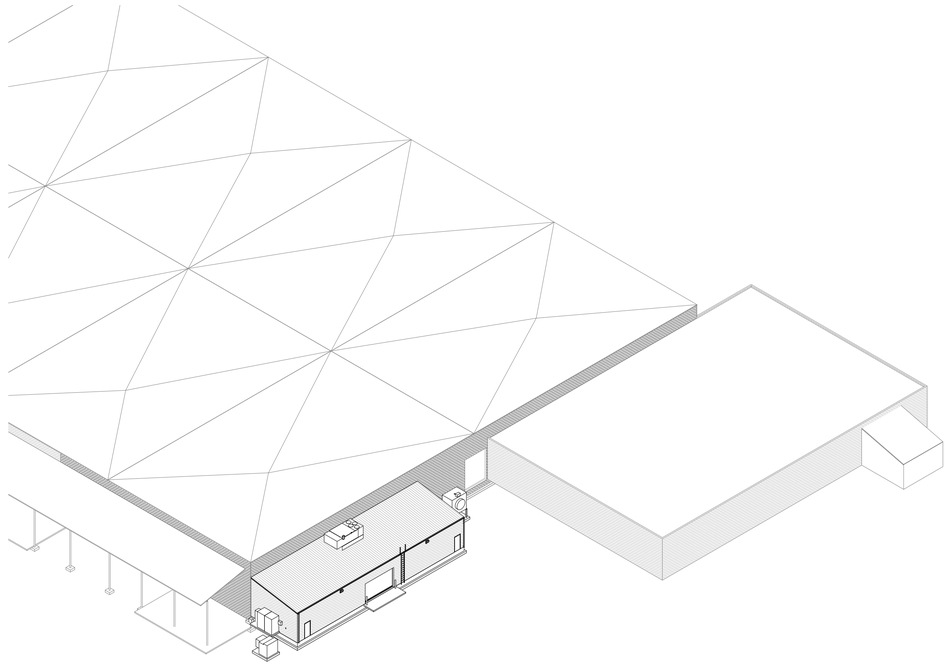
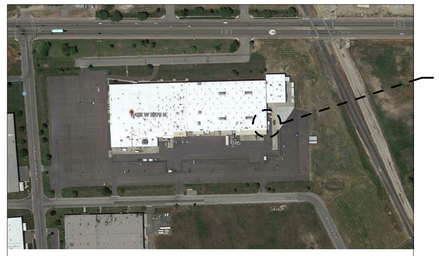
PARKER/HANNFIN CORP. ADDITION TO THE CONTROL SYSTEMS DIVISION PLANT

Case, Lowe and Hart, Inc.
2484 Washington Blvd. Ste 510
Ogden, Utah 84401

ARW Engineers
1594 West Park Circle
Ogden, Utah 84404

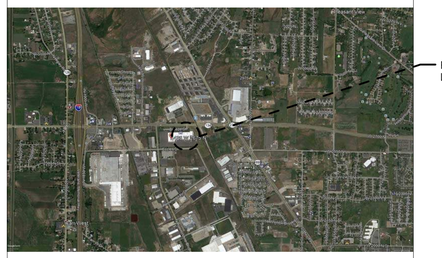
Reeve & Associates
5160 1500 West
Riverdale, Utah 84405





PROJECT LOCATION

VICNITY MAP



PROJECT LOCATION

LOCATION MAP

DRAWING INDEX

IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

CLH ARCHITECTS ENGINEERS
Case, Lowe & Hart, Inc. •2484 Washington Blvd.
Suite 510 • Ogden, Utah• 84401
801.399.5821 • www.elhae.com

CONSULTANTS

STAMP

STATE OF UTAH
STEVEN J. PETERSON
6830295-0301
LICENSED ARCHITECT
4/2/18

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	27 MARCH, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	Author
CHK'D BY:	Checker

PERMIT SET

27 MARCH, 2018

SHEET TITLE

TITLE SHEET

SHEET NO:

G001

4/2/2018 9:51:09 AM

CODE COMPLIANCE NOTES:

APPLICABLE CODES: 2015 INTERNATIONAL BUILDING CODE
2014 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL PLUMBING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE
2015 INTERNATIONAL FUEL GAS CODE

OCCUPANCY: EXISTING BLDG F1/B
EQUIPMENT ONLY ADDITION

CONSTRUCTION TYPE: IIIb
BUILDING WILL BE SERVED BY AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13.

ALLOWABLE FLOOR AREA: UNLIMITED

ACTUAL FLOOR AREA: EXISTING BUILDING APPROX 237,025 sf
NEW ADDITION: 2,442 sf
TOTAL SF: 239,467 sf

ALLOWABLE BUILDING HEIGHT: 75 ft

ACTUAL BUILDING HEIGHT: 28 ft

ALLOWABLE EGRESS
TRAVEL DISTANCE: 250 ft

ACTUAL LONGEST EGRESS
TRAVEL DISTANCE: 67 ft

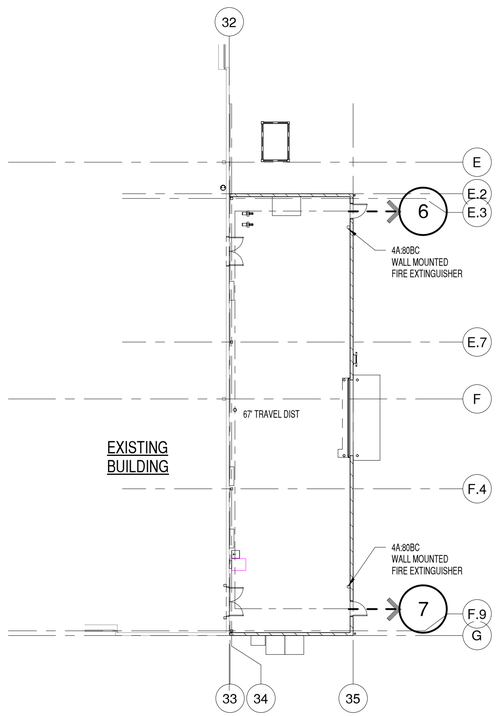
EXITING REQUIREMENTS:
AREA FUNCTION

	FLOOR AREA	FLOOR AREA PER OCC.	OCCUPANTS
ADDITION	2,442	200	13

	OCCUPANTS	EXITS	WIDTH
GROUND FLOOR	13	1	2.6"

EXITING PROVIDED:

	OCCUPANTS	EXITS	WIDTH
GROUND FLOOR	13	2	64"



A3 ADDITION LIFE SAFETY PLAN
1/16" = 1'-0"

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CONSULTANTS

STAMP

STATE OF UTAH
STEVEN J. PETERSON
6830295-0301
LICENSED ARCHITECT
4/2/18

Parker

ADDITION TO THE
CONTROL SYSTEMS DIV.
PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	27 MARCH, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	Author
CHK'D BY:	Checker

PERMIT SET
27 MARCH, 2018

SHEET TITLE

CODE REVIEW &
LIFE SAFETY

SHEET NO:

G002

4/2/2018 8:28:28 AM

Project Narrative/Notes/Revisions

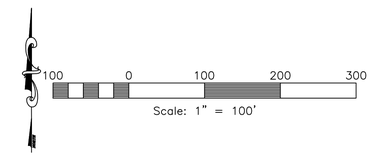
1. 03/02/2018 JM – COMPLETED DESIGN FOR CLIENT & CITY REVIEW.

