

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	N/A
International Mechanical Code	2006	Uniform Code for Building Conservation	N/A
International Plumbing Code	2006	ADA Accessibility Guidelines	N/A
International Fire Code	N/A		
International Energy Conservation Code	N/A		

A. Occupancy and Group: U
 Change in Use: Yes No Mixed Occupancy: Yes No
 Special Use and Occupancy (e.g. High Rise, Covered Mall): N/A

B. Seismic Design Category: D Design Wind Speed: N/A mph

C. Type of Construction (circle one): V-B
 I A I B II A II B III A III B IV HT V A **V B**

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours): N/A
 North: _____ South: _____ East: _____ West: _____

E. Mixed Occupancies: N/A Nonseparated Uses: N/A

F. Sprinklers: N/A
 Required: _____ Provided: _____ Type of Sprinkler System: _____

G. Number of Stories: N/A Building Height: N/A

H. Actual Area per Floor (square feet): N/A

I. Tabular Area: N/A

J. Area Modifications: N/A

$$a) A_a = A_1 + \left[\frac{A_1 I_f}{100} \right] + \left[\frac{A_1 I_s}{100} \right] \quad I_r = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$$

b) Sum of the Ratio Calculations for Mixed Occupancies: N/A

$$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$$

c) Total Allowable Area for: N/A

- 1) One Story: _____
- 2) Two Story: $A_a(2)$ _____
- 3) Three Story: $A_a(3)$ _____

d) Unlimited Area Building: Yes No Code Section: N/A

K. Fire Resistance Rating Requirements for Building Elements (hours): N/A

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls			Floors - Ceiling Floors		
Interior Bearing Walls			Roofs - Ceiling Roofs		
Exterior Non-Bearing Walls			Exterior Doors and Windows		
Structural Frame			Shaft Enclosures		
Partitions - Permanent			Fire Walls		
Fire Barriers			Fire Partitions		
			Smoke Partitions		

L. Design Occupant Load: N/A

Exit Width Required: N/A Exit Width Provided: N/A

M. Minimum Number of Required Plumbing Facilities: N/A

- a) Water Closets - Required (m) _____ (f) _____ Provided (m) _____ (f) _____
- b) Lavatories - Required (m) _____ (f) _____ Provided (m) _____ (f) _____
- c) Bath Tubs or Showers: _____
- d) Drinking Fountains: _____ Service Sinks: _____

FOOTNOTES:

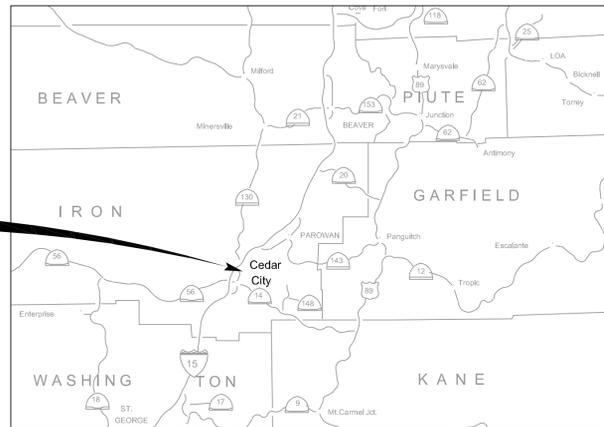
- 1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.
- 2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
 - a) High Rise Requirements.
 - b) Atriums.
 - c) Performance Based Criteria.
 - d) Means or Egress Analysis.
 - e) Fire Assembly Locator Sheet.
 - f) Exterior and Interior Accessibility Route.
 - g) Fire Stopping, Including Tested Design Number.

SOUTHERN UTAH UNIVERSITY STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT

AUGUST 5, 2009

DFCM PROJECT NO.: 09117730 1 OF 2

PROJECT LOCATION



PROJECT VICINITY MAP

SCALE: N.T.S.

SHEET NO.	DESCRIPTION
GG1	TITLE SHEET & SHEET INDEX
GG2	GENERAL NOTES
MP1	MECHANICAL PLAN - DEMOLITION AND REMODEL
MP2	MECHANICAL PLAN - DEMOLITION AND REMODEL
MD1	MECHANICAL DETAILS
SG1	GENERAL STRUCTURAL NOTES SHEET 1
SG2	GENERAL STRUCTURAL NOTES SHEET 2



State of Utah - Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building/Salt Lake City, Utah 84114/538-3018

SPECIAL INSPECTION AND TESTING (IBC 1704)

Indicate required Special inspections for project by checking the appropriate boxes:

STEEL (IBC1704.3)

Item	Reference/Comments	
WELDING (1704.3.1)		
Details (1704.3.2)		
Single-pass fillet welds $\leq 5/16"$	Continuous	<input checked="" type="checkbox"/> Periodic

CONCRETE CONSTRUCTION (IBC1704.4)

Item	Reference/Comments	
Materials (1704.4.1)	Continuous	<input checked="" type="checkbox"/> Periodic
Steel placement	Continuous	<input checked="" type="checkbox"/> Periodic
Steel welding	Continuous	<input checked="" type="checkbox"/> Periodic
Bols prior & during placement	Continuous	<input checked="" type="checkbox"/> Periodic
Use of required design mix	Continuous	<input checked="" type="checkbox"/> Periodic
Concrete sampling for strength test, slump, air content, and temperature of concrete	<input checked="" type="checkbox"/> Continuous	<input type="checkbox"/> Periodic
Concrete & shotcrete placement	<input checked="" type="checkbox"/> Continuous	<input type="checkbox"/> Periodic
Curing temperature and techniques	Continuous	<input checked="" type="checkbox"/> Periodic
Form work	Continuous	<input checked="" type="checkbox"/> Periodic

Special Inspectors Shall:

- Be approved by the Building Official prior to performing any duties;
- Provide proof of licensure as a special inspector by the State of Utah for each type of inspection;
- Inspection reports are to meet the requirements of IBC 1704.1.2 and DFCM standards;
- Inspection reports are to be submitted to the code consultant, architect, DFCM project manager, and the State of Utah Building Official within 48 hrs. of inspections;
- A final inspection report shall be submitted following completion of the project documenting the types of special inspections performed and a statement indicating that the structure is in compliance with the drawings, specifications and applicable codes. IBC 1704.1.2

NO.	ISSUE FOR CONSTRUCTION	CK	CK	DS	08/05/09
NO.	REVISIONS	DWN	APVD	APVD	DATE

383 West Vine Street
Suite 400
Murray, Utah
84123
www.stanleygroup.com

Stanley Consultants INC.

A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

SOUTHERN UTAH UNIVERSITY
STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT
CEDAR CITY, UTAH

TITLE SHEET & SHEET INDEX

DESIGNED	C. KIM	SCALE:	AS NOTED
DRAWN	J. KIM	NO.	22182.01
CHECKED	D. SCANLON	REV.	
APPROVED	C. KIM	GG1	0
APPROVED	D. SCANLON		
DATE	08/05/09		



0 1 2 3 IN
0 1 2 3 4 5 6 7 8 cm

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. SCOPE OF WORK INCLUDED IN THE SINGLE, LUMP SUM PRICE, COMPRISES THE GENERAL CONSTRUCTION AND INSTALLATION OF STEAM PIPING AND STEAM PIPING ANCHORS/SUPPORTS. ALSO INCLUDES RELOCATION OF EXISTING STEAM PIPING GUIDES. THE PROJECT INCLUDES THE TASKS DESCRIBED HEREIN.
- B. ALL UTILITY OUTAGES AND THEIR DURATION SHALL BE REVIEWED AND APPROVED BY THE OWNER. CONTRACTOR SHALL PROVIDE A MINIMUM OF FIVE (5) WORKING DAYS NOTICE FOR REVIEW, PRIOR TO ANY SCHEDULED OUTAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE INSTALLATION OF THE VARIOUS PROJECT ELEMENTS WITH THE OWNER TO ASSURE MAXIMUM AVAILABILITY OF THE UTILITY SYSTEM.
- C. WORK UNDER THIS CONTRACT SHALL OCCUR DURING NORMAL BUSINESS HOURS AS DIRECTED BY THE UNIVERSITY. WORK DURING WEEKENDS AND HOLIDAYS WILL NOT BE PERMITTED UNLESS DIRECTED OTHERWISE BY THE UNIVERSITY.

1.02 CONFLICTS

- A. IF CONFLICTS BETWEEN THE SPECIFICATIONS, DRAWINGS OR NATIONAL STANDARDS AND CODES ARE NOTED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF THE DISCREPANCY. FOR ANY CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
- B. IF CONFLICTS EXIST BETWEEN THE DRAWINGS AND SPECIFICATIONS; BETWEEN SECTIONS OF THE SPECIFICATIONS; OR BETWEEN DRAWINGS AND DETAILS WITHIN THE DRAWINGS, THE CONTRACTOR SHALL INCLUDE IN THE BID THE MORE COSTLY METHOD OR MATERIAL, UNLESS THE CONTRACTOR CONTACTS THE ENGINEER AND THE OWNER PRIOR TO BID TO OBTAIN A CLARIFICATION. AFTER THE BID, IF THE CONFLICT IS BROUGHT UP AND THE LESS COSTLY METHOD OR MATERIAL IS THE CORRECT SOLUTION, THE CONTRACTOR SHALL PROVIDE A CREDIT TO THE CONTRACT.

1.03 EXAMINATION OF SITE

- A. FAILURE TO VISIT SITE WILL IN NO WAY RELIEVE THE CONTRACTOR FROM THE NECESSITY OF FURNISHING MATERIALS OR PERFORMING WORK THAT MAY BE REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS WITHOUT ADDITIONAL COST TO THE OWNER.

1.04 LAYING OUT OF WORK

- A. THE CONTRACTOR SHALL FURNISH BENCHMARKS AND MAINTAIN BENCHMARKS AND ALL OTHER GRADES, LINES, AND LEVELS AND DIMENSIONS AS INDICATED IN THE CONTRACT DOCUMENTS. REPORT ANY ERRORS OR INCONSISTENCIES IN ABOVE TO THE OWNER BEFORE COMMENCING WORK.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LINES, ELEVATIONS, AND MEASUREMENTS OR WORK INDICATED, EVEN WHEN DELEGATED BY SUBCONTRACTOR OR NORMAL TRADE PRACTICE.
- C. DOCUMENTATION: THE CONTRACTOR SHALL CREATE DOCUMENTATION AS A PART OF THIS PROJECT.
- D. THE FOLLOWING DOCUMENTS SHALL BE CREATED AND SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL: SUBMITTALS AND O&M MANUALS.

