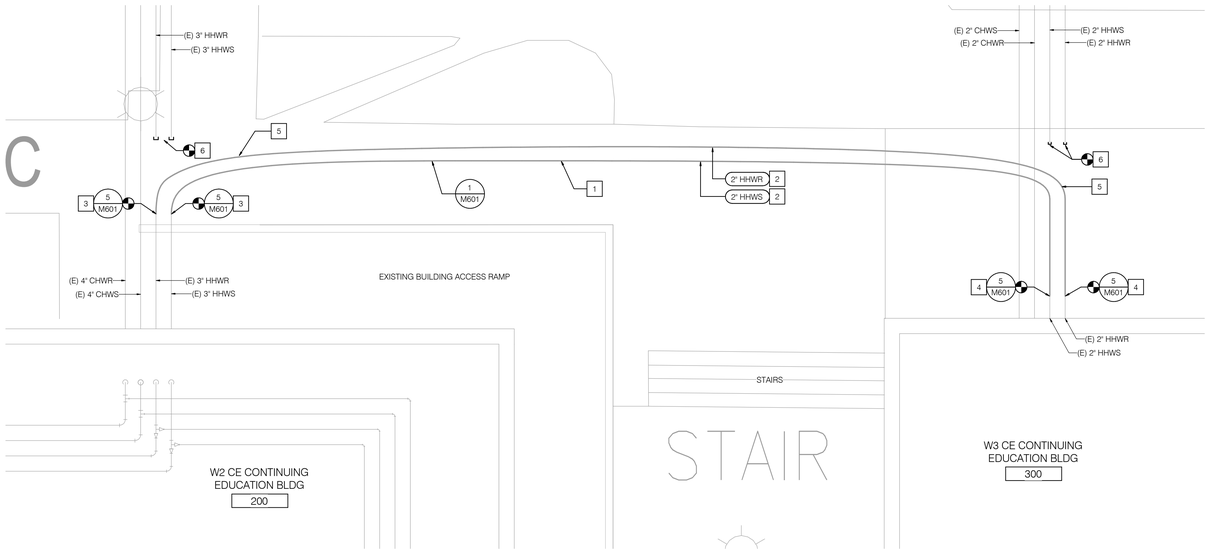

2 BUILDING 200 AND BUILDING 300 CONNECTION PLAN

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

1 BUILDING 200 AND BUILDING 300 SURFACE FEATURE PLAN

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

GENERAL NOTES

1. AUTOMATIC AIR VENTS SHALL BE PROVIDED FOR ALL DIRECT BURIED PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.

NOTES

1. PROVIDE PREINSULATED DIRECT BURIED PEX PIPING AS SHOWN. PROVIDE ROUTING AS SHOWN TO FOLLOW PLAN AND ELEVATION ROUTING ALONGSIDE EXISTING CHW PIPES. AIR VENTS SHALL BE PROVIDED FOR ALL PEX PIPING INSTALLATIONS AT ALL HIGH POINTS. SEE DETAIL 2/M602.
2. PEX PIPE ROUTING SHOWN ON PLANS IS APPROXIMATE. PEX IS A FLEXIBLE PIPE AND ACTUAL ROUTING SHALL BE DETERMINED IN FIELD. CONTRACTOR SHALL SUBMIT PROPOSED ROUTING TO IOR AND UNIVERSITY FOR APPROVAL. PIPE SHALL BE BURIED AT A MINIMUM OF 3 FEET DEEP. AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS PER DETAIL 2/M602.
3. CONNECT AND TRANSITION FROM 2" PEX HHWS/R PIPES TO EXISTING 3" STEEL HHWS/R PIPES. SEE DETAIL 5/M601.
4. CONNECT 2" PEX HHWS/R PIPES TO EXISTING 2" STEEL HHWS/R PIPES. SEE DETAIL 5/M601.
5. PEX PIPING ELBOWS TO BE LAID AT NO MORE THAN A MINIMUM BEND RADIUS OF 4.0 FEET.
6. CAP (E) HHWS/R PIPES AND ABANDON IN PLACE. REFER TO PIPE SIZES INDICATED ON THE PLANS.
7. ALL IRRIGATION REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED USING CAMPUS STANDARD IRRIGATION STANDARDS.
8. ALL LANDSCAPING IMPACTED BY UTILITY WORK WILL BE REPLACED IN KIND. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE CAMPUS STAFF ON EXISTING PLANT, SHRUB, AND TURN TYPE.
9. ALL HARDSCAPING FOR SIDEWALKS, PARKING LOTS, AND CURBS WHICH ARE IMPACTED BY UTILITY WORK WILL BE REPLACED IN KIND. SEE M302 FOR PAVING FINISH INFORMATION.
10. ALL EXISTING PLANTING NOT IMPACTED BY UTILITY WORK TO BE MAINTAINED IN GOOD GROWING CONDITION. CONTRACTOR SHALL MAINTAIN IRRIGATION TO REMAINING PLANTING DURING THE ENTIRE COURSE OF CONSTRUCTION.

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SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
Date	January 8, 2020
Submittal	DSA Back Check
Scale	1/4" = 1'-0"

Sheet Title
Connection Plan Building 200 and Building 300

Sheet Number
M213

P2S No. 9570

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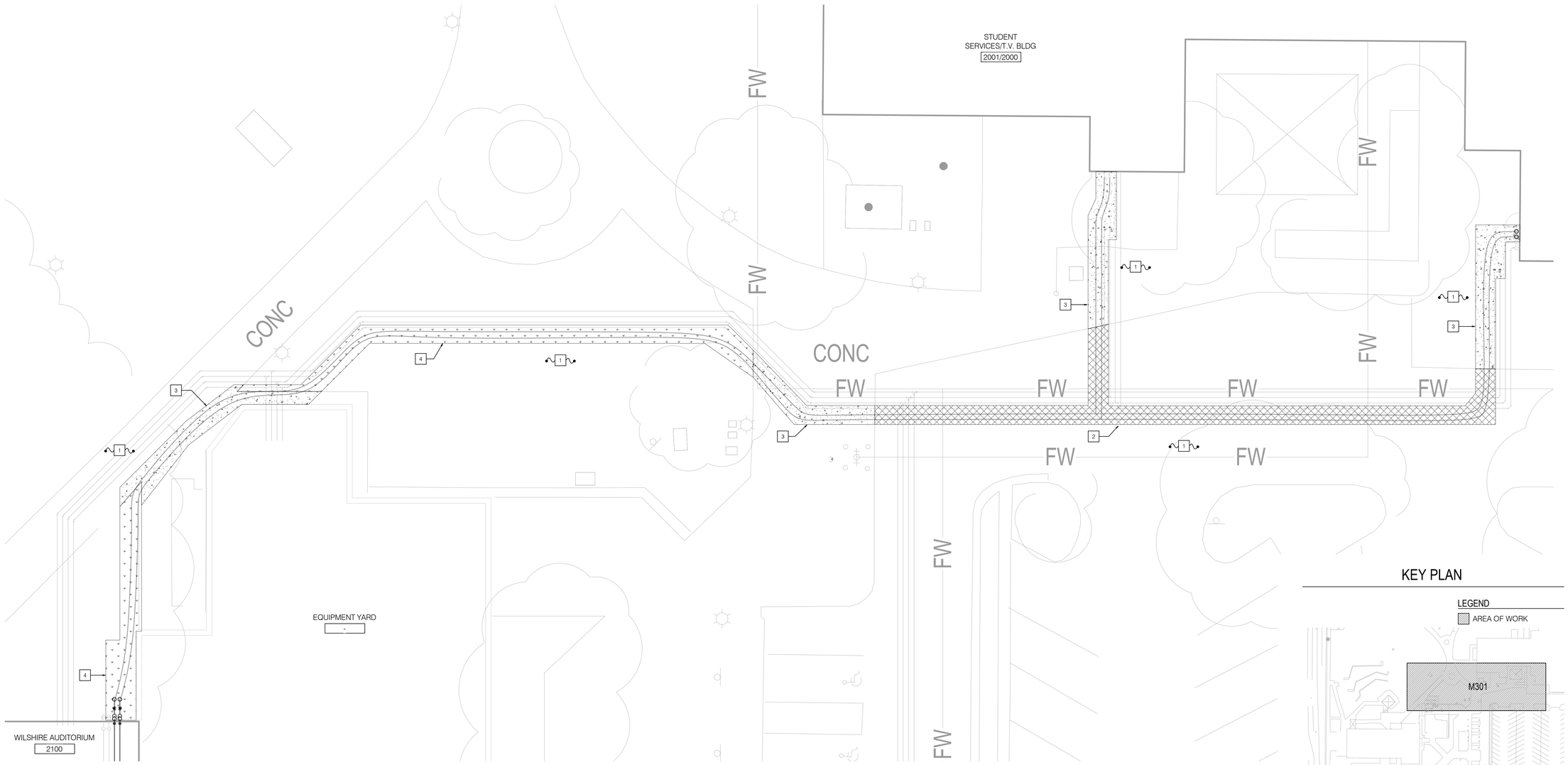
1/8/2020 5:45:47 PM