Parker/Hannifin Corp.
1425 West 2675 North
Improvement Plans

CITY OF OGDEN, WEBER COUNTY, UTAH
MARCH 2018

Vicinity Map
NOT TO SCALE

Sheet Index



Engineer's Notice To Contractors

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM AVAILABLE INFORMATION PROVIDED BY OTHERS. THE LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO CONTACT THE UTILITY COMPANIES AND TAKE DUE PRECAUTIONARY MEASURE TO PROTECT ANY UTILITY LINES SHOWN, AND ANY OTHER LINES OBTAINED BY THE CONTRACTOR'S RESEARCH, AND OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

Developer Contact:

Blue Stakes Location Center
Call: Toll Free
1-800-662-4111
Two Working Days Before You Dig

Reeve & Associates, Inc.
5160 SOUTH 1500 WEST
RIVERDALE, UTAH 84405
TEL: (801) 621-3100
FAX: (801) 621-2666
www.reeve-assoc.com
LAND PLANNERS • CIVIL ENGINEERS
LAND SURVEYORS • TRAFFIC ENGINEERS
STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

PROJECT NUMBER: 5799-494
DRAWN BY: TRP
ENGINEER: JNR

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CLH ARCHITECTS ENGINEERS
Case, Lowe & Hart, Inc. • 484 Washington Blvd. Suite 510 • Ogden, Utah • 84401
801.399.5821 • www.clhae.com

CONSULTANTS

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LAND SURVEYORS • TRAFFIC ENGINEERS
STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

PROJECT NUMBER: 6528-28

STAMP

REGISTERED PROFESSIONAL ENGINEER
375328
J. NATE REEVE
03/07/2018
STATE OF UTAH

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	22 February, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	DRW
CHK'D BY:	CHK

30% SUBMITTAL SET
02 March, 2018

SHEET TITLE

Cover/Index

SHEET NO:

C1

General Notes:

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: GOVERNING UTILITY MUNICIPALITY, GOVERNING CITY OR COUNTY (IF UN-INCORPORATETED), INDIVIDUAL PRODUCT MANUFACTURERS, AMERICAN PUBLIC WORKS ASSOCIATION (APWA), AND THE DESIGN ENGINEER. THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CONTRACTOR TO STRICTLY FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATLON/BACKFILL, SITE GRUBBING, RETAINING WALLS AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH THE PROJECT GEOTECHNICAL ENGINEER.
3. TRAFFIC CONTROL, STRIPING &' SIGNAGE TO CONFORM TO CURRENT GOVERNING AGENCIES TRANSPORTATION ENGINEER'S MANUAL AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
5. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
6. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
7. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
8. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED THOROUGHLY REVIEWED PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
9. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE OF COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
10. ANY WORK IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE PERMITS FROM THE APPROPRIATE CITY, COUNTY OR STATE AGENCY CONTROLLING THE ROAD, INCLUDING OBTAINING REQUIRED INSPECTIONS.
11. ALL DIMENSIONS, GRADES & UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
12. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING AND BRING UP ANY QUESTIONS BEFOREHAND.
13. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER.
14. CATCH SLOPES SHALL BE GRADED AS SPECIFIED ON GRADING PLANS.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FLAGGING, CAUTION SIGNS, LIGHTS, BARRICADES, FLAGMEN, AND ALL OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
16. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE BONDABLE FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT BID AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PLANS AND SPECIFICATIONS.
17. CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY HIMSELF BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS HE MAY PREFER OF THE LOCATIONS OF THE PROPOSED WORK AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK. IF, DURING THE COURSE OF HIS EXAMINATION, A BIDDER FINDS FACTS OR CONDITIONS WHICH APPEAR TO HIM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, HE SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING HIS BID. SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, HE HAS RELIED AND IS RELYING ON HIS OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON HIS OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT. THE INFORMATION PROVIDED BY THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT HE HAS NOT RELIED SOLELY UPON OWNER- OR ENGINEER-FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING HIS BID.
18. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
19. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER, ENGINEER, AND/OR GOVERNING AGENCIES.
20. CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
21. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
23. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
24. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
25. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
26. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE HIGHEST QUALITY ARE TO BE USED.
27. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THE TRUE INTENT AND PURPOSE OF THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS IN THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN PECULIAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO TIE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.
29. CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4 FEET OR MORE. FOR EXCAVATIONS 4 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH LOCAL, STATE AND NATIONAL SAFETY CODES, ORDINANCES. OR REQUIREMENTS FOR EXCAVATION AND TRENCHES.
30. ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE

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Utility Notes:

1. CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE SERVICE, GAS SERVICE, CABLE, POWER, INTERNET.
2. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING A COMBINATION OF ON-SITE SURVEYS (BY OTHERS). PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE IN THE FIELD, THEIR MAIN AND SERVICE LINES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
3. CONTRACTOR SHALL POT HOLE ALL UTILITIES TO DETERMINE IF CONFLICTS EXIST PRIOR TO BEGINNING ANY EXCAVATION. NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR SHALL VERIFY LOCATION AND INVERTS OF EXISTING UTILITIES TO WHICH NEW UTILITIES WILL BE CONNECTED. PRIOR TO COMMENCING ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE REQUIRED PROCEDURES.
4. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT HIS EXPENSE.
5. ALL VALVES AND MANHOLE COVERS SHALL BE RAISED OR LOWERED TO MEET FINISHED GRADE.
6. CONTRACTOR SHALL CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE.
7. CONTRACTOR SHALL GROUT AT CONNECTION OF PIPE TO BOX WITH NON-SHRINKING GROUT, INCLUDING PIPE VOIDS LEFT BY CUTTING PROCESS, TO A SMOOTH FINISH.
8. CONTRACTOR SHALL GROUT WITH NON-SHRINK GROUT BETWEEN GRADE RINGS AND BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX
9. SILT AND DEBRIS IS TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
10. CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
11. EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DE-WATERED CONDITIONS.
12. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
13. MAINTAIN A MINIMUM 18" VERTICAL SEPARATION DISTANCE BETWEEN ALL UTILITY CROSSINGS.
14. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
15. ALL BOLTED FITTINGS MUST BE GREASED AND WRAPPED.
16. UNLESS SPECIFICALLY NOTED OTHERWISE, MAINTAIN AT LEAST 2 FEET OF COVER OVER ALL STORM DRAIN LINES AT ALL TIMES (INCLUDING DURING CONSTRUCTION).
17. ALL WATER LINES SHALL BE INSTALLED A MINIMUM OF 60" BELOW FINISHED GRADE.
18. ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, PIPE EDGE TO PIPE EDGE, FROM THE WATER LINES. IF A 10 FOOT SEPARATION CAN NOT BE MAINTAINED, THE SEWER LINE AND WATER LINE SHALL BE LAID IN SEPARATE TRENCHES AND THE BOTTOM OF THE WATER LINE SHALL BE AT LEAST 18" ABOVE THE TOP OF THE SEWER LINE.
19. CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
20. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
21. CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.