1.05 GENERAL CONDITIONS

- A. THE CONTRACTOR SHALL FURNISH ALL FIELD ENGINEERING, SUPERVISION, LABOR, TOOLS, SPECIAL TOOLS, EQUIPMENT, STAGING, RIGGING AND INCIDENTAL MATERIAL NECESSARY FOR THE COMPLETE DESIGN AND INSTALLATION OF ALL EQUIPMENT TO COMPLETE THE SCOPE OF WORK.
- B. THE CONTRACTOR SHALL FURNISH ALL RECEIVING, UNLOADING, SORTING, STORING, LOADING AND HAULING FROM THE POINT OF SHIPMENT TO THE STORAGE AREA AND/OR TO THE ERECTION SITE. ALL EQUIPMENT SHALL BE HANDLED, STORED AND PROTECTED IN SUCH A MANNER AS TO ENSURE PROPER OPERATION, ALIGNMENT AND FINISH. ALL REQUIRED TEMPORARY BLOCKING, STIFFENING, COVERING, WEATHER PROTECTION, ETC., SHALL BE FURNISHED BY THE CONTRACTOR. THIS SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:
 - 1. ALL SHORING, RIGGING, DEWATERING EQUIPMENT, CABLE, ROPE, BLOCKS, CHAIN HOISTS, ETC.
 - 2. SCAFFOLDING, TEMPORARY STAIRS, FLOORS, LADDERS, PLATFORMS, RAILINGS, TOE BOARDS, ETC., AS REQUIRED.
 - 3. WELDING MACHINES, CABLE, WELDING ROD, SOLDER, FLUX, AND BURNING EQUIPMENT.
 - 4. ALL NUTS, BOLTS, GASKETS, ETC., REQUIRED FOR COMPLETE PIPING AND EQUIPMENT INSTALLATION.
 - 5. PIPING AND HOSES FOR EQUIPMENT AND SITE CLEANING AND DELIVERING WATER TO EQUIPMENT AND PIPING FOR PRESSURE TESTING AND DISPOSAL OF WATER AFTER TESTING.
 - 6. LABOR AND EQUIPMENT FOR PRESSURE TESTING.
 - 7. LABOR AND EQUIPMENT FOR OTHER MECHANICAL TESTS.
 - 8. LABOR AND EQUIPMENT FOR ELECTRICAL TESTING OF CABLES AND EQUIPMENT.
 - 9. SMALL TOOLS AND EQUIPMENT, SUCH AS WRENCHES, HAMMERS, TURNBUCKLES, EXTENSION CORDS, JACKS, ROLLERS, GENERATORS, TEMPORARY LIGHTING, ETC.
 - 10. OXYGEN, ACETYLENE, OIL, FUELS, CLEANING FLUIDS, AND OTHER MISCELLANEOUS SUPPLIES REQUIRED DURING INSTALLATION AND EQUIPMENT COMMISSIONING AND STARTUP.
 - 11. ANY OTHER TOOLS, EQUIPMENT OR SERVICES NECESSARY TO ACCOMPLISH A COMPLETE AND EXPEDITIOUS INSTALLATION.
 - 12. PERSONNEL PROTECTION EQUIPMENT (PPE) INCLUDING, BUT NOT LIMITED TO, HARD HATS, SAFETY GLASSES WITH SIDE SHIELDS, SAFETY TOED BOOTS, GLOVES, HEARING PROTECTION, GOGGLES, FIRE RETARDANT COVERALLS, FALL PROTECTION EQUIPMENT, OXYGEN AND AIR MONITORING EQUIPMENT, DUST MASKS, RESPIRATORS, SELF-CONTAINED BREATHING APPARATUS (SCBA), ETC.
 - 13. REMOVAL AT COMPLETION OF WORK ALL TRASH AND WASTE CREATED BY THE CONTRACTOR DURING EXECUTION OF THE WORK. USED OR REPLACED EQUIPMENT SHALL BE RETURNED TO THE OWNER, IF THE OWNER WANTS TO RETAIN IT. IF THE OWNER DOES NOT WANT TO RETAIN USED OR REPLACED EQUIPMENT, THE CONTRACTOR SHALL DISPOSE OF THE EQUIPMENT. ALL DISPOSAL SHALL BE AT AN APPROPRIATE DISPOSAL SITE IN ACCORDANCE WITH THE LOCAL AND FEDERAL ENVIRONMENTAL REQUIREMENTS.

1.06 WORK SEQUENCE

- A. CONSTRUCT WORK IN STAGES TO ACCOMMODATE OWNER'S USE OF PREMISES DURING CONSTRUCTION PERIOD; COORDINATE CONSTRUCTION SCHEDULE AND OPERATIONS WITH OWNER'S REPRESENTATIVE.
- B. ENSURE THAT WORK IS CLEAR OF ENCRoACHMENT INTO AREAS REQUIRED FOR FUTURE WORK.
- C. SCHEDULE WORK TO MINIMIZE INTERRUPTIONS TO UTILITY SERVICES. PROVIDE OWNER WITH A MINIMUM 3 DAY NOTICE TO SCHEDULE ANY OUTAGES.

1.07 CONTRACTOR USE OF PREMISES

- A. CONTRACTOR SHALL NOT HAVE COMPLETE AND EXCLUSIVE USE OF PREMISES FOR EXECUTION OF WORK. CONTRACTOR SHALL BE OBLIGATED TO PROVIDE RIGHT-OF-WAY AND PRIORITY TO EXISTING OPERATIONS BY THE OWNER. THE CONTRACTOR SHALL:
 - 1. ASSUME FULL RESPONSIBILITY FOR PROTECTION AND SAFEKEEPING OF ITEMS STORED ON-SITE.
 - 2. MOVE ANY STORED ITEM OR EQUIPMENT, UNDER CONTRACTOR'S CONTROL, THAT INTERFERE WITH THE OWNER'S OPERATIONS OR SEPARATE CONTRACTOR.
 - 3. OBTAIN AND PAY FOR USE OF ADDITIONAL STORAGE OR WORK AREAS NEEDED FOR STORAGE OF MATERIALS OR CONSTRUCTION OF THE WORK.
- B. CONTRACTOR SHALL COORDINATE USE OF PREMISES UNDER DIRECTION OF OWNER. CONTRACTOR SHALL CONFINE CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS AND EQUIPMENT AND OPERATIONS OF WORKERS TO AREAS PERMITTED BY LAW, ORDINANCES, PERMITS, OR REQUIREMENTS OF CONTRACT DOCUMENTS, AND SHALL NOT UNREASONABLY ENCUMBER PREMISES WITH CONSTRUCTION EQUIPMENT OR OTHER MATERIAL OR EQUIPMENT.
- C. THE OWNER'S SECURITY AND OPERATIONAL REQUIREMENTS SHALL TAKE PRECEDENCE. CONTRACTOR SHALL IMMEDIATELY FOLLOW THE DIRECTION OF THE OWNER OR THE OWNER'S REPRESENTATIVE AS REQUIRED TO FACILITATE THE OPERATION OF THE FACILITY AND TO MAINTAIN SITE SECURITY.

1.08 PARTIAL OWNER OCCUPANCY

- A. CONTRACTOR SHALL SCHEDULE ITS OPERATIONS FOR COMPLETION OF PORTIONS OF WORK, AS DESIGNATED, FOR OWNER'S OCCUPANCY PRIOR TO SUBSTANTIAL COMPLETION OF ENTIRE WORK.
- B. OWNER WILL OCCUPY PREMISES FOR PURPOSE OF NORMAL OPERATIONS.
- C. EXECUTE CERTIFICATE OF SUBSTANTIAL COMPLETION FOR EACH SPECIFIC PORTION OF WORK PRIOR TO OWNER OCCUPANCY.
 - 1. AFTER OWNER OCCUPANCY, CONTRACTOR SHALL ALLOW:
 - a. ACCESS FOR OWNER'S PERSONNEL.
 - b. INSPECTION BY THE AUTHORITY HAVING JURISDICTION FOR THE VARIOUS SYSTEMS.

2.01 SUBMITTAL PROCEDURES

- A. DELIVER SUBMITTALS TO:

MR. CHEOL KIM
STANLEY CONSULTANTS, INC.
383 W. VINE STREET, SUITE 400
MURRAY, UT 84123

- B. TRANSMIT EACH ITEM USING A SHOP DRAWING TRANSMITTAL FORM.
- C. SEQUENTIALLY NUMBER THE TRANSMITTAL FORM. REVISE SUBMITTALS WITH ORIGINAL NUMBER AND A SEQUENTIAL ALPHABETIC SUFFIX.
- D. IDENTIFY PROJECT, CONTRACTOR, SUBCONTRACTOR AND SUPPLIER; PERTINENT DRAWING AND DETAIL NUMBER, AND SPECIFICATION SECTION NUMBER, AS APPROPRIATE.
- E. APPLY CONTRACTOR'S STAMP, SIGNED OR INITIALED CERTIFYING THAT REVIEW, APPROVAL, VERIFICATION OF PRODUCTS REQUIRED, FIELD DIMENSIONS, ADJACENT CONSTRUCTION WORK, AND COORDINATION OF INFORMATION IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE WORK AND CONTRACT DOCUMENTS.
- F. SCHEDULE SUBMITTALS TO EXPEDITE THE PROJECT, AND DELIVER TO ENGINEER AT BUSINESS ADDRESS. COORDINATE SUBMISSION OF RELATED ITEMS.
- G. FOR EACH SUBMITTAL FOR REVIEW, ALLOW 10 BUSINESS DAYS EXCLUDING DELIVERY TIME TO AND FROM THE CONTRACTOR.
- H. IDENTIFY VARIATIONS FROM CONTRACT DOCUMENTS AND PRODUCT OR SYSTEM LIMITATIONS WHICH MAY BE DETRIMENTAL TO SUCCESSFUL PERFORMANCE OF THE COMPLETED WORK.
- I. NOTIFY ENGINEER IN WRITING, AT TIME OF SUBMISSION, OF ANY DEVIATIONS IN SUBMITTALS FROM REQUIREMENTS OF CONTRACT DOCUMENTS. ANY SUCH DEVIATIONS PERMITTED BY ENGINEER WILL REQUIRE MODIFICATIONS OF CONTRACT DOCUMENTS.
- J. PROVIDE SPACE FOR CONTRACTOR AND ARCHITECT/ENGINEER REVIEW STAMPS.
- K. WHEN REVISED FOR RESUBMISSION, IDENTIFY ALL CHANGES MADE SINCE PREVIOUS SUBMISSION.
- L. BEGIN NO FABRICATION OR WORK WHICH REQUIRES SUBMITTALS UNTIL RETURN OF SUBMITTALS BY ENGINEER WITH ENGINEER STAMP, AS EITHER "REVIEWED" OR REVIEWED AS NOTED."
- M. DISTRIBUTE COPIES OF REVIEWED SUBMITTALS THAT CARRY ENGINEER STAMP AS EITHER "REVIEWED" OR "REVIEWED AS NOTED" AS APPROPRIATE. INSTRUCT PARTIES TO PROMPTLY REPORT ANY INABILITY TO COMPLY WITH REQUIREMENTS.
- N. SUBMITTALS NOT REQUESTED WILL NOT BE RECOGNIZED OR PROCESSED.