TRENCHWORK LEGEND

- CONCRETE SIDEWALK
- ASPHALT PARKING LOT
- GRASS LANDSCAPE

NOTES

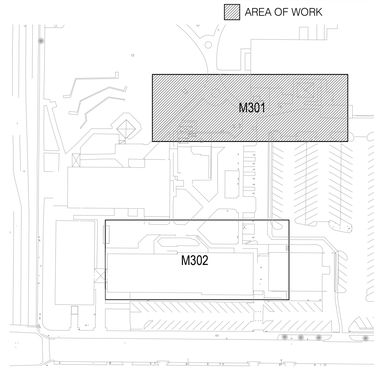
1. ALL TRENCH PATHS SHALL BE TRENCHED PER 1/M601.
2. GRIND & OVERLAY ASPHALT PAVEMENT 2" MINIMUM PER DETAIL 4/M602. MATCH EXISTING FLUSH.
3. REMOVE AND REPLACE CONCRETE PER DETAIL 3/M602 AND MATCH EXISTING FLUSH.
4. REMOVE AND REPLACE EXISTING LAWN WITH SOD. RESTORE IRRIGATION TO EXISTING CONDITION AND TO SATISFACTION OF CAMPUS REPRESENTATIVE.



KEY PLAN

LEGEND

AREA OF WORK



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01.09.20

P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
No. C 44351
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

North Trench Repair and Paving Plan

Sheet Number

M301

P2S No. 9570

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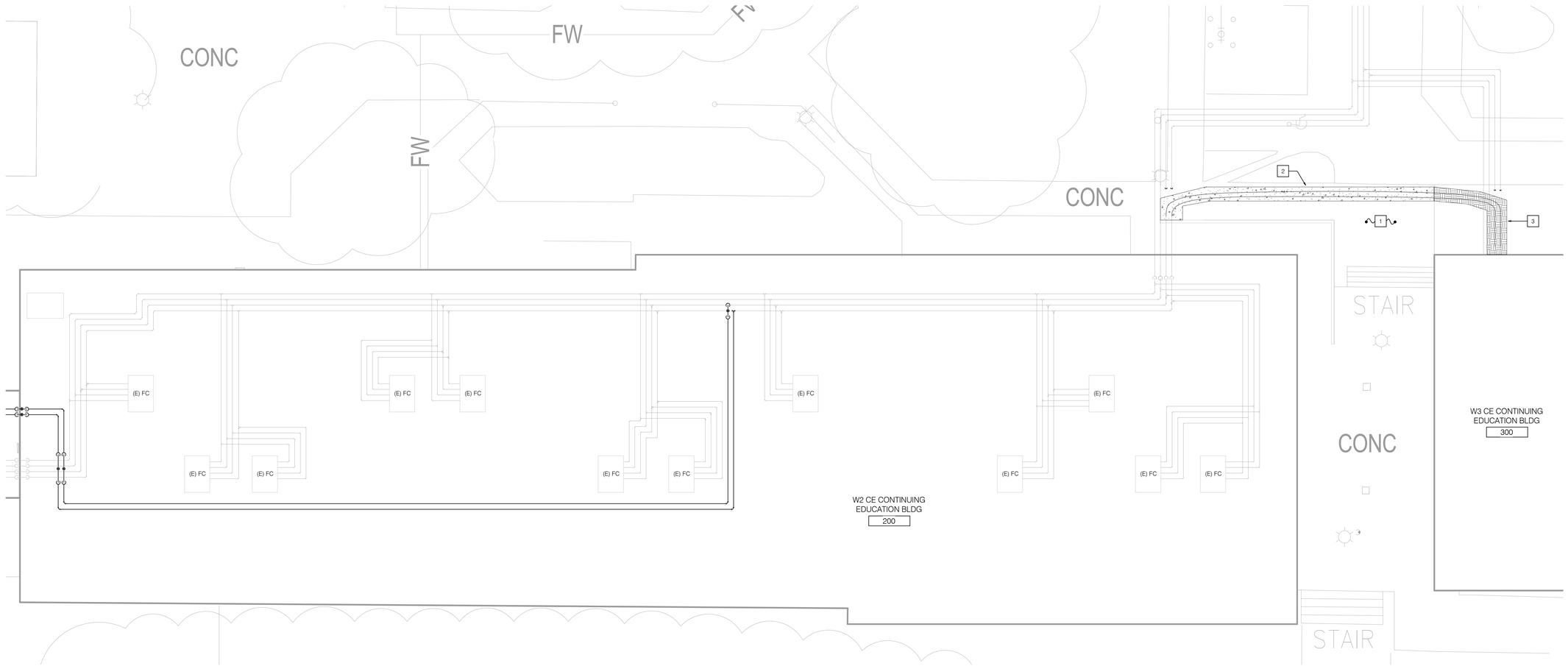
1/8/2020 9:45:49 PM

TRENCHWORK LEGEND

- CONCRETE SIDEWALK
- PLANTED LANDSCAPE

NOTES

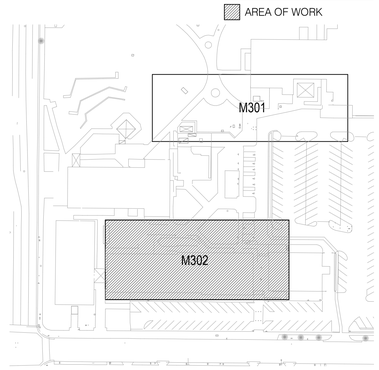
1. ALL TRENCH PATHS SHALL BE TRENCHED PER 1/M602.
2. REMOVE AND REPLACE CONCRETE PER DETAIL 3/M602 AND MATCH EXISTING FLUSH.
3. RESTORE PLANTER SPACE TO ORIGINAL CONDITIONS. RESTORE IRRIGATION TO EXISTING CONDITION AND TO SATISFACTION OF FACILITIES.



KEY PLAN

LEGEND

AREA OF WORK



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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 01.09.20

P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
No. M 22 Exp: 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
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Designed	T Mueller
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Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

South Trench Repair and Paving Plan

Sheet Number

M302

P2S No. 9570

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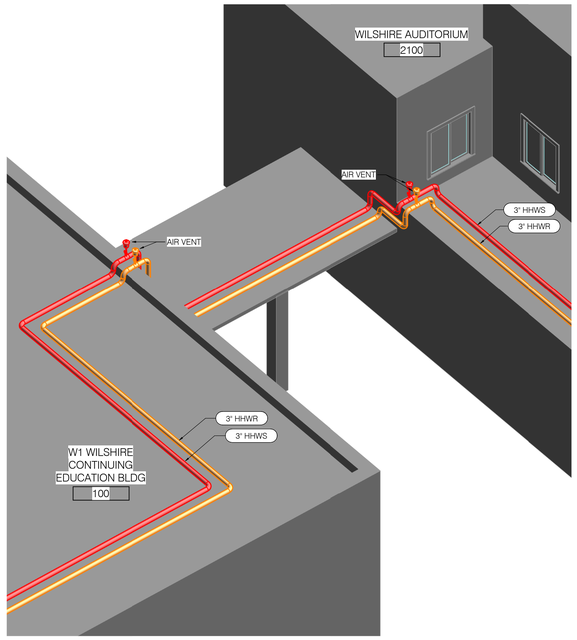
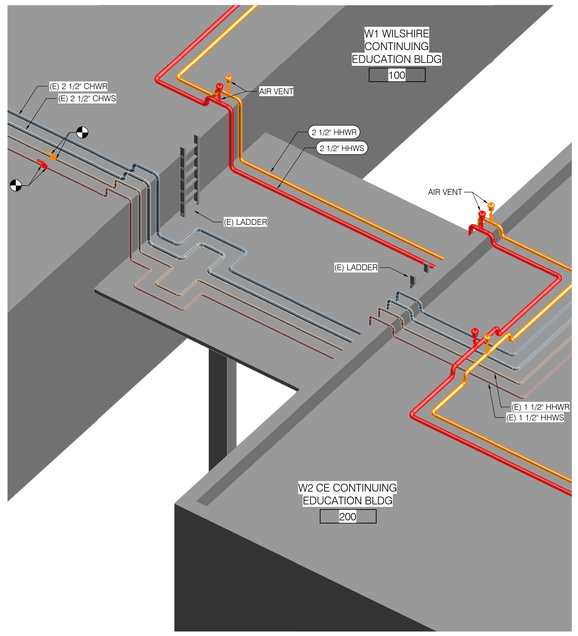