Erosion Control General Notes:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO GOVERNING AGENCIES ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE COUNTIES. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.

CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTRACTOR TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER. CONSTRUCTION WATER COST TO BE INCLUDED IN BID.

WHEN GRADING OPERATIONS ARE COMPLETED AND THE DISTURBED GROUND IS LEFT ♦OPEN♦ FOR 14 DAYS OR MORE, THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

ALL ACCESS TO PROPERTY WILL BE FROM PUBLIC RIGHT-OF-WAYS. THE CONTRACTOR IS REQUIRED BY STATE AND FEDERAL REGULATIONS TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN AND FILE A "NOTICE OF INTENT" WITH THE GOVERNING AGENCIES.

Maintenance:

ALL BEST MANAGEMENT PRACTICES (BMP'S) SHOWN ON THIS PLAN MUST BE MAINTAINED AT ALL TIMES UNTIL PROJECT CLOSE-OUT.

THE CONTRACTOR'S RESPONSIBILITY SHALL INCLUDE MAKING BI-WEEKLY CHECKS ON ALL EROSION CONTROL MEASURES TO DETERMINE IF REPAIR OR SEDIMENT REMOVAL IS NECESSARY. CHECKS SHALL BE DOCUMENTED AND COPIES OF THE INSPECTIONS KEPT ON SITE.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF BARRIER.

SEDIMENT TRACKED ONTO PAVED ROADS MUST BE CLEANED UP AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN THE END OF THE NORMAL WORK DA Y. THE CLEAN UP WILL INCLUDE SWEEPING OF THE TRACKED MATERIAL, PICKING IT UP, AND DEPOSITING IT TO A CONTAINED AREA.

EXPOSED SLOPES:

ANY EXPOSED SLOPE THAT WILL REMAIN UNTOUCHED FOR LONGER THAN 14 DAYS MUST BE STABILIZED BY ONE OR MORE OF THE FOLLOWING METHODS:

A) Spraying DISTURBED AREAS WITH A TACKIFIER VIA HYDROSEED
B) TRACKING STRAW PERPENDICULAR TO SLOPES
C) INSTALLING A LIGHT-WEIGHT, TEMPORARY EROSION CONTROL BLANKET

Legend

———W———	= PROPOSED CULINARY WATER LINE	FC	= FENCE CORNER
— —EX.W— — —	= EXISTING CULINARY WATER LINE	FF	= FINISH FLOOR
———SS———	= PROPOSED SANITARY SEWER LINE	FFE	= FINISH FLOOR ELEVATION
— —EX.SS— —	= EXISTING SANITARY SEWER LINE	FG	= FINISHED GRADE
———SD———	= PROPOSED STORM DRAIN LINE	FH	= FIRE HYDRANT
— —EX.SD— —	= EXISTING STORM DRAIN LINE	FL	= FLOW LINE
———X———X	= FENCE LINE	GB	= GRADE BREAK
●	= PROPOSED FIRE HYDRANT	INV	= INVERT
○	= EXISTING FIRE HYDRANT	L.F.	= LINEAR FEET
●	= PROPOSED MANHOLE	NG	= NATURAL GRADE
○	= EXISTING MANHOLE	PP	= POWER/UTILITY POLE
•	= PROPOSED SEWER CLEAN-OUT	P.U.E.	= PUBLIC UTILITY EASEMENT
⧗	= PROPOSED GATE VALVE	RCP	= REINFORCED CONCRETE PIPE
⧖	= EXISTING GATE VALVE	RIM	= RIM OF MANHOLE
◘	= PROPOSED WATER METER	R.O.W.	= RIGHT-OF-WAY
⊞	= EXISTING WATER METER	SD	= STORM DRAIN
▬	= PROPOSED CATCH BASIN	SS	= SANITARY SEWER
▭	= EXISTING CATCH BASIN	TBC	= TOP BACK OF CURB
⧓	= PLUG W/ 2" BLOW-OFF	TOA	= TOP OF ASPHALT
⊣	= PLUG & BLOCK	TOC	= TOP OF CONCRETE
●⬭	= STREET LIGHT	TOFF	= TOP OF FINISHED FLOOR
┻	= SIGN	TOI	= TOP OF PUMP ISLAND
BLDG	= BUILDING	TSW	= TOP OF SIDEWALK
C&G	= CURB & GUTTER	W	= CULINARY WATER
CB	= CATCH BASIN	WM	= WATER METER
C.F.	= CUBIC FEET		= EXISTING ASPHALT ROADWAY
C.F.S.	= CUBIC FEET PER SECOND		=EX. ASPHALT TAXIWAY
			= PROPOSED PAVEMENT
			= PROPOSED CONCRETE

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PROJECT NUMBER: 6528-28

STAMP

REGISTERED PROFESSIONAL ENGINEER
375328
J. NATE REEVE
03/07/2018
STATE OF UTAH

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	22 February, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	DRW
CHK'D BY:	CHK

30% SUBMITTAL SET

02 March, 2018

SHEET TITLE

Notes/Legend

SHEET NO:

C2

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ADDITION TO THE CONTROL SYSTEMS DIV. PLANT PARKER/HANNIFIN CORP.

1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	22 February, 2018
PROJECT NO:	18110
CAD DWG FILE:	
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02 March, 2018

SHEET TITLE

Existing Condition Plan

SHEET NO:

C3

EX. BUILDING

EX. CONCRETE PAVEMENT

EXIST. SHED

EXIST. CARPORT

EXIST. LIGHT

EX. CARPORT TO BE REMOVED

EX. ASPHALT PAVEMENT TO BE REMOVED

EX. CONCRETE PAVING TO BE REMOVED

EX. POWER TO BE REMOVED

EX. CANOPY TO BE REMOVED

PROTECT DURING CONSTRUCTION

EX. CANOPY TO BE REMOVED

EX. CURBING TO BE REMOVED

EX. MACHINERY TO BE REMOVED

EX. STORM DRAIN TO BE REMOVED

97.30'

28.20'

EX. SDCB

EX. FENCE

EDGE OF PAVEMENT

EDGE OF PAVEMENT

EDGE OF PAVEMENT

EX. FENCE

EDGE OF PAVEMENT

EDGE OF PAVEMENT

EX. CONCRETE PAVEMENT

EX. SDCB

EX. FENCE

EX. ASPHALT PAVEMENT

EX. ASPHALT PAVEMENT

EX. FENCE

EX. WALL

EXIST. LOADING DOCK

EX. STORM DRAIN GRATE

IRRIG.

EX. WALL

EX. LOADING RAMP

EX. WALL

ELEC.

BOLL.

EX. STORM DRAIN GRATE

BOLL.