3.01 CUTTING AND PATCHING REQUIREMENTS

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, FITTING, AND PATCHING, REQUIRED TO COMPLETE WORK OR TO:
 - 1. MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY.
 - 2. UNCOVER PORTIONS OF WORK TO PROVIDE FOR INSTALLATION OF ILL-TIMED WORK.
 - 3. REMOVE AND REPLACE DEFECTIVE WORK.
 - 4. REMOVE AND REPLACE WORK NOT CONFORMING TO REQUIREMENTS OF CONTRACT DOCUMENTS.
 - 5. REMOVE SAMPLES OF INSTALLED WORK AS SPECIFIED FOR TESTING.
 - 6. PROVIDE ROUTINE PENETRATIONS OF NONSTRUCTURAL SURFACES FOR INSTALLATION OF PIPING AND ELECTRICAL CONDUIT.

4.01 SUBSTANTIAL COMPLETION

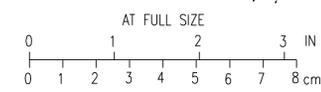
- A. WHEN CONTRACTOR CONSIDERS WORK OR DESIGNATED PORTION THEREOF IS SUBSTANTIALLY COMPLETE, SUBMIT WRITTEN NOTICE, WITH LIST OF ITEMS TO BE COMPLETED OR CORRECTED.
- B. WITHIN REASONABLE TIME, ENGINEER WILL INSPECT TO DETERMINE STATUS OF COMPLETION.
- C. SHOULD ENGINEER DETERMINE THAT WORK IS NOT SUBSTANTIALLY COMPLETE, IT WILL PROMPTLY NOTIFY CONTRACTOR IN WRITING, GIVING REASONS THEREFOR.
- D. CONTRACTOR SHALL REMEDY DEFICIENCIES, AND SEND SECOND WRITTEN NOTICE OF SUBSTANTIAL COMPLETION, AND ENGINEER WILL REINSPECT WORK.
- E. WHEN ENGINEER DETERMINES THAT WORK IS SUBSTANTIALLY COMPLETE, IT WILL PREPARE CERTIFICATE OF SUBSTANTIAL COMPLETION IN ACCORDANCE WITH GENERAL CONDITIONS.

4.02 FINAL COMPLETION

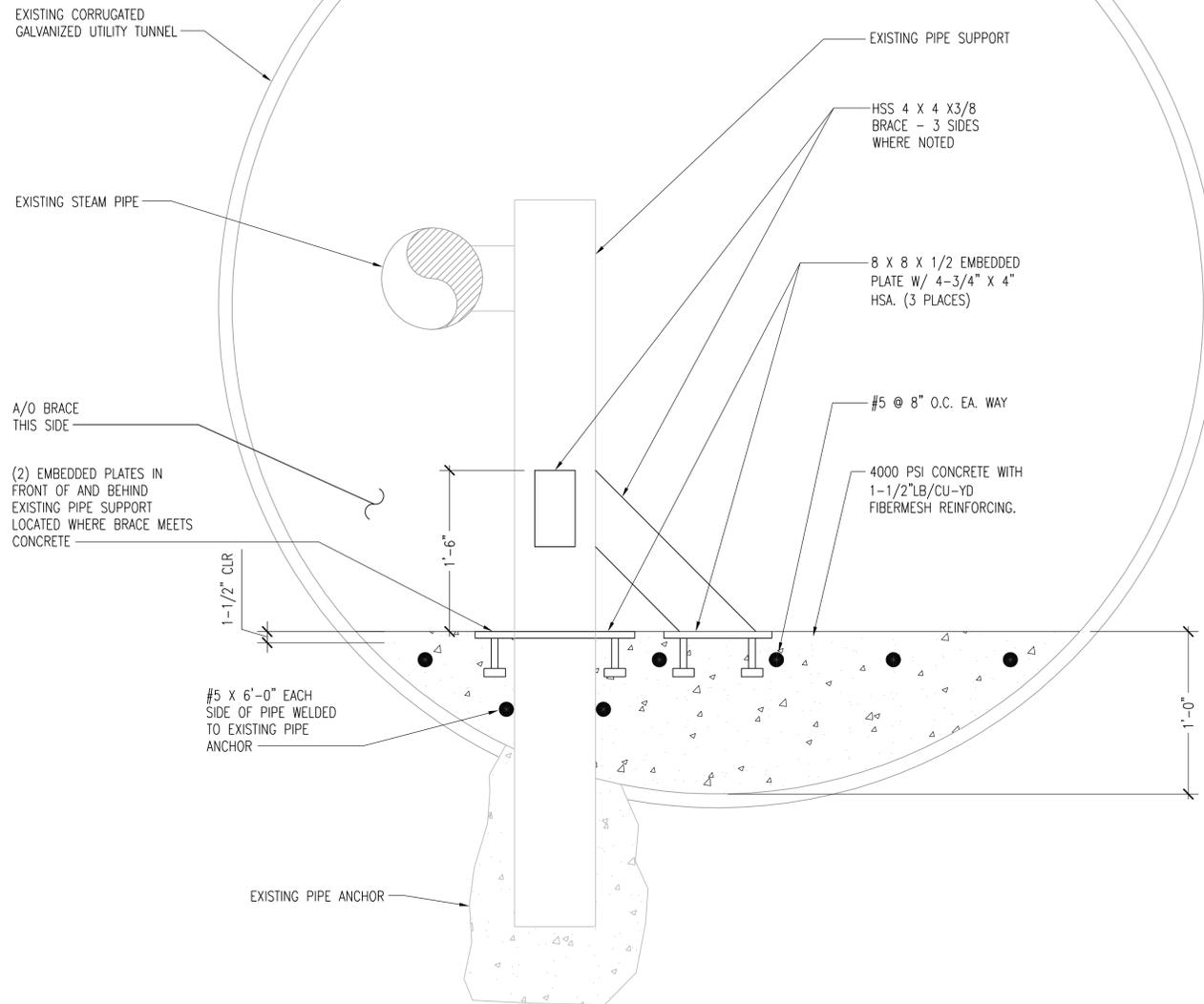
- A. WHEN CONTRACTOR CONSIDERS WORK IS COMPLETE, IT SHALL SUBMIT WRITTEN CERTIFICATION THAT:
 - 1. CONTRACT DOCUMENTS HAVE BEEN REVIEWED.
 - 2. WORK HAS BEEN INSPECTED FOR COMPLIANCE WITH CONTRACT DOCUMENTS.
 - 3. WORK HAS BEEN COMPLETED IN ACCORDANCE WITH CONTRACT DOCUMENTS, AND DEFICIENCIES LISTED WITH CERTIFICATE OF SUBSTANTIAL COMPLETION HAVE BEEN CORRECTED.
 - 4. EQUIPMENT AND SYSTEMS HAVE BEEN TESTED IN PRESENCE OF OWNER'S REPRESENTATIVE AND ARE OPERATIONAL.
 - 5. WORK IS COMPLETE AND READY FOR FINAL INSPECTION.
- B. ENGINEER WILL INSPECT TO VERIFY STATUS OF COMPLETION WITH REASONABLE PROMPTNESS.
- C. SHOULD ENGINEER CONSIDER THAT WORK IS INCOMPLETE OR DEFECTIVE, IT WILL PROMPTLY NOTIFY CONTRACTOR IN WRITING, LISTING INCOMPLETE OR DEFECTIVE WORK.
- D. CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO REMEDY DEFICIENCIES AND SEND SECOND WRITTEN CERTIFICATION THAT WORK IS COMPLETE, AND ENGINEER WILL REINSPECT WORK.
- E. WHEN ENGINEER FINDS WORK IS ACCEPTABLE, IT WILL CONSIDER CLOSEOUT SUBMITTALS.