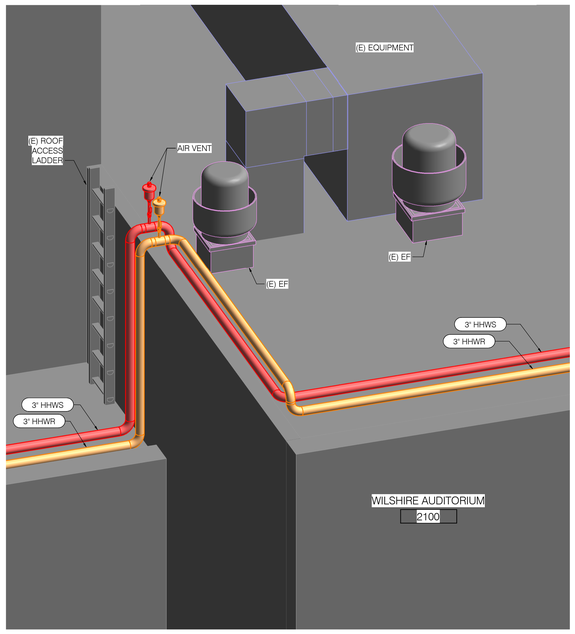
2 PIPE AWNING ISOMETRIC - BUILDING 2100 TO BUILDING 100

SCALE: NONE



3 PIPE AWNING ISOMETRIC - BUILDING 100 TO BUILDING 200

SCALE: NONE



1 PIPE RISER ISOMETRIC - BUILDING 2100 SOUTH ROOF

SCALE: NONE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01.09.20

P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	No Scale

Sheet Title

Isometric Views

Sheet Number

M401

P2S No. 9570

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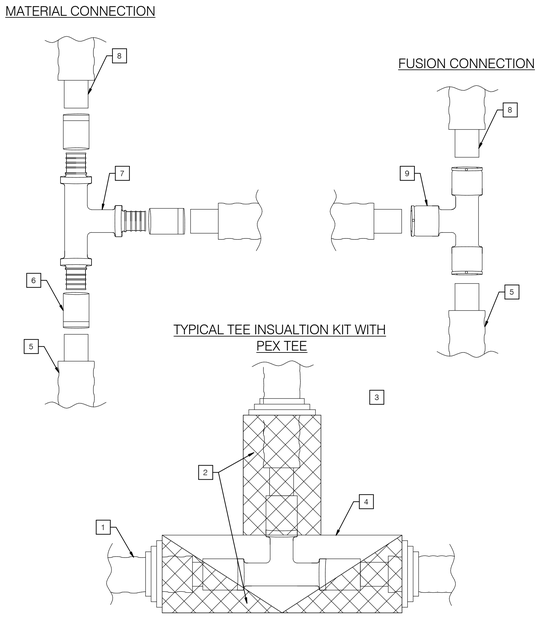
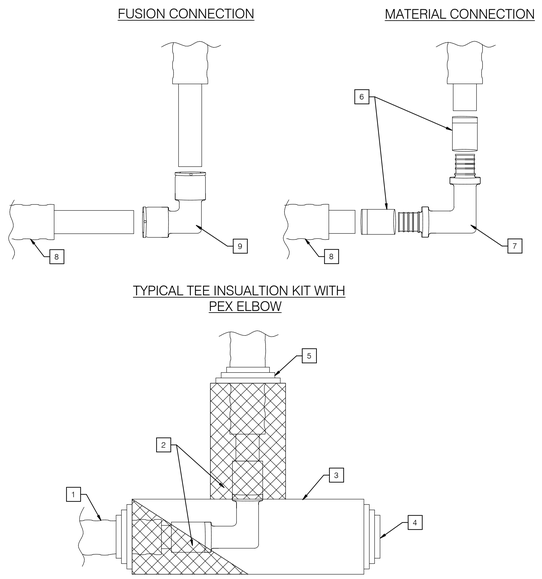


NOTES

1. PIPE JACKET
2. HEAT SHRINK SLEEVE.
3. STEPPED EDGE CUT BASED ON OUTSIDE PIPE JACKET SIZE.
4. TEE SHAPED PLASTIC SHELL.
5. PIPE JACKET. CONTRACTOR SHALL REMOVE A MINIMUM OF 7" OF INSULATION FOR FITTING ASSEMBLY.
6. SLEEVE.
7. METAL TEE.
8. 02 BARRIER PIPE.
9. PEX FUSIBLE TEE.
10. CONTRACTOR SHALL REFER TO MAUFACTURER'S INSTALLATION GUIDE FOR DETAILED INSTALLATION INSTRUCTIONS.

6 TYPICAL CONNECTIONS

NO SCALE

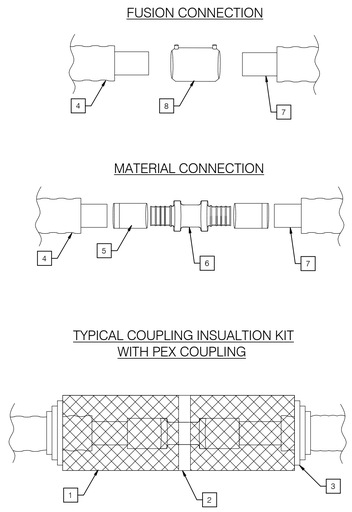


NOTES

1. OUTSIDE JACKET.
2. HEAT SHRINK SLEEVE.
3. TEE SHAPED PLASTIC SHELL.
4. STEPPED EDGE-REMAINS UNCUT.
5. CUT BASED ON OUTSIDE PIPE JACKET SIZE.
6. METAL SLEEVE.
7. METAL ELBOW
8. INSULPEX LDPE JACKET. CONTRACTOR SHALL REMOVE A MINIMUM OF 7' OF INSULATION FOR FITTING ASSEMBLY.
9. FUSIBLE PEX ELBOW.
10. CONTRACTOR SHALL REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR DETAILED INSTALLATION INSTRUCTIONS.

4 TYPICAL CONNECTIONS

NO SCALE

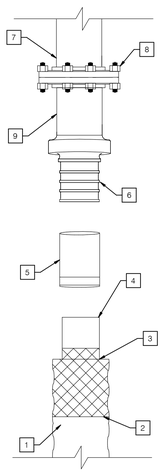


NOTES

1. HEAT SHRINK SLEEVE.
2. COUPLING SHAPED PLASTIC SHELL.
3. STEPPED EDGE CUT BASED ON OUTSIDE PIPE JACKET SIZE.
4. OUTSIDE JACKET. CONTRACTOR SHALL REMOVE A MINIMUM OF 7" OF INSULATION FOR FITTING ASSEMBLY.
5. SLEEVE.
6. METAL COUPLING.
7. 02 BARRIER PIPE.
8. FUSIBLE PEX COUPLING
9. CONTRACTOR SHALL REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR DETAILED INSTALLATION INSTRUCTIONS.