EX. WALL

EXIST. BARRIER

EX. ASPHALT PAVEMENT

20 0 20 40 60

Scale: 1" = 20'

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1425 WEST 2675 NORTH OGDEN, UTAH

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SHEET TITLE

Demoltion Plan

SHEET NO:

C4

EX. BUILDING

EX. CONCRETE PAVEMENT

EX. SDCB

EDGE OF PAVEMENT

EX. FENCE

4287

4290

MATCH EXISTING

EXIST. LIGHT

PUMP RM 101

(87.08) FFE

93.30'

97.30'

PROTECT DURING CONSTRUCTION

EX. SDCB
(85.75) GRATE
(83.42) BTM

EXIST. LIGHT

MATCH EXISTING

26.20'

28.20'

IRRIG.

EX. WALL

EXIST. LOADING DOCK

EX. STORM DRAIN GRATE

EX. LOADING RAMP

EX. WALL

EX. WALL

S=10% MIN 270LF. 8" PVC SS

EDGE OF PAVEMENT

EX. CONCRETE PAVEMENT

EX. SDCB

EX. FENCE

EX. ASPHALT PAVEMENT

EX. ASPHALT PAVEMENT

ELEC.

EX. WALL

EXIST. BARRIER

BOLL.

EX. STORM DRAIN GRATE

BOLL.

4286

4287

4288

4289

4290

4291

4292

4293

NOTE: PROP. SEWER SHOWN FOR REFERENCE ONLY. FIELD VERIFY LOCATION OF EXISTING SEWER.

EX. ASPHALT PAVEMENT

CONNECT TO EX. SSMH (FIELD VERIFY IINVERT)

6" PVC SS
S=1.0% MIN 270LF.

EX. FENCE

EDGE OF PAVEMENT

EDGE OF PAVEMENT

EDGE OF PAVEMENT

EX. FENCE

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6" THICK CONCRETE
6-BAG 4500 psi CONCRETE
1.5" DIA. AGGREGATE
#4 REBAR @ 18" ON CENTER
(2.4.B)

5" CRUSHED AGGREGATE BASE

PROPERLY PREPARED BASE MATERIAL.

(REFER TO THE SITE SPECIFIC GEOTECHNICAL REPORT; GEOTECHNICAL REPORT TO GOVERN & CONTROL.)

1 Typical On-Site Concrete Paving

SCALE: NONE

3" ASPHALT SURFACE COURSE

9" CRUSHED AGGREGATE BASE

PROPERLY PREPARED BASE MATERIAL.

(REFER TO THE SITE SPECIFIC GEOTECHNICAL REPORT; GEOTECHNICAL REPORT TO GOVERN & CONTROL.)

2 Typical On-Site Asphalt Paving - Alternate Bid

SCALE: NONE

20 0 20 40 60

Scale: 1" = 20'

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SHEET TITLE

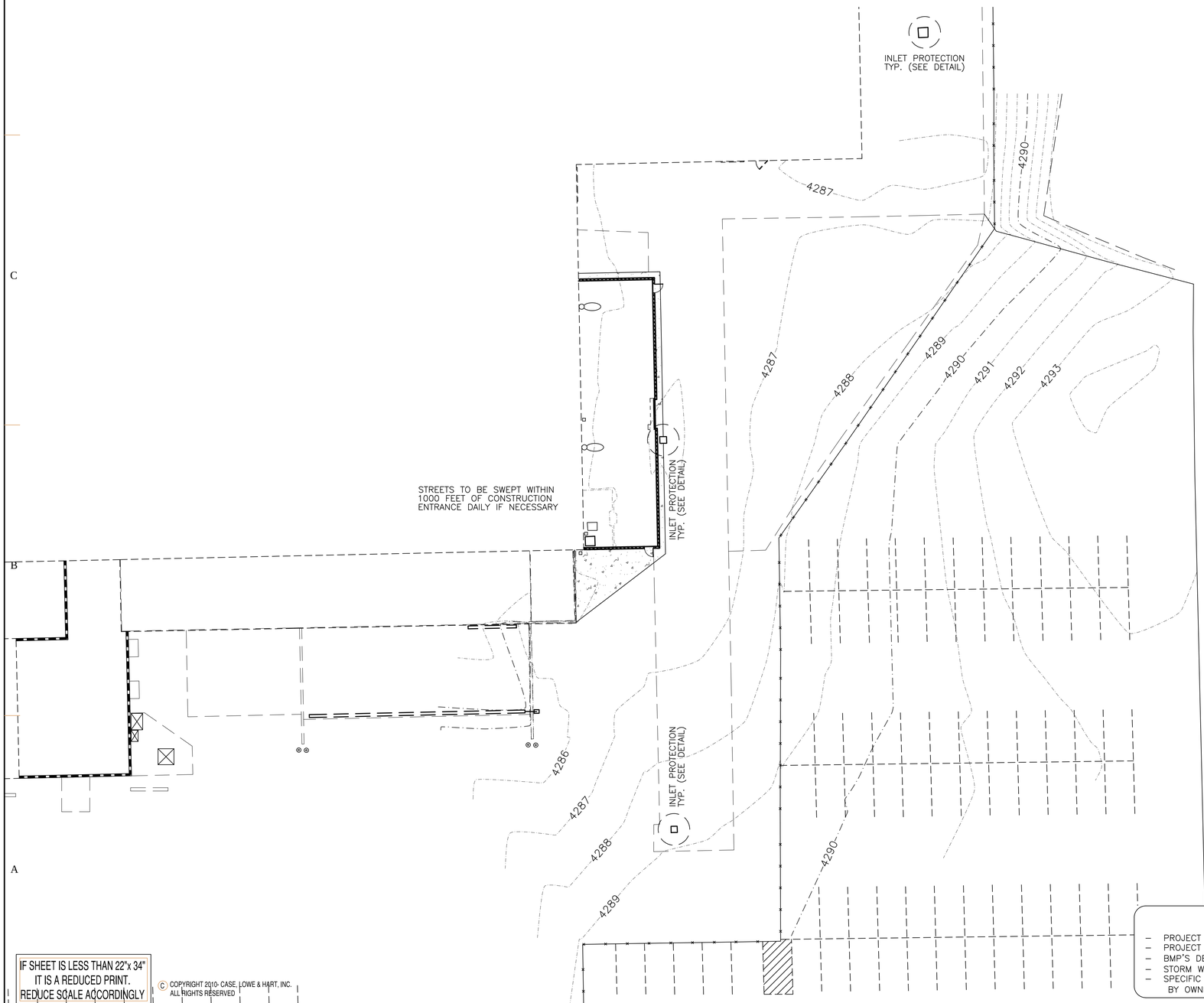
Proposed Site Plan

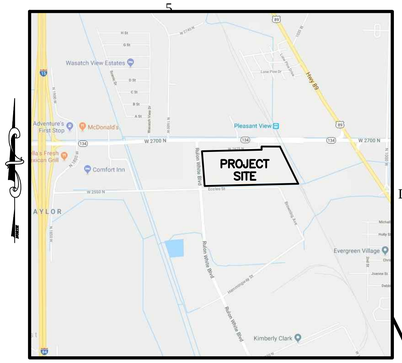
SHEET NO:

C5

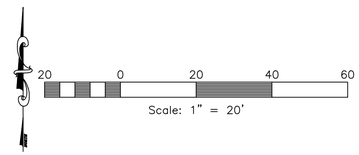
Parker/Hannifin Corp.
1425 West 2675 North
Storm Water Pollution Prevention Plan Exhibit

CITY OF OGDEN, WEBER COUNTY, UTAH
MARCH 2018





Vicinity Map
NOT TO SCALE



Construction Activity Schedule

- PROJECT LOCATION.....OGDEN CITY, WEBER COUNTY, UT
- PROJECT BEGINNING DATE.....MARCH 2018
- BMP'S DEPLOYMENT DATE.....MARCH 2018
- STORM WATER MANAGEMENT CONTACT / INSPECTOR.....CONTACT NAME (000) 000-0000
- SPECIFIC CONSTRUCTION SCHEDULE INCLUDING BMP CONSTRUCTION SCHEDULE TO BE INCLUDED WITH SWPPP BY OWNER/DEVELOPER

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PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

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02 March, 2018

SHEET TITLE

Storm Water Pollution Prevention Plan Exhibit

SHEET NO:

C6

Notes:

1. Describe all BMP's to protect storm water inlets:
   All storm water inlets to be protected by straw wattle barriers, or gravel bags (see detail).

2. Describe BMP's to eliminate/reduce contamination of storm water from:
   a. Equipment / building / concrete wash areas:
      To be performed in designated areas only and surrounded with silt fence barriers.
   b. Soil contaminated by soil amendments:
      If any contaminates are found or generated, contact environmental engineer and contacts listed.
   c. Areas of contaminated soil:
      If any contaminates are found or generated, contact environmental engineer and contacts listed.
   d. Fueling area:
      To be performed in designated areas only and surrounded with silt fence.
   e. Vehicle maintenance areas:
      To be performed in designated areas only and surrounded with silt fence.
   f. Vehicle parking areas:
      To be performed in designated areas only and surrounded with silt fence.
   g. Equipment storage areas:
      To be performed in designated areas only and surrounded with silt fence.
   h. Materials storage areas:
      To be performed in designated areas only and surrounded with silt fence.
   i. Waste containment areas:
      To be performed in designated areas only and surrounded with silt fence.
   j. Service areas:
      To be performed in designated areas only and surrounded with silt fence.

3. BMP's for wind erosion:
   Stockpiles and site as needed to be watered regularly to eliminate / control wind erosion

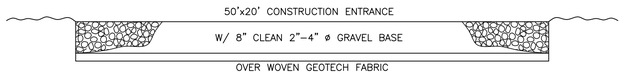
4. Construction Vehicles and Equipment:
   a. Maintenance
      - Maintain all construction equipment to prevent oil or other fluid leaks.
      - Keep vehicles and equipment clean, prevent excessive build-up of oil and grease.
      - Regularly inspect on-site vehicles and equipment for leaks, and repair immediately.
      - Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment on-site.
      - Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic, and transmission fluids.
   b. Fueling
      - If fueling must occur on-site, use designated areas away from drainage.
      - Locate on-site fuel storage tanks within a bermed area designed to hold the tank volume.
      - Cover retention area with an impervious material and install in in a manner to ensure that any spills will be contained in the retention area. To catch spills or leaks when removing or changing fluids.
      - Use drip pans for any oil or fluid changes.
   c. Washing
      - Use as little water as possible to avoid installing erosion and sediment controls for the wash area.
      - If washing must occur on-site, use designated, bermed wash areas to prevent waste water discharge into storm water, creeks, rivers, and other water bodies.
      - Use phosphate-free, biodegradable soaps.
      - Do not permit steam cleaning on-site.

5. Spill Prevention and Control
   a. Minor Spills:
      Minor spills are those which are likely to be controlled by on-site personnel. After contacting local emergency response agencies, the following actions should occur upon discovery of a minor spill:
      - Contain the spread of the spill.
      - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (i.e. absorbent materials, cat litter, and / or rags).
      - If the spill occurs in dirt areas, immediately contain the spill by constructing an earth dike. Dig up and properly dispose of contaminated soil.
      - If the spill occurs during rain, cover the impacted area to avoid runoff.
      - Record all steps taken to report and contain spill.
   b. Major Spills:
      On-site personnel should not attempt to control major spills until the appropriate and qualified emergency response staff have arrived at the site. For spills of federal reportable quantities, also notify the National Response Center at (800) 424-8802. A written report should be sent to all notified authorities. Failure to report major spills can result in significant fines and penalties.

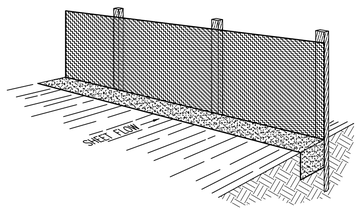
6. Post Roadway / Utility Construction
   a. Maintain good housekeeping practices.
   b. Enclose or cover building material storage areas.
   c. Properly store materials such as paints and solvents.
   d. Store dry and wet materials under cover, away from drainage areas.
   e. Avoid mixing excess amounts of fresh concrete or cement on-site.
   f. Perform washout of concrete trucks offsite or in designated areas only.
   g. Do not wash out concrete trucks into storm drains, open ditches, streets or streams.
   h. Do not place material or debris into streams, gutters or catch basins that stop or reduce the flow of runoff water.
   i. All public streets and storm drain facilities shall be maintained free of building materials, mud and debris caused by grading or construction operations. Roads will be swept within 1000' of construction entrance daily, if necessary.
   j. Install straw wattle around all inlets contained within the development and all others that receive runoff from the development.

7. Erosion Control Plan Notes
   a. The contractor will designate an emergency contact that can be reached 24 hours a day 7 days a week.
   b. A stand-by crew for emergency work shall be available at all times during potential rain or snow runoff events. Necessary materials shall be available on site and stockpiled at convenient locations to facilitate rapid construction of emergency devices when rain or runoff is eminent.
   c. Erosion control devices shown on the plans and approved for the project may not be removed without approval of the engineer of record. If devices are removed, no work may continue that have the potential of erosion without consulting the engineer of record. If deemed necessary erosion control should be reestablished before this work begins.
   d. Graded areas adjacent to fill slopes located at the site perimeter must drain away from the top of the slope at the conclusion of each working day. this should be confirmed by survey or other means acceptable to the engineer of record.
   e. All silt and debris shall be removed from all devices within 24 hours after each rain or runoff event.
   f. Except as otherwise approved by the inspector, all removable protective devices shown shall be in place at the end of each working day and through weekends until removal of the system is approved.
   g. All loose soil and debris, which may create a potential hazard to offsite property, shall be removed from the site as directed by the engineer of record of the governing agency.
   h. The placement of additional devices to reduce erosion damage within the site is left to the discretion of the engineer of record.
   i. Desilting basins may not be removed or made inoperable without the approval of the engineer of record and the governing agency.
   j. Erosion control devices will be modified as need as the project progresses and plans of these changes submitted for approval by the engineer of record and the governing agency.