5.01 OPERATING AND MAINTENANCE MANUALS

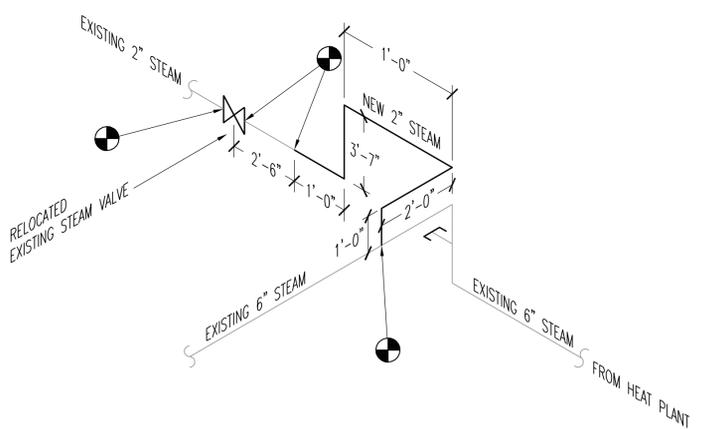
- A. PROVIDE PRODUCT DATA AND RELATED INFORMATION FOR OWNER'S MAINTENANCE AND OPERATION OF THE PRODUCTS FURNISHED.
- B. PROVIDE NEATLY TYPED TABLE OF CONTENTS FOR EACH VOLUME, ARRANGED IN SYSTEMATIC ORDER.
 - 1. CONTRACTOR, NAME OF RESPONSIBLE PRINCIPAL, ADDRESS, AND TELEPHONE NUMBER.
 - 2. LIST OF EACH PRODUCT REQUIRED TO BE INCLUDED, INDEXED TO CONTENT OF VOLUME.
 - 3. LIST, WITH EACH PRODUCT, NAME, ADDRESS, AND TELEPHONE NUMBER OF:
 - a. SUBCONTRACTOR OR INSTALLER.
 - b. MAINTENANCE CONTRACTOR, AS APPROPRIATE.
 - c. IDENTIFY AREA OF RESPONSIBILITY OF EACH.
 - d. LOCAL SOURCE OF SUPPLY FOR PARTS AND REPLACEMENT AND LIST OF RECOMMENDED SPARE PARTS.
 - 4. IDENTIFY EACH PRODUCT BY PRODUCT NAME AND OTHER IDENTIFYING SYMBOLS AS SET FORTH IN CONTRACT DOCUMENTS, INCLUDING NAMEPLATE INFORMATION AND SHOP ORDER NUMBERS FOR EACH ITEM OF EQUIPMENT FURNISHED.
- C. CONTENTS, FOR EACH UNIT OF EQUIPMENT AND SYSTEM, AS APPROPRIATE:
 - 1. DESCRIPTION OF UNIT AND COMPONENT PARTS:
 - a. FUNCTION, NORMAL OPERATING CHARACTERISTICS, AND LIMITING CONDITIONS.
 - b. PERFORMANCE CURVES, ENGINEERING DATA, AND TESTS.
 - c. COMPLETE NOMENCLATURE AND COMMERCIAL NUMBER OF REPLACEABLE PARTS.
 - 2. OPERATING PROCEDURES:
 - a. STARTUP, BREAK-IN, ROUTINE, AND NORMAL OPERATING INSTRUCTIONS.
 - b. REGULATION, CONTROL, STOPPING, SHUTDOWN, AND EMERGENCY INSTRUCTIONS.
 - c. SUMMER AND WINTER OPERATING INSTRUCTIONS.
 - d. SPECIAL OPERATING INSTRUCTIONS.
 - 3. MAINTENANCE PROCEDURES:
 - a. ROUTINE OPERATIONS.
 - b. GUIDE TO "TROUBLE-SHOOTING."
 - c. DISASSEMBLY, REPAIR, AND REASSEMBLY.
 - d. ALIGNMENT, ADJUSTING, AND CHECKING.



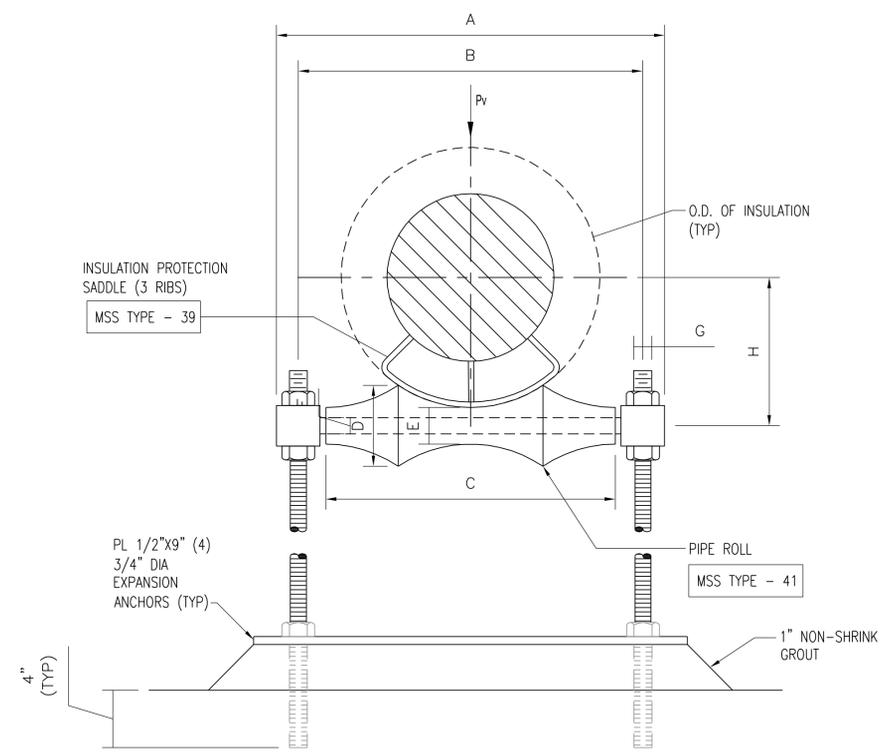
O		ISSUE FOR CONSTRUCTION	CK	CK	DS	08/05/09
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 <p>383 West Vine Street Suite 400 Murray, Utah 84123 www.stanleygroup.com</p> <p>Stanley Consultants Inc. A Stanley Group Company Engineering, Environmental and Construction Services - Worldwide</p> <p>SOUTHERN UTAH UNIVERSITY STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT CEDAR CITY, UTAH</p> <p>GENERAL NOTES</p>						
DESIGNED	C. KIM	SCALE: AS NOTED				
DRAWN	J. KIM	NO. 22182.01		REV.		
CHECKED	D. SCANLON	GG2		0		
APPROVED	C. KIM					
APPROVED	D. SCANLON					
DATE	08/05/09					



STEAM PIPE ANCHOR DETAIL 1-MD1
MP1,MP2
SCALE: NTS



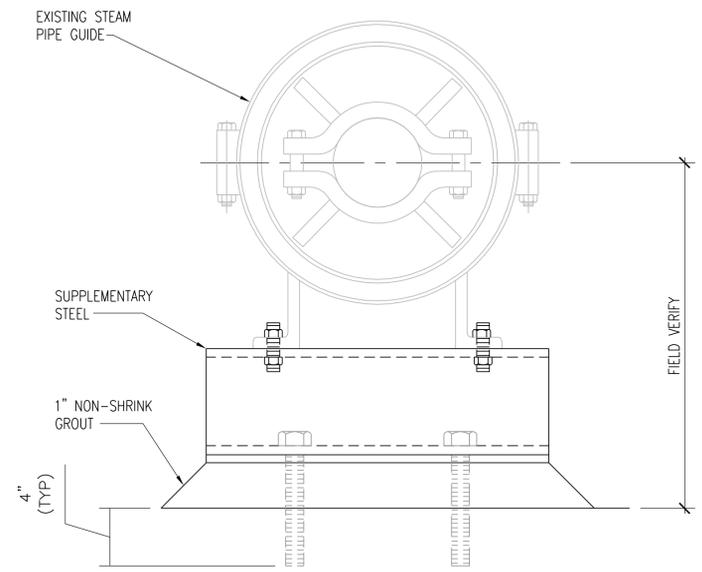
VAULT PIPING DETAIL 3-MD1
MP2
SCALE: NTS



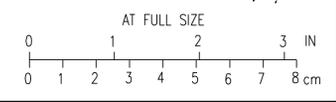
PIPE SIZE	SERVICE	INSUL THICK	DIMENSIONS								BODY SIZE
			A	B	C	D	E	F	G	H	
6"	STEAM	3"	16-3/16"	14-1/16"	11"	3-3/8"	1-3/4"	7/8"	7/8"	6-3/8"	10
2"	STEAM	2"	9-11/16"	8-1/16"	5-13/16"	2"	1-1/8"	5/8"	5/8"	3-7/16"	5

TYPICAL PIPE SUPPORT
GRINNEL FIG. 171 OR APPROVED EQUAL

STEAM PIPE SUPPORT DETAIL 2-MD1
MP1,MP2
SCALE: NTS



STEAM PIPE GUIDE DETAIL 4-MD1
MP1,MP2
SCALE: NTS



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STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT
CEDAR CITY, UTAH

**MECHANICAL
DETAILS**

DESIGNED	C. KIM	SCALE:	AS NOTED
DRAWN	J. KIM	NO.	22182.01
CHECKED	D. SCANLON	REV.	
APPROVED	C. KIM		
APPROVED	D. SCANLON		
DATE	08/05/09		

MD1 **0**

CADD: D1-R-3

GENERAL NOTES:

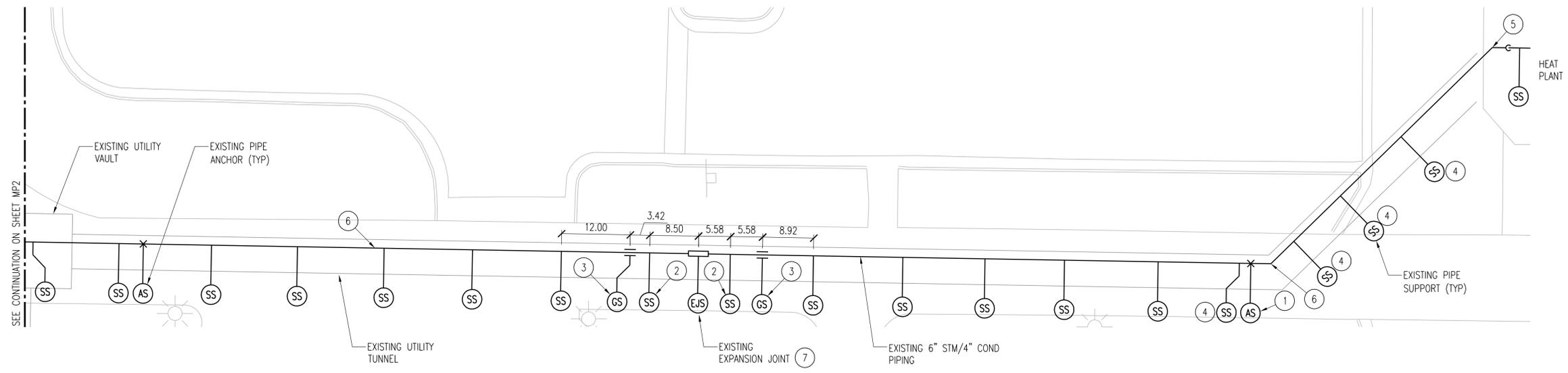
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. VOIDS IN FLOOR AS A RESULT OF DEMOLITION WORK SHALL BE FILLED WITH CONCRETE.
3. CONTRACTOR SHALL RETAIN REMOVED EXISTING STEAM PIPING FOR INSPECTION BY OWNER.