2 TYPICAL CONNECTIONS

NO SCALE

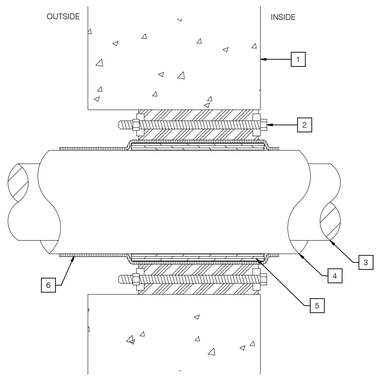


NOTES

1. PRE-INSULATED PEX PIPE
2. END CAP
3. JACKET. CONTRACTOR SHALL REMOVE A MINIMUM OF 7" OF INSULATION FOR FITTING ASSEMBLY.
4. PEX PIPE
5. PIPE COUPLING SLEEVE
6. MALE THREADED ADAPTER
7. CARBON STEEL WELDING ENDS
8. FLANGE CONNECTION
9. MALE THREADED ADAPTER

5 TYPICAL PEX TO METAL COUPLING

NO SCALE



NOTES

1. CONCRETE WALL.
2. WATER PROOF LINK SEAL ASSEMBLY
3. CARRIER PIPE
4. INSULATION AND JACKET
5. REINFORCE PIPE JACKET AS NECESSARY TO AVOID COLLAPSING OF JACKET WHEN INSTALLING LINK SEAL.
6. HDPE OR HEAT SHRINK

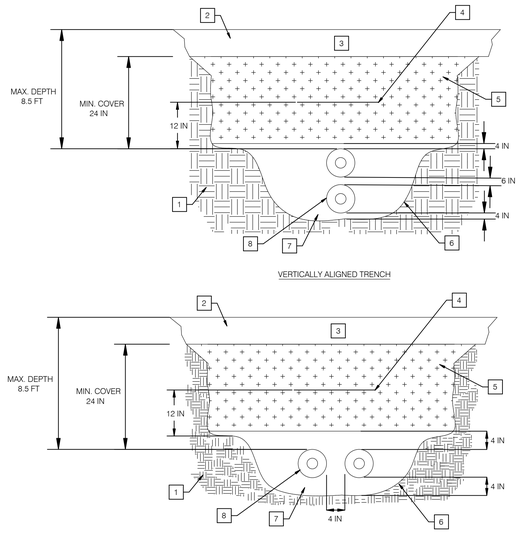
3 PIPE PENETRATION THROUGH CONCRETE WALL

NOTES

1. UNEXCAVATED EARTH
2. H20 LOAD
3. ROAD BED
4. WARNING TAPE
5. EXCAVATED MATERIAL
6. EDGE OF TRENCH
7. SAND
8. PEX PIPE
9. THIS DETAIL IS INTENDED AS A GENERAL INSTALLATION PURPOSES. VERIFY ACTUAL CONSTRUCTION OF ROAD BED WITH CIVIL PLANS.

1 TYPICAL TWO-PIPE PEX TRENCH

NOTES



NOTES

1. UNEXCAVATED EARTH
2. H20 LOAD
3. ROAD BED
4. WARNING TAPE
5. EXCAVATED MATERIAL
6. EDGE OF TRENCH
7. SAND
8. PEX PIPE
9. THIS DETAIL IS INTENDED AS A GENERAL INSTALLATION PURPOSES. VERIFY ACTUAL CONSTRUCTION OF ROAD BED WITH CIVIL PLANS.

1 TYPICAL TWO-PIPE PEX TRENCH

NO SCALE

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DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01.09.20

P2S ENG
Long Beach | Los Angeles
San Diego San Jose
p2sinc.com

Consultant

Project Title
Heating Hot Water Replacement Parking Lot 10

Owner
FULLERTON COLLEGE
321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
Date	January 8, 2020
Submittal	DSA Back Check
Scale	No Scale

Sheet Title
Details

Sheet Number
M601

P2S No. 9570

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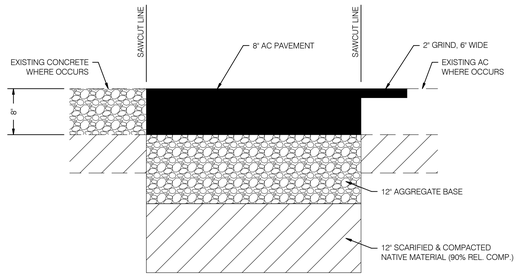
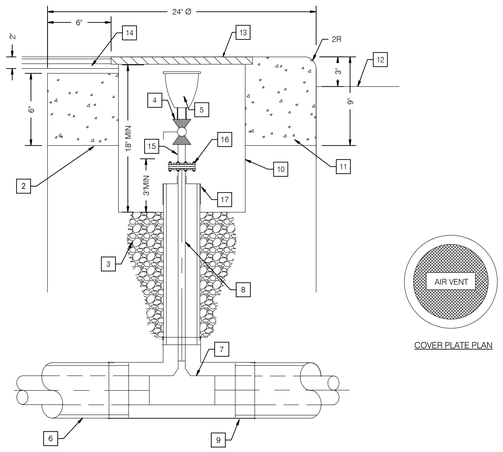


GENERAL NOTES

1. ALL PATCHES TO AC PAVEMENT SHALL COMPLY WITH 2016 CALIFORNIA BUILDING CODE, CHAPTER 11B, SECTION 302.1 AND SECTION 303.

4 AC PAVEMENT

NO SCALE

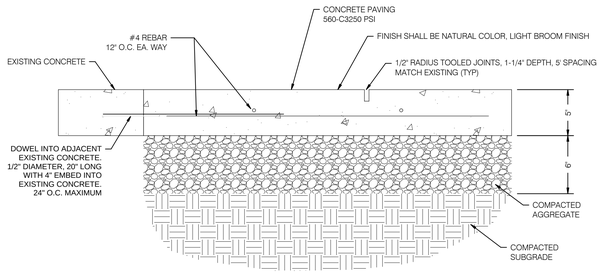


NOTES

1. WHERE RISERS ARE PROVIDED SIDE BY SIDE AND CONCRETE RINGS OVERLAP PROVIDE A SINGLE, OVAL, CONCRETE RING THAT MEETS OVERALL EXTERIOR DIMENSIONS DICTATED.
2. PROVIDE CONCRETE RING AS SHOWN. EXTEND DOWN 18" OR PROVIDE SCH 40 PVC SLEEVE TO A DEPTH OF 18"
3. PROVIDE GRAVEL BASE 12" DEEP AND 12" WIDE AROUND AIR VENT RISER FOR DRAINAGE.
4. BALL VALVE
5. AUTOMATIC AIR VENT
6. PRE-INSULATED PEX PIPING
7. REDUCING TEE
8. 1" Ø PRE INSULATED PEX AIR VENT PIPE BY PIPING MANUFACTURER
9. MANUFACTURER INSULATION KIT. SEE DETAIL 6/M601.
10. VALVE BOX
11. CLASS 520-A-2500 CONCRETE COLLAR (TYP.)
12. FINISHED GROUND SURFACE IF INSTALLED UNDER LANDSCAPE
13. 12" SOLID MANHOLE COVER
14. A.C. OR P.C.C. PAVEMENT (MATCH EXISTING). SEE 1/M602, 3/M602, AND 4/M602 AS NECESSARY.
15. 1" Ø STEEL AIR VENT PIPE
16. FLANGE CONNECTION
17. POLYETHYELNE SHRINK END SEAL.

2 DIRECT BURIED PEX AIR VENT

NO SCALE

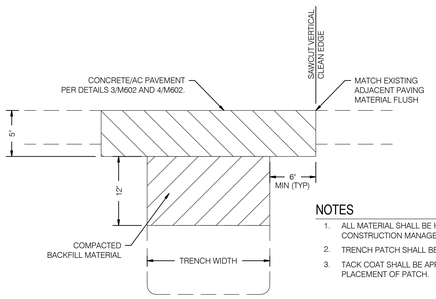


GENERAL NOTES

1. ALL PATCHES TO CONCRETE SHALL COMPLY WITH 2016 CALIFORNIA BUILDING CODE, CHAPTER 11B, SECTION 302.1 AND SECTION 303.

3 CONCRETE PAVING

NO SCALE



NOTES

1. ALL MATERIAL SHALL BE HOT PLANT MIX APPROVED BY CONSTRUCTION MANAGER.
2. TRENCH PATCH SHALL BE SAND-SEALED.
3. TACK COAT SHALL BE APPLIED TO ALL EDGES PRIOR TO PLACEMENT OF PATCH.