8. Conduct a minimum of one inspection of the erosion and sediment controls every two weeks. Maintain documentation on site.
   a. Part III.D.4 of general permit UTR300000 identifies the minimum inspection requirements.
   b. Part II.D.4.C identifies the minimum inspection report requirements.
   c. Failure to complete and/or document storm water inspections is a violation of part III.D.4 of Utah General Permit UTR 300000.

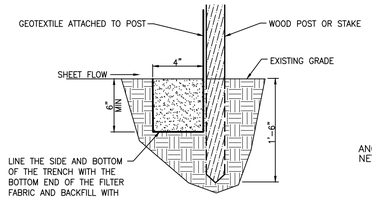


Cross Section 50' x 20' Construction Entrance

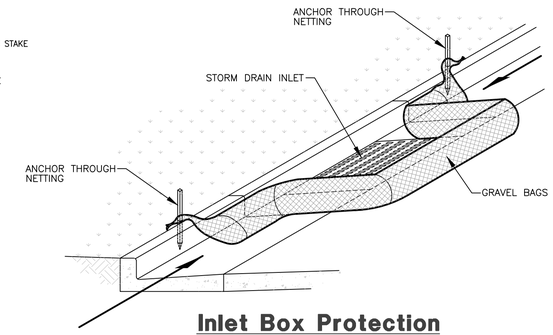


Perspective View

Figure 2



Section



Inlet Box Protection

INSTALLATION
The silt fence should be installed prior to major soil disturbances in the drainage area. The fence should be placed across the slope along a line of uniform elevation wherever flow of sediment is anticipated. Table 1 shows generally-recommended maximum slope lengths (slope spacing between fences) at various site grades for most silt fence applications.

TABLE 1:
Recommended Maximum Slope Lengths for Silt Fence
(Richardson & Middlebrooks, 1991)

Slope Steepness (%)	Max. Slope Length m (ft)
<2%	30.5m (100ft)
2-5%	22.9m (75ft)
5-10%	15.2m (50ft)
10-20%	7.6m (25ft)
>20%	4.5m (15ft)

PREFABRICATED SILT FENCE ROLLS
*Excavate a minimum 15.2cm x 15.2cm (6"x6") trench at the desired location.
*Unroll the silt fence, positioning the post against the downstream wall of the trench.
*Adjacent rolls of silt fence should be joined be nesting the end post of one fence into the other. Before nesting the end posts, rotate each post until the geotextile is wrapped completely around the post, then abut the end posts to create a tight seal as shown in Figure 1.
*Drive posts into the ground until the required fence height and/or anchorage depth is obtained.
*Bury the loose geotextile at the bottom of the fence in the upstream trench and backfill with natural soil, tamping the backfill to provide good compaction and anchorage. Figure 2 illustrates a typical silt fence installation and anchor trench placement.

FIELD ASSEMBLY:
*Excavate a minimum 15.2cm x 15.2cm (6"x6") trench at the desired location.
*Drive wooden posts, or steel posts with fastening projections, against the downstream wall of the trench. Maximum post spacing should be 2.4-3.0m (8-10ft). Post spacing should generally be less than three (3) times the height of the fence.
*If a steel or plastic mesh is required to reinforce the geotextile, it shall have a minimum mesh opening of 15.2cm (6").
*Fasten the mesh to the upslope side of the posts using heavy duty wire staples, tie wires or hog strings. Extend the mesh into the bottom of the trench.
*The geotextile shall then be stapled or wired to the posts. An extra 20-50cm (8-20") of geotextile shall extend into the trench.

INSPECTION
*Inspect the silt fence daily during periods of rainfall, immediately after significant rainfall event and weekly during periods of no rainfall. Make any repairs immediately.
*When sediment deposits behind the silt fence are one-third of the fence height, remove and properly dispose of the silt accumulations. Avoid damage to the fabric during cleanout.

REMOVAL
*Silt fence should not be removed until construction ceases and the upslope area has been properly stablized and/or revegetated.

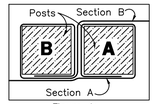
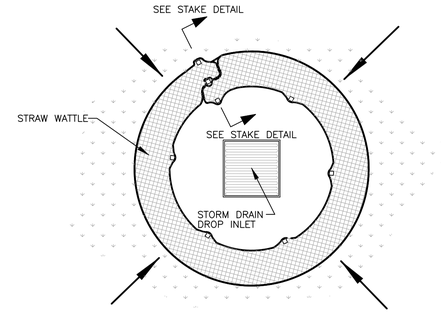


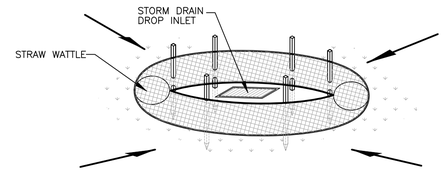
Figure 1:
Top View of
Roll-to-Roll Connection

Silt Fence Detail

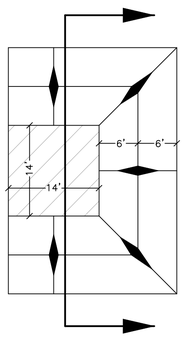
SCALE: NONE

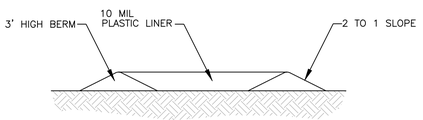


Plan View



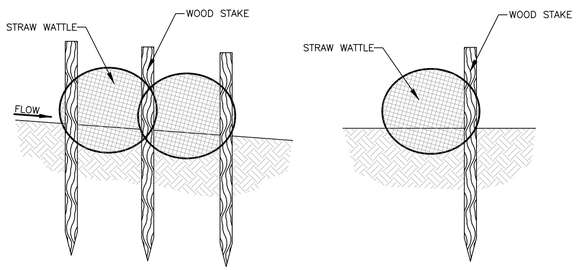
Drop Inlet Protection





Concrete Washout Area w/ 10 mil Plastic Liner

SCALE: NONE



Stake Detail

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STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

PROJECT NUMBER: 6528-28

STAMP

REGISTERED PROFESSIONAL ENGINEER
375328
J. NATE REEVE
03/07/2018
STATE OF UTAH

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	22 February, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	DRW
CHK'D BY:	CHK

30% SUBMITTAL SET

02 March, 2018

SHEET TITLE

Storm Water Pollution Prevention Plan Details

SHEET NO:

C7

STRUCTURAL NOTES :

A. GENERAL

1. THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
2. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, SIZES, ETC).
3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED "TYPICAL" OR "SIMILAR" IN THE PLANS AND DOCUMENTS.
11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM; HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET S004 & S006.
2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER.