DEMOLITION KEY NOTES:

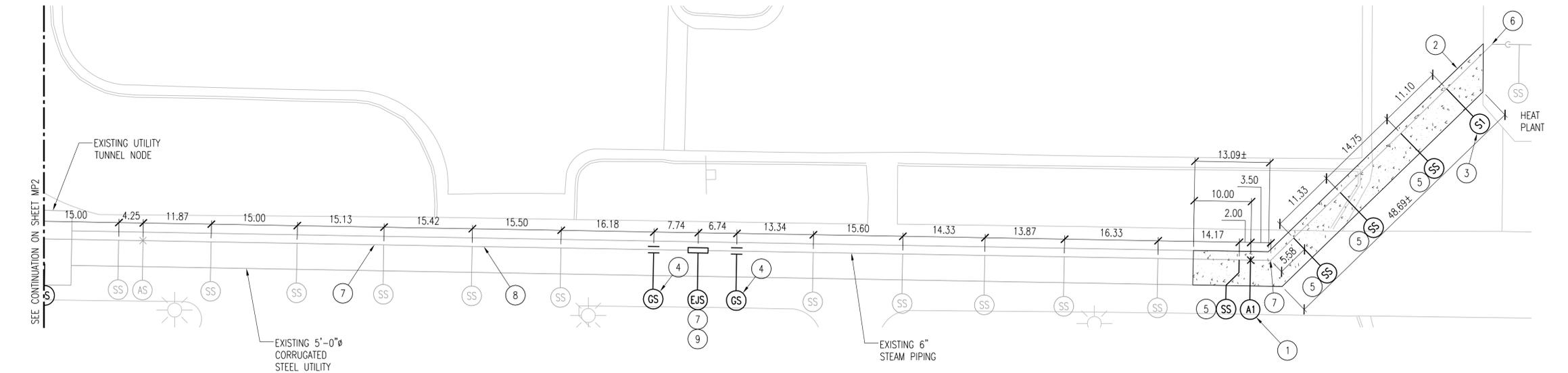
- | | |
|----------------|--|
| BASE BID | 1. EXISTING ANCHOR TO REMAIN. SEE REMODEL PLAN FOR ANCHOR MODIFICATIONS. |
| ALTERNATE NO.1 | 2. REMOVE EXISTING PIPE SUPPORT COMPLETE. |
| ALTERNATE NO.2 | 3. REMOVE AND RELOCATE EXISTING PIPE GUIDE TO NEW LOCATION. SEE REMODEL PLAN ON THIS SHEET. |
| ALTERNATE NO.3 | 4. REMOVE EXISTING SUPPORT COMPLETE AND REPLACE WITH NEW SUPPORT PER DETAIL ON SHEET MD1. |
| | 5. REMOVE APPROXIMATELY 10' OF DAMAGED PIPING INSULATION FROM TUNNEL ENTRY INTO HEAT PLANT FOR BOTH STEAM AND CONDENSATE PIPING. |
| | 6. REMOVE APPROXIMATELY 10' OF DAMAGED PIPING INSULATION AT THIS LOCATION FOR BOTH STEAM AND CONDENSATE PIPING. |
| | 7. REMOVE EXISTING EXPANSION JOINT. |

REMODEL KEY NOTES:

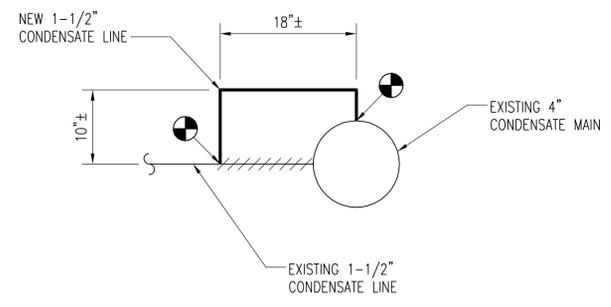
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|----------------|--|
| BASE BID | 1. INSTALL NEW PIPING ANCHOR IN THIS LOCATION. SEE DETAIL ON SHEET MD1 FOR ADDITIONAL INFORMATION. INSTALL NEW PIPING SECTION AS REQUIRED DUE TO DEMOLITION WORK. |
| ALTERNATE NO.1 | 2. BOUNDARY REPRESENTS NEW CONCRETE FLOOR TO FACILITATE ANCHOR INSTALLATION. SEE DETAIL ON SHEET MD1 FOR ADDITIONAL INFORMATION. |
| ALTERNATE NO.2 | 3. INSTALL NEW PIPING SUPPORT IN THIS LOCATION. SEE DETAIL ON SHEET MD1 FOR ADDITIONAL INFORMATION. INSTALL NEW PIPING SECTION AS REQUIRED DUE TO DEMOLITION WORK. |
| ALTERNATE NO.3 | 4. REINSTALL EXISTING PIPE GUIDE IN THIS LOCATION. |
| | 5. INSTALL NEW PIPE SUPPORT. SEE DETAIL ON SHEET MD1 FOR ADDITIONAL INFORMATION. |
| | 6. INSTALL APPROXIMATELY 10' OF PIPING INSULATION FROM TUNNEL ENTRY INTO HEAT PLANT FOR BOTH STEAM AND CONDENSATE PIPING. |
| | 7. INSTALL APPROXIMATELY 10' OF PIPING INSULATION FOR BOTH STEAM AND CONDENSATE PIPING. |
| | 8. RE-ROUTE EXISTING 1-1/2" CONDENSATE LINE. SEE DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION. |
| | 9. INSTALL NEW EXPANSION JOINT. MATCH EXISTING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. |



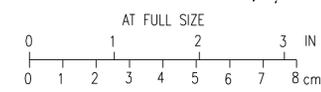
MECHANICAL PLAN - DEMOLITION
SCALE: 1"=10'-0"



MECHANICAL PLAN - REMODEL
SCALE: 1"=10'-0"



CONDENSATE LINE DETAIL 1-MP1
SCALE: NTS



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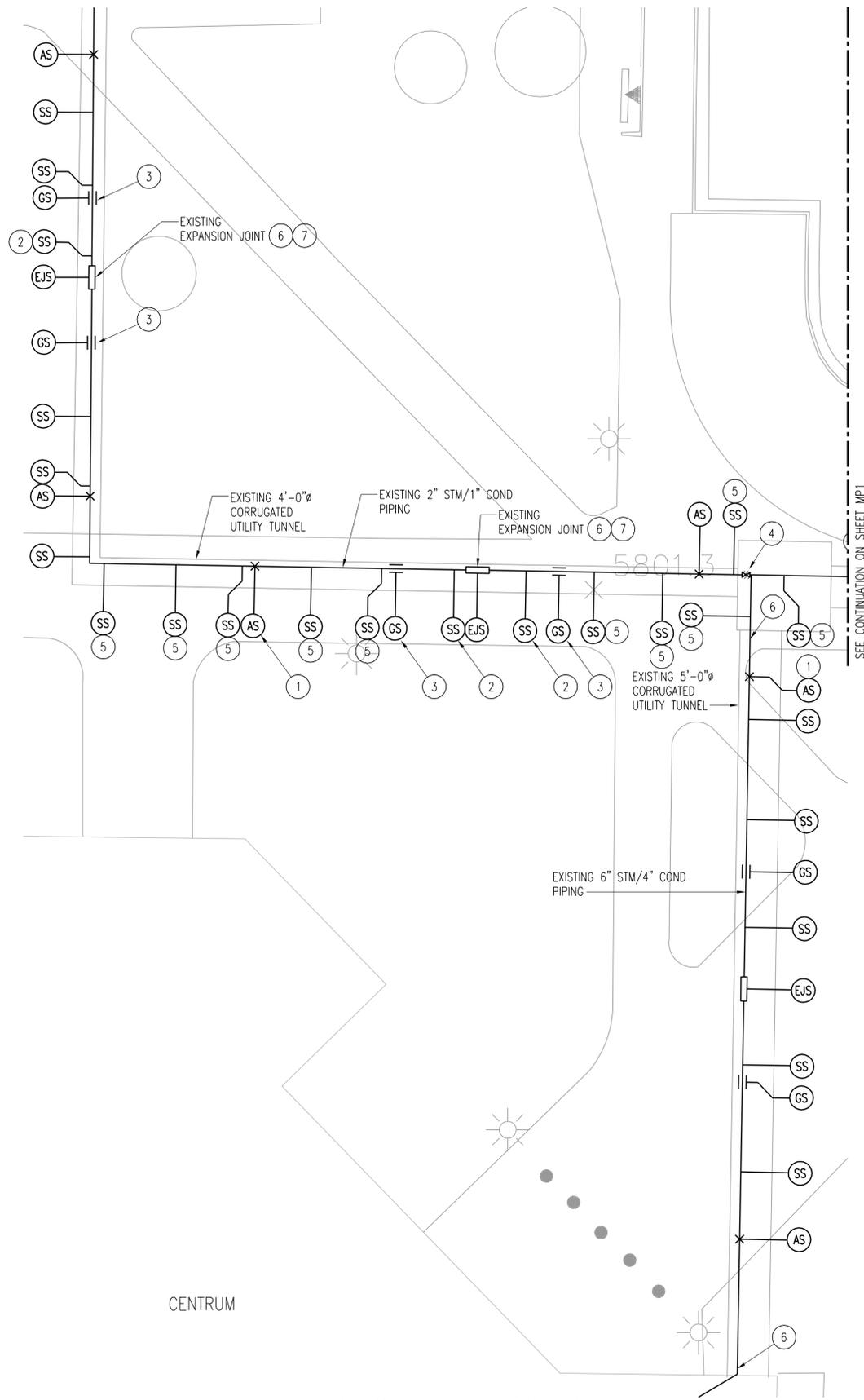
SOUTHERN UTAH UNIVERSITY
 STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT
 CEDAR CITY, UTAH