1 TYPICAL PAVEMENT TRENCH PATCH

NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
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P2S ENG
Long Beach | Los Angeles
San Diego San Jose
p2sinc.com

Consultant

Project Title
Heating Hot Water Replacement Parking Lot 10

Owner
FULLERTON COLLEGE
321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
Exp: 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

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Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
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Sheet Title
Details

Sheet Number
M602

P2S No. 9570

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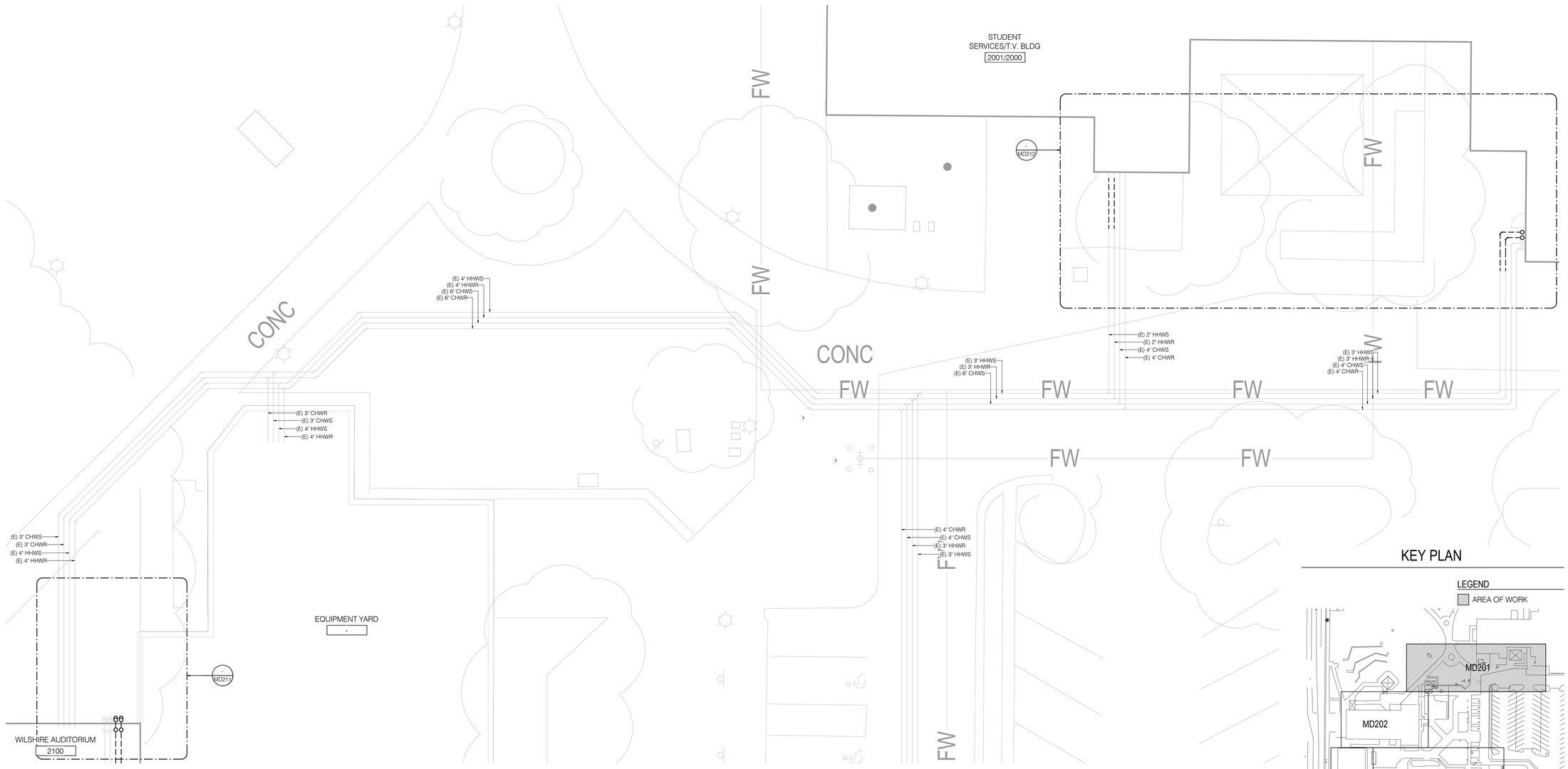
1/8/2020 5:45:58 PM

GENERAL NOTES

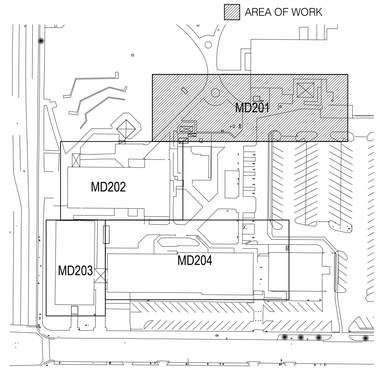
1. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.



KEY PLAN

LEGEND

AREA OF WORK



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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
No. 20000
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA

SIGNED: 1/8/2020

Revisions

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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

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Submittal	DSA Back Check
Scale	1/8" = 1'-0"

Sheet Title

Enlarged Site Plan
Demolition

Sheet Number

MD201

P2S No. 9570

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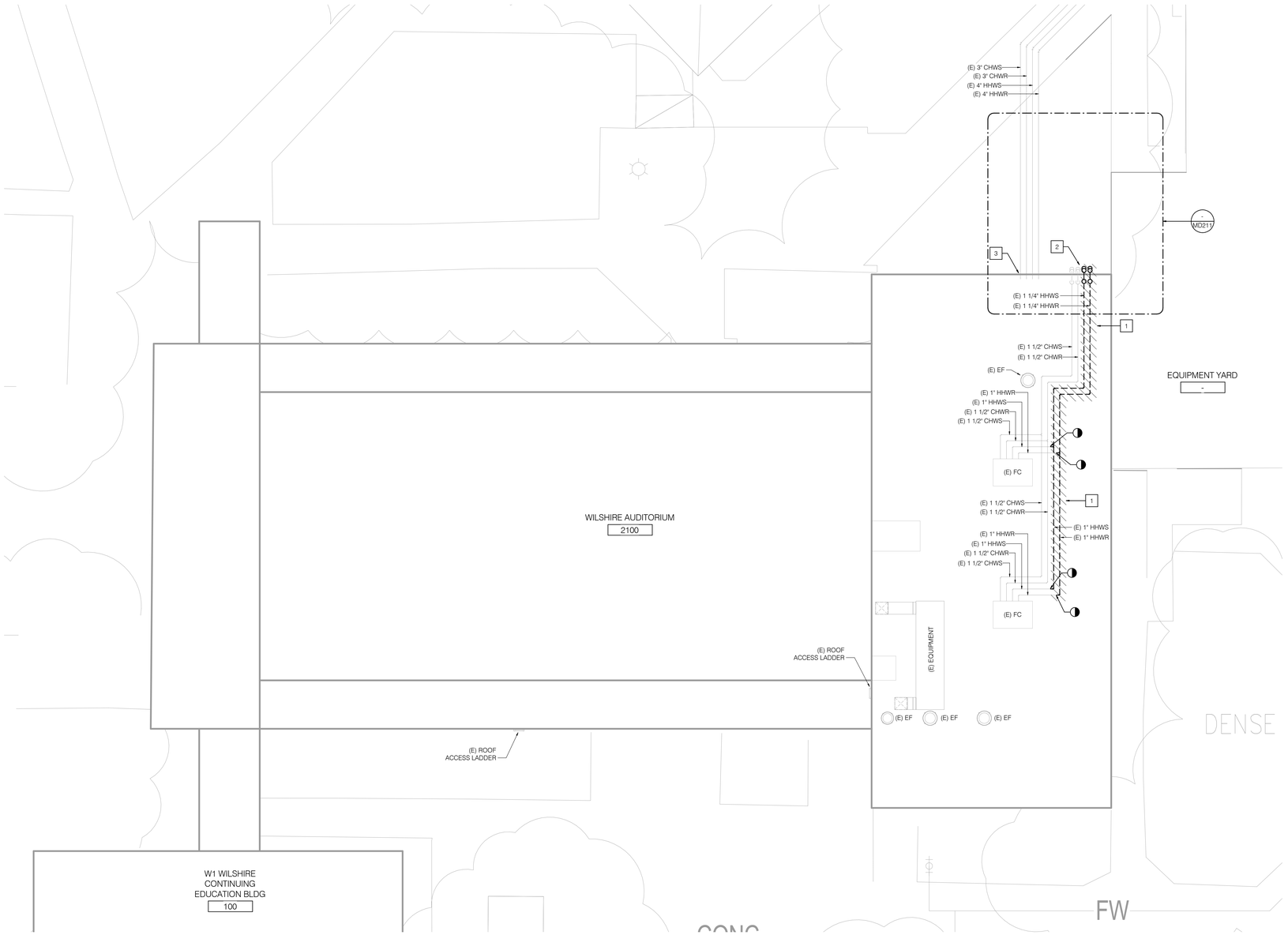
GENERAL NOTES

1. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

NOTES

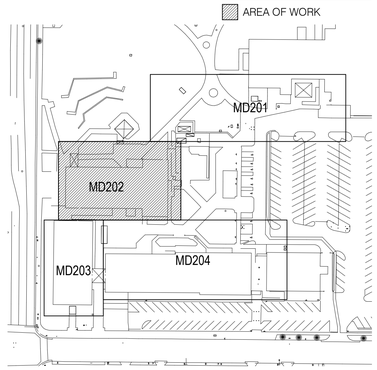
1. DEMOLISH EXISTING HHWS/R PIPES AND ATTACHED PIPING ACCESSORIES AS INDICATED. BRANCH PIPING SERVING EXISTING ROOFTOP UNITS TO REMAIN. ALL SURROUNDING PIPING, EQUIPMENT, AND ANCILLARY DEVICES SHALL BE PROTECTED IN PLACE.
2. EXISTING HHW PIPES AND EXISTING CHW PIPES FROM ROOFTOP DOWN TO GRADE AND PENETRATE THROUGH EXTERIOR WALL TO WILSHIRE AUDITORIUM BASEMENT STORAGE ROOM. SEE SHEET MD205.
3. EXISTING HHW PIPES AND EXISTING CHW PIPES PENETRATE THROUGH EXTERIOR WALL TO WILSHIRE AUDITORIUM BASEMENT STORAGE ROOM. SEE SHEET MD205.



KEY PLAN

LEGEND

AREA OF WORK



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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY MUELLER
No. 33131
EXP. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

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	DSA Submittal	10/29/2019
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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date January 8, 2020

Submittal DSA Back Check

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Sheet Title

Enlarged Site Plan Demolition

Sheet Number

MD202

P2S No. 9570

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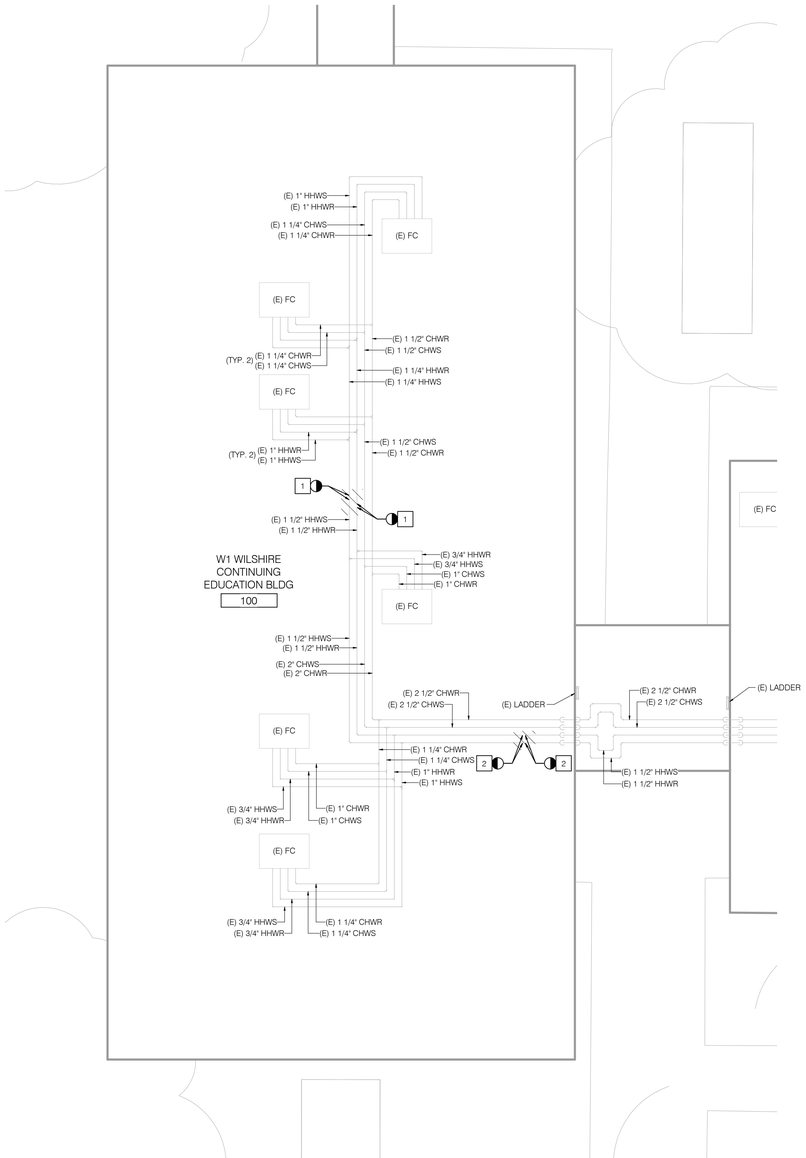
1/7/2020 11:52:06 PM

GENERAL NOTES

1. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

NOTES

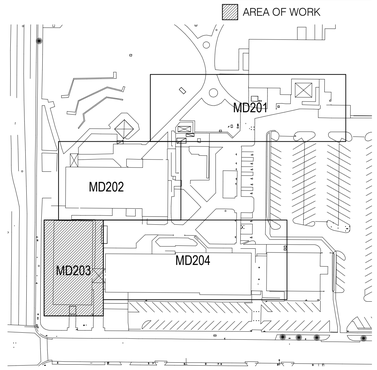
1. DEMOLISH ADEQUATE PIPING TO PROVIDE CUT IN FOR 2 INCH TEE AND TWO REDUCERS. SEE M203. ALL SURROUNDING PIPING, EQUIPMENT, AND ANCILLARY DEVICES SHALL BE PROTECTED IN PLACE.
2. DEMOLISH ADEQUATE PIPING TO ALLOW FOR INSTALLATION OF 1-1/2 INCH BALL VALVES FOR ISOLATION. ALL SURROUNDING PIPING, EQUIPMENT, AND ANCILLARY DEVICES SHALL BE PROTECTED IN PLACE.



KEY PLAN

LEGEND

AREA OF WORK



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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118731 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01.09.20

P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water
Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date January 8, 2020

Submittal DSA Back Check

Scale 1/8" = 1'-0"

Sheet Title

Enlarged Site Plan
Demolition

Sheet Number

MD203

P2S No. 9570

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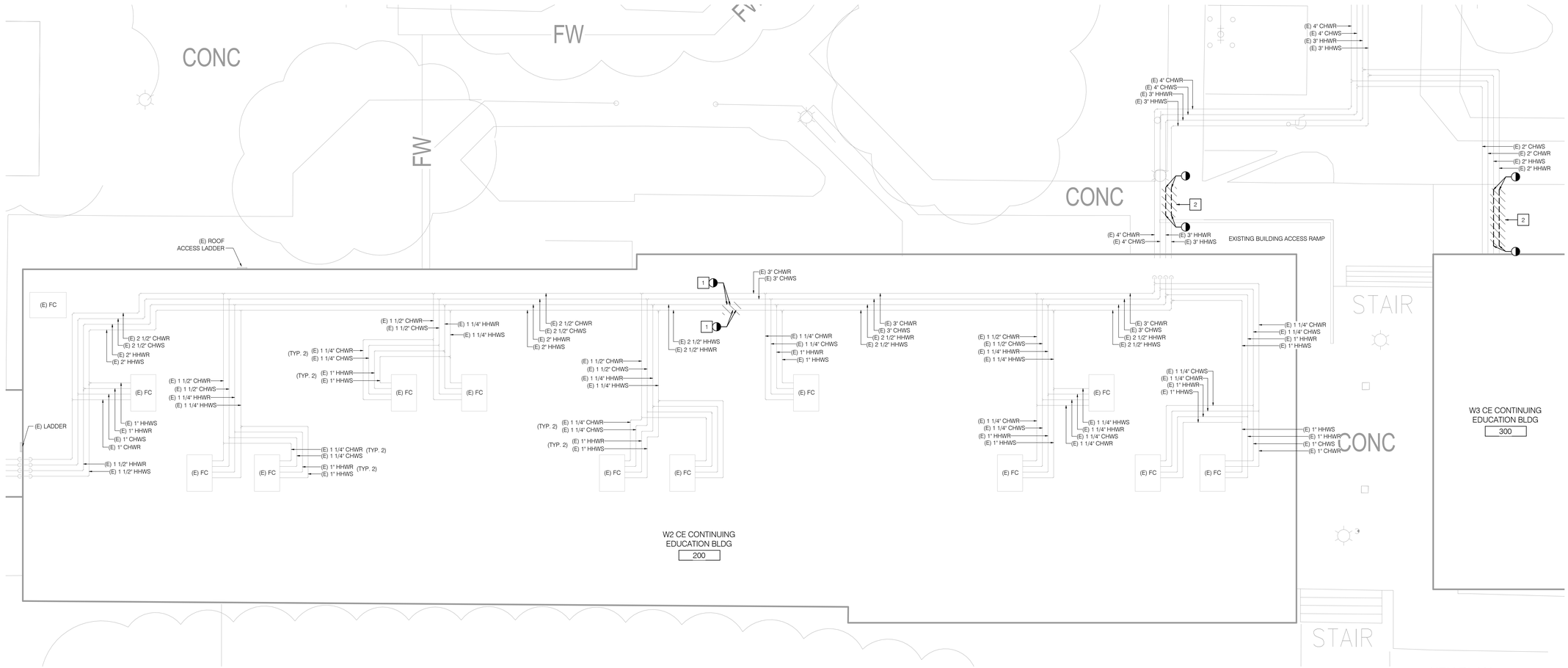
1/8/2020 5:46:02 PM

GENERAL NOTES

1. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

NOTES

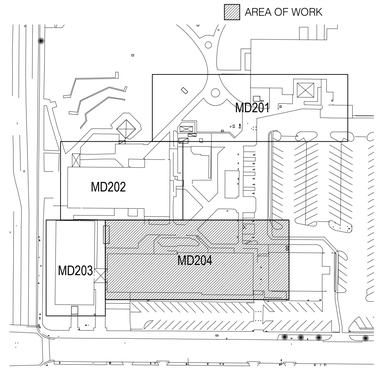
1. DEMOLISH ADEQUATE PIPING TO PROVIDE CUT IN FOR 2 INCH TEE. SEE M204.
2. DEMOLISH EXISTING HHWS/R PIPES AS INDICATED. REMOVE CONCRETE SIDEWALK AS NECESSARY. SEE SOUTH PAVING PLAN M302 FOR ADDITIONAL INFORMATION.



KEY PLAN

LEGEND

AREA OF WORK



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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER ANTHONY MUELLER MECHANICAL STATE OF CALIFORNIA
Exp. 3/31/21
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
	DSA Back Check	1/8/2020

Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date January 8, 2020

Submittal DSA Back Check

Scale 1/8" = 1'-0"

Sheet Title

Enlarged Site Plan Demolition

Sheet Number

MD204

P2S No. 9570

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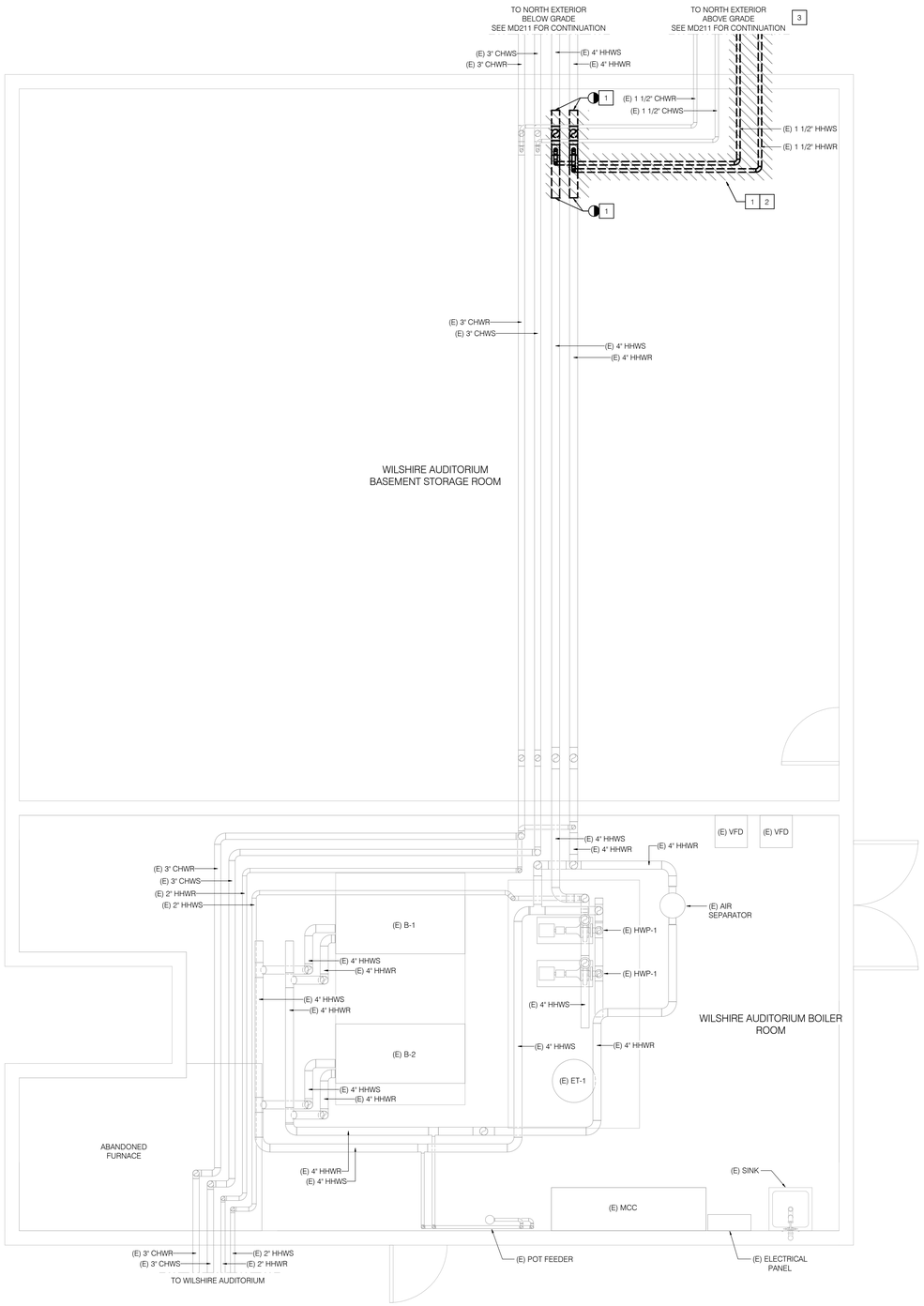
GENERAL NOTES

1. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

NOTES

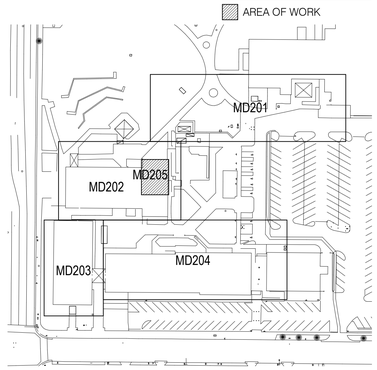
1. DEMOLISH EXISTING HHWS/R PIPES AS INDICATED. ALL CHW PIPING IS TO REMAIN AND SHALL BE PROTECTED IN PLACE.
2. DEMOLISH EXISTING PIPE SUPPORTS. EXISTING PIPE SUPPORTS ALSO SUPPORT REMAINING (E)CHWS/R PIPES. DO NOT REMOVE EXISTING SUPPORTS UNTIL REPLACEMENT SUPPORTS HAVE BEEN INSTALLED.
3. DEMOLITION OF HHWS/R PIPING CONTINUES ON NORTH EXTERIOR OF WILSHIRE AUDITORIUM. SEE SHEET MD211 FOR CONTINUATION OF DEMOLITION.