**MECHANICAL PLAN
 DEMOLITION AND REMODEL**

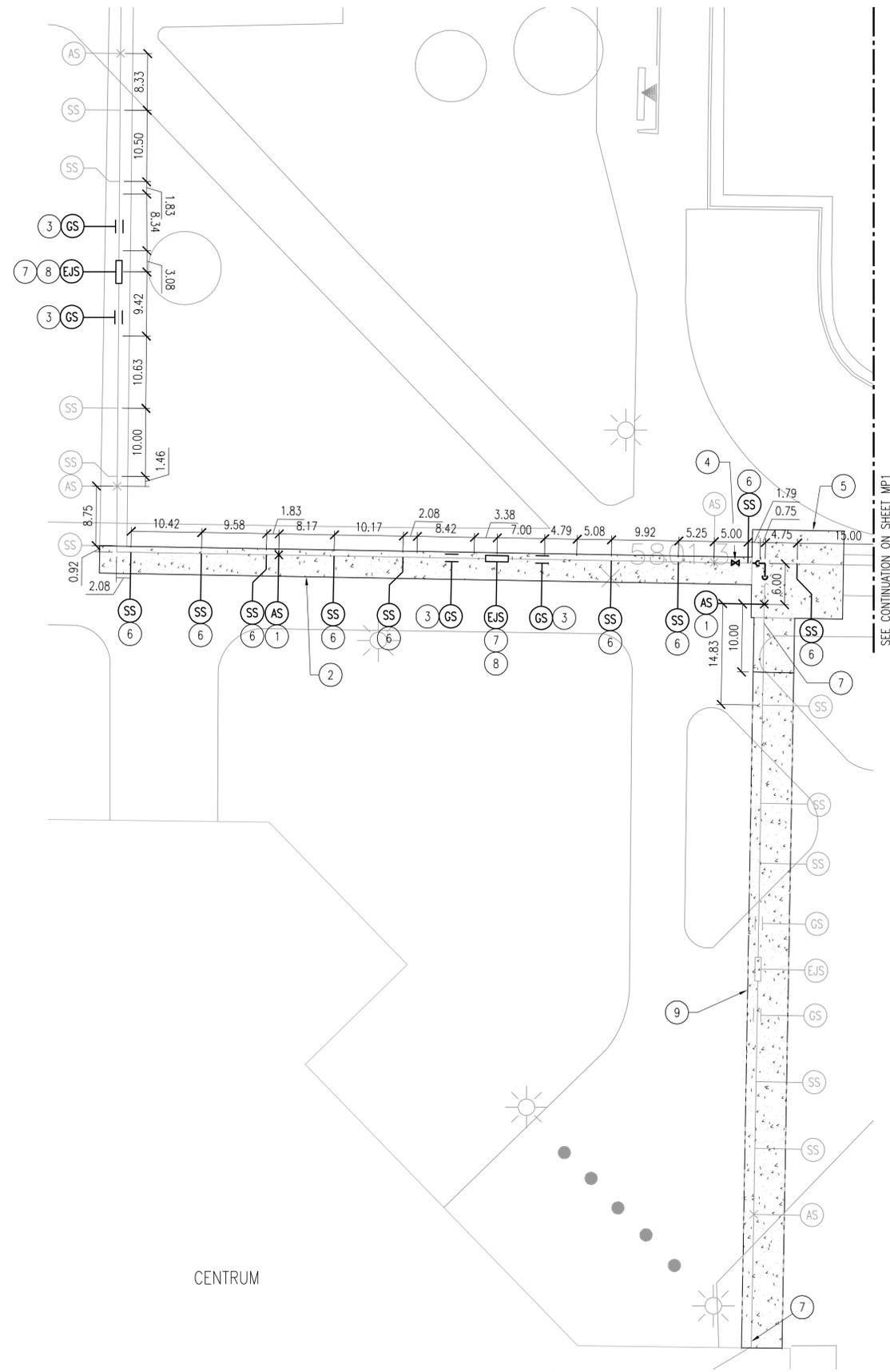
DESIGNED	C. KIM	SCALE:	AS NOTED
DRAWN	J. KIM	NO.	22182.01
CHECKED	D. SCANLON	REV.	
APPROVED	C. KIM		
APPROVED	D. SCANLON		
DATE	08/05/09		

MP1 **0**

CADD: D1-1-R-3



MECHANICAL PLAN - DEMOLITION
SCALE: 1"=10'-0"



MECHANICAL PLAN - REMODEL
SCALE: 1"=10'-0"



GENERAL NOTES:

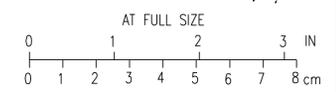
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. VOIDS IN FLOOR AS A RESULT OF DEMOLITION WORK SHALL BE FILLED WITH CONCRETE.
3. CONTRACTOR SHALL RETAIN REMOVED EXISTING STEAM PIPING FOR INSPECTION BY OWNER.

DEMOLITION KEY NOTES:

- BASE BID — 1. EXISTING ANCHOR TO REMAIN. SEE REMODEL PLAN FOR ANCHOR MODIFICATIONS.
- ALTERNATE NO.1 — 2. REMOVE EXISTING PIPE SUPPORT COMPLETE.
- BASE BID — 3. REMOVE AND RELOCATE EXISTING PIPE GUIDE TO NEW LOCATION. SEE REMODEL PLAN ON THIS SHEET.
- ALTERNATE NO.2 — 4. REMOVE EXISTING 2" ISOLATION VALVE. SEE REMODEL PLAN FOR NEW LOCATION.
- ALTERNATE NO.3 — 5. REMOVE EXISTING SUPPORT COMPLETE AND REPLACE WITH NEW SUPPORT PER DETAIL ON SHEET MD1.
- ALTERNATE NO.3 — 6. REMOVE APPROXIMATELY 10' OF DAMAGED PIPING INSULATION ON BOTH STEAM AND CONDENSATE PIPING.
- ALTERNATE NO.3 — 7. REMOVE EXISTING EXPANSION JOINT.

REMODEL KEY NOTES:

- BASE BID — 1. INSTALL NEW PIPING ANCHOR IN THIS LOCATION. SEE DETAIL ON SHEET MD1 FOR ADDITIONAL INFORMATION. INSTALL NEW PIPING SECTION AS REQUIRED DUE TO DEMOLITION WORK.
- ALTERNATE NO.1 — 2. BOUNDARY REPRESENTS NEW CONCRETE FLOOR TO FACILITATE ANCHOR INSTALLATION. SEE DETAIL ON SHEET MD1 FOR ADDITIONAL INFORMATION.
- BASE BID — 3. REINSTALL EXISTING PIPE GUIDE IN THIS LOCATION.
- ALTERNATE NO.2 — 4. REINSTALL EXISTING 2" ISOLATION STEAM VALVE IN THIS APPROXIMATE LOCATION.
- ALTERNATE NO.2 — 5. SEE ISOMETRIC DRAWING ON SHEET MD1 FOR PIPING MODIFICATIONS WITHIN VAULT.
- ALTERNATE NO.3 — 6. INSTALL NEW PIPE SUPPORT. SEE DETAIL ON SHEET MD1 FOR ADDITIONAL INFORMATION.
- ALTERNATE NO.3 — 7. INSTALL APPROXIMATELY 10' OF PIPING INSULATION FOR BOTH STEAM AND CONDENSATE PIPING.
- ALTERNATE NO.3 — 8. INSTALL NEW EXPANSION JOINT. MATCH EXISTING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ALTERNATE NO.3 — 9. BOUNDARY REPRESENTS NEW CONCRETE FLOOR. SEE SHEET MD1 FOR ADDITIONAL INFORMATION.



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SOUTHERN UTAH UNIVERSITY
STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT
CEDAR CITY, UTAH

**MECHANICAL PLAN
DEMOLITION AND REMODEL**

DESIGNED	C. KIM	SCALE:	AS NOTED
DRAWN	J. KIM	NO.	22182.01
CHECKED	D. SCANLON	REV.	0
APPROVED	C. KIM	MP2	
APPROVED	D. SCANLON		
DATE	08/05/09		

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND CONDITIONS ONSITE AS ADDRESSED IN THE STRUCTURAL DOCUMENTS.
2. ANY CONFLICTS OR OMISSIONS OF THE EXISTING STRUCTURE AND THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE WORK IS TO CONTINUE FORWARD.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONS WITHIN AND ADJACENT TO THE JOBSITE.
4. ANY AND ALL SITE VISITS/OBSERVATIONS BY THE ENGINEER OF RECORD OR HIS/HER REPRESENTATIVES ARE NOT TO BE INTERPRETED AS SPECIAL INSPECTION OR APPROVAL ON ANY WORK PERFORMED ON THE JOBSITE.
5. PROVIDE SHOP DRAWINGS SUBMITTALS PRIOR TO THE FABRICATION OR ERECTION OF ANY STRUCTURAL COMPONENTS.

STRUCTURAL DESIGN CRITERIA

1. BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC) 2006; PUBLISHED BY INTERNATIONAL CODE COUNCIL, INC.
2. AMERICAN NATIONAL STANDARDS INSTITUTE CODE, ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES; PUBLISHED BY AMERICAN NATIONAL STANDARDS INSTITUTE, INC.
3. STEEL DESIGN CODE: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LOAD AND RESISTANCE FACTOR DESIGN (LRFD) 2005; PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
4. CONCRETE DESIGN CODE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-05; PUBLISHED BY AMERICAN CONCRETE INSTITUTE.
5. STRUCTURAL WELDING CODE: AWS D-1.1, PUBLISHED BY AMERICAN WELDING SOCIETY
6. STRUCTURAL STEEL: SEE SPECIFICATION.
7. SPECIAL LOADS: SEE PLANS AND DETAILS FOR SPECIFIED INPLACE PERMANENT EQUIPMENT LOADS WHERE APPLICABLE.