KEY PLAN

LEGEND

AREA OF WORK



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DATE: 01.09.20

P2S ENG

Long Beach | Los Angeles
San Diego San Jose

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Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips
Date	January 8, 2020
Submittal	DSA Back Check
Scale	3/8" = 1'-0"

Sheet Title

Building 2100 - Basement Demolition

Sheet Number

MD205

P2S No. 9570

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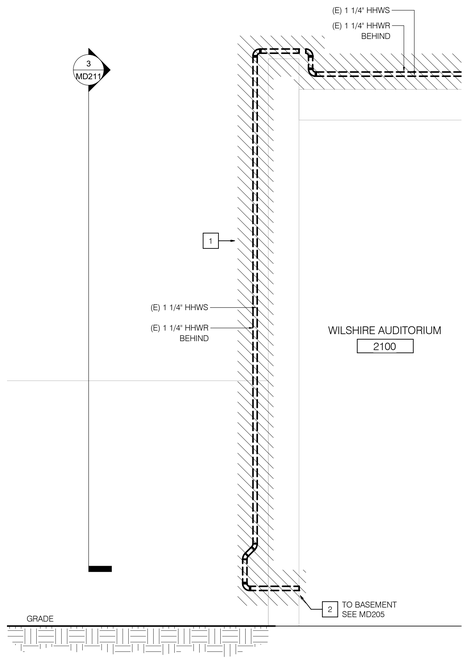
1/8/2020 5:46:03 PM

GENERAL NOTES

1. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

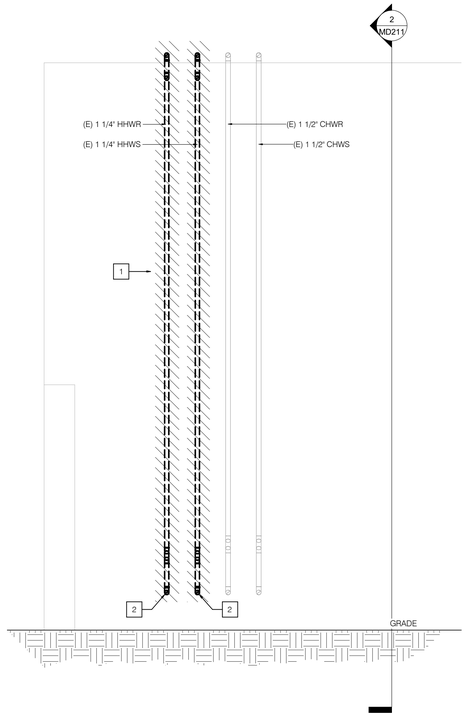
NOTES

1. DEMOLISH EXISTING HHWS/R PIPES AND ATTACHED PIPING ACCESSORIES AND SUPPORTS AS INDICATED. ALL OTHER SURROUNDING PIPING, EQUIPMENT, AND ANCILLARY DEVICES SHALL BE PROTECTED IN PLACE. FOR CONTINUATION, SEE MD205.
2. EXISTING PIPES PENETRATE EXTERIOR WALL AND CONTINUE INTO WILSHIRE AUDITORIUM BASEMENT STORAGE ROOM. FOR CONTINUATION, SEE MD205.



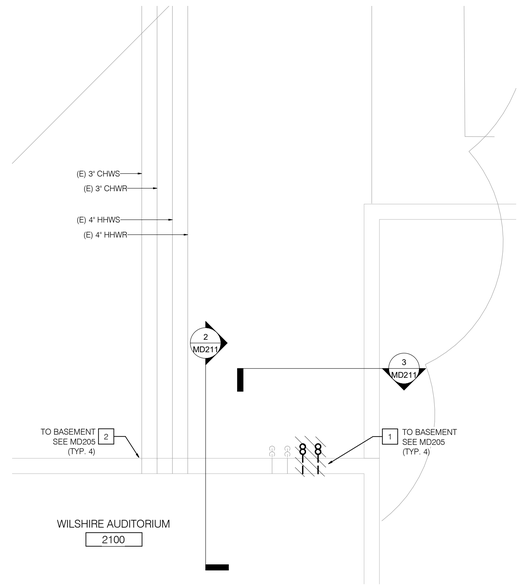
2 BUILDING 2100 DEMOLITION - WEST SECTION

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



3 BUILDING 2100 DEMOLITION - NORTH SECTION

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



1 BUILDING 2100 DEMOLITION PLAN

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

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P2S ENG

Long Beach | Los Angeles
San Diego San Jose

p2sinc.com

Consultant

Project Title

Heating Hot Water Replacement Parking Lot 10

Owner

FULLERTON COLLEGE

321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
ANTHONY MUELLER
No. 26447
Exp. 3/31/21
MECHANICAL
STATE OF CALIFORNIA
SIGNED: 1/8/2020

Revisions

Number	Description	Date
	DSA Submittal	10/29/2019
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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	As indicated

Sheet Title

Demolition Plan Building 2100

Sheet Number

MD211

P2S No. 9570

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1/8/2020 5:40:08 PM

GENERAL NOTES

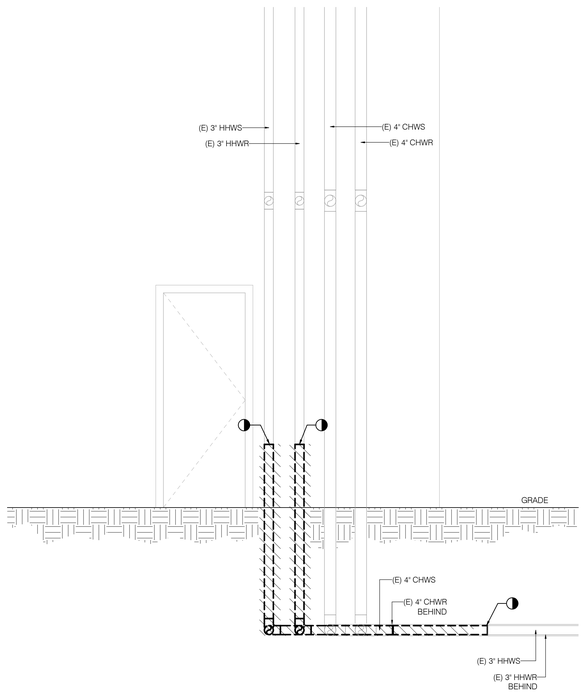
1. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY THE DIVISION OF THE STATE ARCHITECT.

NOTES

1 DEMOLISH EXISTING HHWS/R PIPING AS INDICATED. EXISTING PIPING IS ENCASED IN REINFORCED CONCRETE. ADJACENT CHW PIPES SHALL BE PROTECTED IN PLACE.

2 BUILDING 2001/2000 DEMOLITION PLAN

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



1 BUILDING 2001/2000 DEMOLITION - EAST CONNECTION

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

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Consultant

Project Title

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Replacement Parking Lot 10

Owner

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321 East Chapman Avenue
Fullerton, CA 92832

REGISTERED PROFESSIONAL ENGINEER
TONY MUELLER
Exp. 3/31/21
MECHANICAL
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SIGNED: 1/8/2020

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	DSA Submittal	10/29/2019
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Designed	T Mueller
Drawn	T Mueller
Checked	C Dean
Approved	M Phillips

Date	January 8, 2020
Submittal	DSA Back Check
Scale	As indicated

Sheet Title

Demolition Plan Building
2001/2000

Sheet Number

MD212

P2S No. 9570

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