FIELD MEASUREMENT NOTES

1. ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE APPROXIMATE; CONTRACTOR SHALL MAKE ALL NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURES, BREACHING AND EQUIPMENT TO VERIFY DIMENSIONS SHOWN ON DRAWINGS AND TO PROVIDE DIMENSIONS NOT SHOWN, PRIOR TO FABRICATION. COSTS FOR MODIFICATIONS OF NEW CONSTRUCTION, DUE TO LACK OF CONFIRMATION OF DIMENSIONS BY FIELD MEASUREMENTS SHALL BE BORNE BY CONTRACTOR.
2. CONTRACTOR'S STRUCTURAL STEEL DETAILER SHALL MAKE NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURAL STEEL CONNECTIONS TO ENSURE NEW CONNECTION DETAILS SHOWN ON SHOP DRAWINGS ARE COMPATIBLE WITH EXISTING CONNECTIONS AND ARE CONSTRUCTABLE AS DETAILED.

EXISTING CONDITIONS

1. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MEANS AND METHODS REQUIRED FOR SUFFICIENT SHORING OF THE EXISTING STRUCTURE AS REQUIRED FOR INDIVIDUAL MEMBER MODIFICATIONS OR REPLACEMENT.
2. CONTRACTOR IS TO NOTIFY THE ENGINEER OF RECORD CONCERNING ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS & EXISTING CONDITIONS AT OR ADJACENT TO ANY LOCATION ADDRESSED FOR MODIFICATION WITHIN THESE DOCUMENTS.

STEEL NOTES

1. PROVIDE ALL STEEL SECTIONS SPECIFIED WITHIN THE STRUCTURAL DOCUMENTS PER SECTION SPECIFICATIONS OF AISC AS FOLLOWS UNLESS NOTED OTHERWISE:

WF BEAMS	ASTM A992
WF COLUMNS	ASTM A992
ANGLES	ASTM A36
RECTANGULAR/SQUARE HSS	ASTM 500 GRADE B
CHANNELS	ASTM A36
BASE PLATE	ASTM A36
STIFFENER PLATE	ASTM A36
ANCHOR BOLTS	ASTM A307 GRADE A
BEAM TO BEAM/COLUMN CONNECTION	ASTM A325

2. ELEVATIONS: REFER TO TOP SURFACE OF FLANGE OF MEMBER (AND CENTERLINE OF PIPES) UNLESS SHOWN OTHERWISE.
3. FRAMING MEMBERS NOTED BY DEPTH AND WEIGHT SHALL CONFORM TO THE AISC SPECIFICATION. FRAMING MEMBERS NOTED BY DEPTH ONLY ARE FULLY SIZED ON ANOTHER PLAN OR ELEVATION.
4. MISCELLANEOUS ANCHOR BOLTS, EXPANSION ANCHORS, ANCHOR RODS, AND FASTENERS NOT INDICATED, BUT REQUIRED FOR ANCHORAGE OF EQUIPMENT AND MATERIALS, SHALL BE PROVIDED (AS RECOMMENDED BY MANUFACTURER OF ITEMS). ANCHORAGE WILL BE SUBJECT TO REVIEW BY ENGINEER.

5. CONTRACTOR SHALL FURNISH AND INSTALL MISCELLANEOUS STEEL ITEMS NOT SHOWN BUT NECESSARY FOR COMPLETE CONSTRUCTION OF PROJECT.
6. WELD SYMBOLS SHOWN MAY NOT DISTINGUISH BETWEEN FIELD AND SHOP WELDING. CONTRACTOR SHALL PROVIDE AS MUCH WELDING AS PRACTICAL IN THE SHOP. CONTRACTOR'S SHOP DRAWINGS SHALL SHOW ALL WELDING AND DISTINGUISH BETWEEN FIELD AND SHOP WELDING.
7. WHERE FILLET WELD SIZES ARE NOT NOTED ON DRAWINGS, PROVIDE MINIMUM SIZE IN ACCORDANCE WITH AWS D1.1, 5.14. ALL OTHER TYPE WELDS NOT SIZED ON DRAWINGS SHALL DEVELOP FULL STRENGTH OF MEMBERS ATTACHED.

8. WELDING WILL BE ALLOWED ONLY AT SCHEDULED TIMES AND IN LOCATIONS CONSISTENT WITH OWNER'S PLANT OPERATIONS.
9. PROVIDE ALL CONNECTIONS WITHIN THESE STRUCTURAL DOCUMENTS WITH E70XX ELECTRODES. PERFORM WELDS AS REQUIRED BY AWS SPECIFICATIONS FOR 'SMAW' PROCESS.
10. MINIMUM REQUIRED FILLET WELD THICKNESS AS REQUIRED PER BASE MATERIAL THICKNESS (AISC LRFD THIRTEENTH ED):

MATERIAL THICKNESS (IN.)	MIN FILLET WELD (IN.)
UPTO 1/4	1/8
OVER 1/4 TO 1/2	3/16
OVER 1/2 TO 3/4	1/4
OVER 3/4	5/16

11. CONNECTIONS
 - A. SHOP CONNECTIONS: EITHER WELD OR USE HIGH-STRENGTH BOLTS, UNLESS TYPE IS SPECIFICALLY SHOWN.
 - B. FIELD CONNECTIONS: PROVIDE BOLTS FOR ALL FIELD CONNECTIONS EXCEPT WHERE SHOWN OTHERWISE ON THE DRAWINGS.
 1. USE OF HIGH-STRENGTH BOLTS: CONFORM TO "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS," AS APPROVED BY RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS OF THE ENGINEERING FOUNDATION, AND PUBLISHED BY AISC.

- NONSHRINK GROUT:
- A. USE "MASTER BUILDERS" MASTERFLOW 928 GROUT, OR EQUAL. MINIMUM STRENGTH 5000 PSI AT 28 DAYS.

STEEL NOTES (CONT)

14. SHOP PAINTING
 - A. SURFACE PREPARATION: REMOVE OIL, GREASE, DIRT, RUST, LOOSE MILL SCALE, AND OTHER FOREIGN ELEMENTS BY "COMMERCIAL BLAST CLEANING" IN ACCORDANCE WITH SSPC-SP6.
 - B. SHOP PRIMER: APPLY ONE SHOP COAT OF "90-96 TNEPEC-ZINC," BY TNEPEC CO., INC. OR EQUAL; APPLY IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS INCLUDING RECOMMENDED COVERAGE.

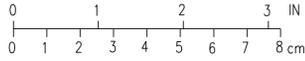
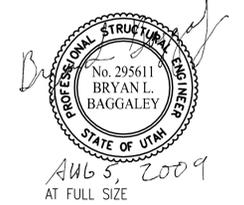
1. OMIT SHOP PRIME COAT FROM SURFACES SUBJECT TO FIELD WELDING. DO NOT PAINT STAINLESS STEEL SURFACES.
2. OMIT PAINT FROM CONTACT SURFACES OF SLIP-CRITICAL CONNECTIONS UNLESS PAINT HAS BEEN QUALIFIED BY TEST IN ACCORDANCE WITH "TEST METHOD TO DETERMINE THE SLIP COEFFICIENT FOR COATINGS USED IN BOLTED JOINTS" AS ADOPTED BY THE AISC RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS. MANUFACTURER'S CERTIFICATION SHALL INCLUDE CERTIFIED COPY OF TEST REPORT.
3. SUPPLY ONE FIELD COAT OF PRIMER TO CLEANED SURFACES OF BOLTS, NEW WELDS, AND ABRASIONS TO SHOP COAT AFTER ERECTION.

15. FIELD PAINTING
 - A. PREPARE SURFACES TO BE FINISHED IN CONFORMANCE TO RECOMMENDATIONS OF FINISH MANUFACTURER.
 - B. FINISH COAT: APPLY ONE COAT OF "66-HI-BUILD EPOXOLINE" BY TNEPEC CO., INC OR EQUAL. APPLY IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS INCLUDING RECOMMENDED COVERAGE. COLOR: BJ45-LIGHT GRAY BY TNEPEC CO.

16. SUBMITTALS
 - A. SHOP DRAWINGS FOR PIPE SUPPORT FRAMES AND MISCELLANEOUS METAL ITEMS.
 - B. LIST OF MANUFACTURED MATERIALS PROPOSED, IDENTIFYING MANUFACTURER AND TYPE.

ABBREVIATIONS

AB	ANCHOR BOLT(S)	MAT	MATERIAL
ALT	ALTERNATE	MAX	MAXIMUM
APPROX	APPROXIMATE	MECH	MECHANICAL
B-B	BACK TO BACK	MFR	MANUFACTURER
BLDG	BUILDING	MIN	MINIMUM
BOT	BOTTOM	NIC	NOT IN CONTRACT
BRG	BEARING	NTS	NOT TO SCALE
C	CHANNEL	OPNG	OPENING
CL	CENTER LINE	OPP	OPPOSITE
CLR	CLEAR	PL	PLATE
CNTRL	CONTROL	PSF	POUNDS PER SQUARE FOOT
COL	COLUMN	PSI	POUNDS PER SQUARE INCH
CONC	CONCRETE	R	RADIUS
CONT	CONTINUOUS	RECT	RECTANGLE
CONTR	CONTRACTOR	REF	REFERENCE
CONST	CONSTRUCTION	REINF	REINFORCING
CTR	CENTER	REQD	REQUIRED
DET	DETAIL	RT	RIGHT
DIA	DIAMETER	SC	SLIP-CRITICAL
DIST	DISTANCE	SHT	SHEET
DN	DOWN	SIM	SIMILAR
DWG	DRAWING	SPEC	SPECIFICATION(S)
EA	EACH	SQ	SQUARE
E-E	EDGE TO EDGE	STD	STANDARD
EF	EACH FACE	STIFF	STIFFENER
EJ	EXPANSION JOINT	STL	STEEL
EL	ELEVATION	STRL	STRUCTURAL
EMBED	EMBEDMENT	T&B	TOP AND BOTTOM
EQL	EQUAL	THK	THICK(NESS)
EQPT	EQUIPMENT	TOB	TOP OF BOLT, BEAM
EST	ESTIMATE	TOC	TOP OF CONCRETE
EW	EACH WAY	TOS	TOP OF STEEL
EXT	EXTERIOR	TOW	TOP OF WALL
EXST	EXISTING	TYP	TYPICAL
FD	FLOOR DRAIN	UNO	UNLESS NOTED OTHERWISE
FLR	FLOOR	VERT	VERTICAL
FT	FOOT, FEET	W/	WITH
GA	GAUGE	WF	WIDE FLANGE
HORIZ	HORIZONTAL	WT	WEIGHT
HSS	HOLLOW STRUCTURAL SECTION		
IN	INCH(ES)		
JT	JOINT		
LB	POUND		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LT	LEFT		



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SOUTHERN UTAH UNIVERSITY STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT CEDAR CITY, UTAH	
GENERAL STRUCTURAL NOTES SHEET 1	
DESIGNED <u>B. BAGGAILEY</u> DRAWN <u>J. KIM</u> CHECKED <u>P. BLACKHAM</u> APPROVED <u>B. BAGGAILEY</u> APPROVED <u>P. BLACKHAM</u> DATE <u>08/05/09</u>	SCALE: AS NOTED NO. 22182.01 REV. 0

REINFORCING STEEL NOTES:

CONCRETE NOTES

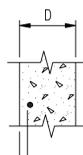
STATEMENT OF SPECIAL INSPECTIONS

GENERAL NOTES

- CONFORM WITH ACI 318 AND ACI STANDARD FOR "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
- REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS UNLESS SHOWN OTHERWISE.
- SHIFT REINFORCING BARS TO CLEAR ANCHOR BOLTS AND EMBEDDED ITEMS; OBTAIN ENGINEER'S APPROVAL AND ADD EXTRA REINFORCING BAR IF REQUESTED BY ENGINEER. CUTTING OF REINFORCING BARS NOT PERMITTED.
- REINFORCING SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS SHOWN OTHERWISE.
- TACK WELDING TO REINFORCING BARS IS NOT PERMITTED.
- LAP ALL #11 AND SMALLER BAR SPLICES AND WELD OR MECHANICALLY CONNECT ALL #14 AND LARGER BAR SPLICES UNLESS APPROVED OTHERWISE BY ENGINEER.
- MINIMUM BAR SPLICE LAP LENGTH SHALL BE AS SHOWN. WHERE LAP LENGTH IS NOT SHOWN ON DRAWINGS, USE MINIMUM LENGTH SHOWN IN THE FOLLOWING TABLE.

REINFORCING BAR MINIMUM SPLICE LAP LENGTH IN INCHES										
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	
TOP BARS	24	32	40	48	70	80	90	102	113	
OTHER BARS	19	25	31	37	54	62	70	78	87	

- A. CLASS B SPLICE FOR $f_y = 60,000$ PSI, $f'_c = 4000$ PSI, NORMAL WEIGHT CONCRETE, UNCOATED BARS AND FOLLOWING:
- CLEAR SPACING OF BARS ≥ 2 BAR DIA AND COVER \geq BAR DIA, OR
 - CLEAR SPACING OF BARS \geq DIA BAR AND COVER \geq DIA BAR, AND STIRRUPS OR TIES THROUGHOUT LAP NOT LESS THAN ACI CODE MINIMUM.
- B. TOP BARS ARE DEFINED AS HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
- ALL BARS SHALL BE SECURELY PLACED IN FINAL POSITION PRIOR TO PLACING CONCRETE. PLACING BARS INTO WET CONCRETE IS PROHIBITED.
 - REINFORCING CONCRETE COVER UNLESS OTHERWISE SHOWN: 2" MINIMUM WITH FOLLOWING EXCEPTIONS; 3" WHEN DEPOSITED AGAINST EARTH; 3/4" FOR WALLS AND SLABS NOT EXPOSED TO EARTH OR WEATHER.
 - CONCRETE REINFORCEMENT SHALL BE PLACED WITHIN FOLLOWING TOLERANCE RELATIVE TO FORMED OR UNFORMED CONCRETE SURFACE:



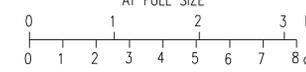
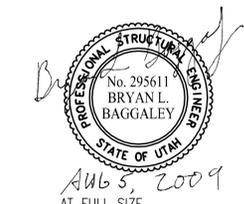
SPECIFIED COVER	TOLERANCE	
	D ≤ 12"	D > 12"
3/4"	-1/8", +1/4"	-1/8", +3/8"
1"	± 1/4"	-1/4", +3/8"
1 1/2" OR GREATER	± 3/8"	-3/8", +1/2"

NOTE:
TOLERANCES APPLY ONLY AT LOCAL ANOMALIES.
SIZE CHAIRS AND SPACERS FOR SPECIFIED COVER.

- ALL CONCRETE SHALL BE 4000 PSI CONCRETE WITH 1-1/2" LB OF FIBERMESH REINFORCING PER CUBIC YARD.
- EXPOSED CONCRETE CORNER CHAMFER: 1" UNLESS SHOWN OTHERWISE.
- KEYWAY DIMENSIONS: DEPTH 1-1/2"; WIDTH ONE-THIRD THAT OF MEMBER UNLESS SHOWN OTHERWISE.
- ALL CONSTRUCTION JOINTS SHALL HAVE KEYWAYS UNLESS SHOWN OTHERWISE.
- CONSTRUCTION JOINTS AS SHOWN MAY BE VARIED TO SUIT PLACING SEQUENCE PROVIDED THE RELOCATION, ADDITION, OR DELETION OF CONSTRUCTION JOINTS IS APPROVED BY THE ENGINEER PRIOR TO PREPARATION OF REINFORCING STEEL SHOP DRAWINGS.
- PROVIDE SETTING TEMPLATES TO POSITION ANCHOR BOLTS PRIOR TO PLACING CONCRETE. ACCURATELY POSITION BOLTS TO ASSURE CORRECT VERTICAL AND HORIZONTAL LOCATION TO MATCH STEEL OR EQUIPMENT BOLT PATTERN.
- ALL METAL FABRICATIONS EMBEDDED IN CONCRETE, OTHER THAN REINFORCING AND ANCHOR BOLTS, SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM A386 AS APPLICABLE.
- CONCRETE SHALL NOT BE LOADED UNTIL IT HAS ATTAINED SUFFICIENT STRENGTH TO SAFELY WITHSTAND LOADING AND UNTIL REQUIRED SHORING AND BRACING HAVE BEEN INSTALLED.
- CONSTRUCTION CRANE OR OTHER HEAVY ERECTION EQUIPMENT WILL NOT BE PERMITTED ON SLABS.

- SPECIAL INSPECTION AS PER IBC SECTION 1704 SHALL BE PROVIDED UNLESS WAIVED BY THE BUILDING OFFICIAL. AN INDEPENDENT AGENCY IS TO BE EMPLOYED BY THE OWNER TO PROVIDE REQUIRED INSPECTIONS LISTED BELOW. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE AND SCHEDULE WITH THE SPECIAL INSPECTOR THROUGH THE CONSTRUCTION PROCESS THE APPROPRIATE TIMES FOR THESE INSPECTIONS TO OCCUR. THE FOLLOWING ARE REQUIRED INSPECTIONS TO BE PROVIDED:
 - STRUCTURAL STEEL** - PER SECTION 1704.3
 - IDENTIFICATION OF STEEL WITH MILL REPORTS - (PERIODIC)
 - SAMPLING AND TESTING - (PERIODIC)
 - WELDING** - PER SECTION 1704.3.1
 - ALL FIELD WELDING - (PERIODIC)
 - SHOP WELDING MUST BE PERFORMED BY A SHOP WITH AWS CERTIFICATION
 - VERIFICATION OF WELDER CERTIFICATION FOR TYPE OF WELD BEING PERFORMED.
 - STEEL FABRICATION**
 - FABRICATOR MUST SUBMIT CERTIFICATE OF COMPLIANCE
 - BOLTING**
 - HIGH STRENGTH BOLTED CONNECTION USING A325, AND A307 BOLTS ALL CONDITIONS PROVIDED AS SNUG TIGHT, CONTACT OF ALL PLYS - (PERIODIC)
 - CONCRETE**
 - REINFORCING STEEL (PERIODIC)
 - BOLTS AND EMBEDMENTS (PERIODIC)
 - REQUIRED DESIGN MIX (PERIODIC)
 - CONCRETE PLACEMENT (CONTINUOUS)
 - CONCRETE TESTING (EVERY 50 YARDS WITH A MINIMUM OF 1 PER DAY, PER TYPE OF CONCRETE PLACED.)
 - ERECTION OF PRECAST (PERIODIC)
 - FORMWORK (PERIODIC)
- THE CONTRACTOR IS TO NOTIFY THE ENGINEER A MINIMUM OF 3 DAYS PRIOR TO THE PHASES OF CONSTRUCTION LISTED BELOW TO ALLOW FOR SCHEDULING OF SITE OBSERVATION BY THE ENGINEER OF RECORD.
 - INITIAL PLACEMENT OF STRUCTURAL STEEL MEMBERS
 - FINAL PLACEMENT OF STRUCTURAL STEEL MEMBERS
 - INITIAL PLACEMENT OF CONCRETE IN ANY SITE FORMWORK.

- DIMENSIONS AND/OR ELEVATIONS MARKED THUS (±) ARE ASSUMED AND SHALL BE VARIED BY THE CONTRACTOR TO SUIT EQUIPMENT FURNISHED. FINAL DIMENSIONS ARE SUBJECT TO THE REVIEW OF THE ENGINEER AND/OR OWNER.
- DIMENSIONS AND/OR ELEVATIONS MARKED THUS (±) MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- FOR PIPE SUPPORT LOCATIONS, SEE MECHANICAL DRAWINGS.



0	ISSUE FOR CONSTRUCTION	JK	BB	PB	08/05/09
NO.	REVISIONS	DWN	APVD	APVD	DATE

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SOUTHERN UTAH UNIVERSITY
STEAM DISTRIBUTION SYSTEM ANCHOR REPLACEMENT
CEDAR CITY, UTAH

**GENERAL
STRUCTURAL NOTES
SHEET 2**

DESIGNED	B. BAGGLEY	SCALE:	AS NOTED
DRAWN	J. KIM	NO.	22182.01
CHECKED	P. BLACKHAM	REV.	
APPROVED	B. BAGGLEY		
APPROVED	P. BLACKHAM		
DATE	08/05/09		

SG2 0

CADD D1-R3