C. BASIS OF DESIGN

1. GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2015
   RISK CATEGORY : II
2. ROOF LOADS
   a. FLAT-ROOF SNOW LOAD, P_f : 30 PSF
      1. GROUND SNOW LOAD, P_g : 43 PSF
      2. SNOW EXPOSURE FACTOR, C_e : 1.0
      3. SNOW LOAD IMPORTANCE FACTOR, I_s : 1.0.
      4. THERMAL FACTOR, C_t : 1.0.
   b. LIVE LOAD = 20 PSF
   c. DEAD LOAD = 15 PSF
3. WIND DESIGN
   a. BASIC WIND SPEED (3 SECOND GUST) : 115 MPH
   b. WIND EXPOSURE : C
   c. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-10.
4. SEISMIC DESIGN :
   a. SEISMIC IMPORTANCE FACTOR, I_E : 1.0
   b. SITE CLASS : D
   c. MAPPED SPECTRAL RESPONSE ACCELERATIONS : S_S = 1.522 , S_1 = 0.529
   d. SPECTRAL RESPONSE COEFFICIENTS : S_{DS} = 1.014 , S_{D1} = .0529
   e. SEISMIC DESIGN CATEGORY : D
   f. BASIC SEISMIC-FORCE-RESISTING SYSTEM : SPECIAL REINFORCED MASONRY SHEAR WALLS
   g. SEISMIC RESPONSE COEFFICIENT, C_S : 0.2
   h. RESPONSE MODIFICATION FACTOR, R : 5.0
   i. ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE PROCEDURE

D. FOUNDATION

1. DESIGN SOIL PRESSURE : 3000 PSF
2. SOILS REPORT BY : ACEC
   REPORT # : 25292
3. ALL FOOTINGS SHALL BE PLACED ON MECHANICALLY COMPACTED FILL COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).
4. SOIL PREPARATION UNDER FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE SOILS REPORT.
5. UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON EARTH SHALL BEAR ON STRUCTURAL FILL COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).
6. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON PRELIMINARY GRADING INFORMATION AND MUST BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ALL EXTERIOR FOOTINGS MUST BEAR A MINIMUM OF 30 INCHES BELOW LOWEST ADJACENT FINAL GRADE.
7. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
8. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS TO BE CENTERED BELOW COLUMNS.
9. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.), WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED "SOIL" FORMS PROVIDED THAT THE DIMENSIONS ARE INCREASED 3" ON EACH SIDE.

E. CONCRETE

1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW :
   a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS :
      1. WHERE THE TOP OF THE ELEMENT IS EXPOSED OR LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F1) :
         a. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
         b. MAXIMUM W/C RATIO : 0.45
         c. MAXIMUM AGGREGATE SIZE : 1"
         d. AIR CONTENT : 4.5% +/- 1.5%
      2. WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED OR LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F0) :
   b. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
      INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :
      1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
2. WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
3. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.
5. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING IN ALL CONCRETE FOUNDATION WALLS SHALL BE AS FOLLOWS:

THICKNESS	TOP & BOTTOM BARS	VERTICAL	HORIZONTAL
8"	(2) #5	#4 AT 18"O.C.	#4 AT 12"O.C.

   UNLESS NOTED OTHERWISE, CONCRETE SLABS ON EARTH SHALL BE REINFORCED AS FOLLOWS:
   6" THICK - #4 AT 18"O.C. EACH WAY
   REINFORCING SHALL BE CONTINUOUSLY SUPPORTED AT 36"O.C. MAXIMUM SPACING.
6. UNLESS NOTED OTHERWISE, FOR NON-DETAILED OPENINGS IN CONCRETE WALLS LARGER THAN 12" AND SMALLER THAN 24" IN ANY DIRECTION ADD (2) #5 BARS ON ALL SIDES IN ADDITION TO REGULAR WALL REINFORCING AND EXTEND 24" EACH WAY BEYOND OPENING. IF 24" IS NOT AVAILABLE ON EVERY SIDE, NOTIFY STRUCTURAL ENGINEER FOR FURTHER DIRECTION. OPENINGS SHALL HAVE A MINIMUM OF 12" OF CONCRET ABOVE THE OPENING, TYP.
7. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 2 X 4 (SHAPED) KEYWAY IN ALL VERTICAL AND HORIZONTAL JOINTS UNLESS NOTED OR DETAILED OTHERWISE. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR COLD/CONSTRUCTION JOINTS FOR SLABS ON GRADE.

F. ANCHOR BOLTS/EMBEDDED BOLTS

1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING :
   a. AT ALL OTHER ANCHOR BOLTS (UNLESS NOTED OTHERWISE) - ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
2. EMBEDDED BOLTS IN MASONRY SHALL BE (UNLESS NOTED OTHERWISE) ASTM A-307 GRADE HEADED BOLTS.
3. SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
4. FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO PLACING CONCRETE AND/OR GROUT.
5. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.
6. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

G. ADHESIVE/MECHANICAL ANCHORS

1. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).
2. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
3. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 24 HOURS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN WET OR DAMP HOLES.
4. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) RELATIVE TO SUBSTRATE TEMPERATURE.
5. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-11 D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS.
6. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE:
   a. HILTI HIT-RE 500V3 (ESR-3814), OR HILTI HIT-HY 200 (ESR-3187).
   b. SIMPSON SET-XP (ESR-2508), OR AT-XP (ER-0263).
   c. DEWALT PURE 100+ (ESR-2322) OR AC100+ GOLD (ESR-2592-COLD WEATHER).
7. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO MASONRY SHALL BE:
   a. HILTI HIT-HY-70 (ESR-2682).
   b. SIMPSON SET-XP (ER-0265), OR AT-XP (ER-0281).
   c. DEWALT AC100+ GOLD (ESR-3200).
8. UNLESS NOTED OTHER WISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE:
   a. HILTI KWIK BOLT TZ (ESR-1917).
   b. DEWALT POWER STUD+ SD2 (ESR-2502).
   c. SIMPSON STRONG-BOLT 2 (ESR-3037).
9. UNLESS NOTED OTHERWISE, ALL MECHANICAL ANCHORS INTO MASONRY SHALL BE:
   a. HILTI KWIK HUS-EZ (ESR-3056).
   b. SIMPSON STRONG BOLT 2 WEDGE ANCHOR (ER-0240).
   c. DEWALT POWER STUD+ SD1 (ESR-2966), DEWALT SCREWBOLT+ (ESR-1678).
10. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE:
    a. SIMPSON TITEN HD (ESR-2713).
    b. DEWALT SCREWBOLT+ (ESR-2526).
    c. HILTI KWIK HUS-EZ (ESR-3027).
11. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO MASONRY SHALL BE:
    a. SIMPSON TITEN HD (ESR-1056).
    b. DEWALT SCREWBOLT+ (ESR-1678).
    c. HILTI KWIK HUS EZ (ESR-3056).
12. ALL MASONRY CELLS WITHIN 8" OF THE ANCHOR SHALL BE SOLID GROUTED.
13. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
14. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 1 INCH, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
15. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
16. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC ESR OR IAPMO REPORTAND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT.

H. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS:
   a. ALL REINFORCING BARS EXCEPT AS INDICATED IN NOTE b, SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.
2. HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044.
3. STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100.
4. HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970. OBSTRUCTIONS OR INTERRUPTIONS OF THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.
5. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
6. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :
   a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ..... 3"
   b. EXPOSED TO EARTH OR WEATHER :
      1. #6 & LARGER ..... 2"
      2. #5 & SMALLER .....1-1/2"
   c. NOT EXPOSED TO WEATHER OR EARTH :
      1. SLABS, WALLS, JOISTS, #11 & SMALLER ..... 3/4"
      2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES ..... 1-1/2"
   d. SLAB ON GRADE :
      1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
7. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.
8. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
9. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHING DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF THE FOOTING, BUT NEED NOT EXTEND MORE THAN 20" INTO FOOTING. FOR MASONRY CONSTRUCTION SEE STRUCTURAL NOTE K.6.A.
10. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE ASTM A-706 REINFORCING.
11. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.
12. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
13. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

Structural Sheet Index

IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

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CONSULTANTS

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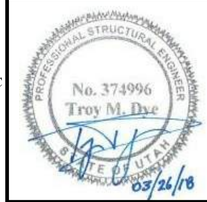

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

SHEET TITLE

STRUCTURAL NOTES

SHEET NO:

S001

7. STRUCTURAL NOTES CONTINUED :

I. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:
   a. ANSI/AISC 360-10 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY" AND "SUPPLEMENTS" AS REQUIRED BY BUILDING CODE.
   b. AISC 303-10 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, AND 4.4.2.
   c. AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
   d. AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
   e. AWS D1.1 AND 1.3, "STRUCTURAL WELDING CODE" (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY CONFLICT WITH AISC).
   f. ANSI/AISC 341-10 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:
   a. WIDE FLANGE SHAPES AND WT SHAPES - ASTM A992
   b. OTHER SHAPES AND PLATES - ASTM A-36 (UNO)
   c. TUBES (TS) AND HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A-500, GRADE B (SQUARE AND RECTANGULAR SHAPES FY = 46 KSI AND ROUND SHAPES FY = 42 KSI)
   d. PIPE COLUMNS - ASTM A-53, GRADE B TYPE E OR S
   e. STAINLESS STEEL SHAPES, PLATES, AND FASTENERS – ASTM 304
   f. DEFORMED BAR ANCHORS (DBA) - ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1
   g. HEADED STUD ANCHORS (HSA) - ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE WITH AWS D1.1 FOR TYPE "B". USE 3/4" DIAMETER STUDS, UNLESS NOTED OTHERWISE.
   h. THREADED ROD - ASTM A-449.
   i. NON-SHRINK GROUT - ASTM C110. NON-SHRINK GROUT SHALL BE PRE-PACKAGED, NON-METALLIC, WITH A 28-DAY COMPRESSIVE STRENGTH OF 6,000 PSI.
3. CONNECTIONS SHALL COMPLY WITH THE STRUCTURAL DRAWINGS UNLESS WRITTEN APPROVAL TO CHANGE IS GIVEN BY THE STRUCTURAL ENGINEER.
4. ALL SHOP FABRICATIONS SHALL BE PERFORMED BY AN APPROVED FABRICATOR IN ACCORDANCE WITH SECTIONS 1702 AND 1704 OF THE IBC OR WITH SHOP INSPECTION BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH SECTION 1704.2.5 OF THE IBC.
5. WELDING
   a. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN ACCORDANCE WITH ANSI/AWS D1.1 (LATEST EDITION).
   b. USE E-70XX ELECTRODES UNLESS NOTED OTHERWISE. E-60XX MAY BE USED FOR WELDING STEEL DECKS.
   c. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT CONNECTED WITH BOLTS SHALL BE WELDED TOGETHER WITH A FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE. WHERE WELD SIZES ARE NOT SHOWN USE THE FOLLOWING:
      1. WHERE ALL CONNECTED PARTS ARE THICKER THAN 1/4", WELD IS 1/16" LESS THAN THE THICKNESS OF THE THINNEST PART.
      2. WHERE ANY OF THE CONNECTED PARTS IS LESS THAN 1/4" THICK, WELD IS SAME AS THICKNESS OF THE THINNEST PART.
   d. WELDING OF HSA'S AND DBA'S SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
   e. WHEREVER POSSIBLE, WELDS SHALL BE SHOP WELDS. SPECIAL CONSIDERATIONS, SUCH AS ITEMS WHICH MAY NEED ADJUSTMENT AT THE SITE, REQUIRE THAT SOME WELDS BE FIELD WELDS. WHERE QUESTIONS OR DISCREPANCIES OCCUR THE CONTRACTOR SHALL COORDINATE THE WORK BETWEEN THE SHOP FABRICATOR AND THE STEEL ERECTOR.
6. BOLTING
   a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL TO STEEL CONNECTIONS SHALL USE HIGH STRENGTH BOLTS CONFORMING TO ASTM A-325.
   b. UNLESS NOTED OTHERWISE, ALL BOLTING IS CLASSIFIED AS NON-SLIP CRITICAL BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS TO A SNUG TIGHT CONDITION, WITH ALL PLIES OF THE JOINT IN FIRM CONTACT.
   c. WHERE OVERSIZED OR SLOTTED HOLES OCCUR IN THE OUTER PLY, AN ASTM F436 WASHER OR 5/16" THICK COMMON PLATE WASHER SHALL BE USED AS REQUIRED TO COMPLETELY COVER THE HOLE.
   d. BOLTS SHALL BE COUNTERED IN SLOTTED HOLES, UNLESS NOTED OTHERWISE.
   e. WHERE A STEEL BEAM TO BEAM CONNECTION IS NOT SHOWN, PROVIDE AN AISC STANDARD FRAMED CONNECTION SIZED FOR 1/2 OF THE TOTAL LOAD CAPACITY OF THE BEAM FOR THE SPAN AND STEEL SPECIFIED.
7. METAL DECKING
   a. UNLESS NOTED OTHERWISE, METAL ROOF DECK SHALL BE 22 GAUGE TYPE B GALVANIZED STEEL DECK. SEE ROOF DECK SCHEDULE FOR ATTACHMENTS.
   b. ALL DECK SHALL BE CONTINUOUS OVER 3-SPANS. WHERE NOT POSSIBLE, THE DECK SUPPLIER/CONTRACTOR SHALL PROVIDE HEAVIER GAUGE DECK AS NEEDED TO PROVIDE THE EQUIVALENT PERFORMANCE OF THE SPECIFIED DECK WITH 3-SPAN CONTINUITY.
   c. SEE TYPICAL DETAILS FOR SUPPORT OF DECK AT OPENINGS.
   d. PROVIDE L2"x2"x3/16" FOR DECK SUPPORT AT LOCATIONS WHERE COLUMNS EXTEND THROUGH DECK.
   e. PAINTED STEEL DECK SHALL CONFORM TO ASTM A1008 AND GALVANIZED STEEL DECK SHALL CONFORM TO A653 GRADE G60.
   f. BUILDING ELEMENTS MAY BE SUPPORTED BY HANGING DIRECTLY FROM METAL DECKING, PROVIDED THAT THE TOTAL WEIGHT PER CONNECTION IS LESS THAN 50 LBS AND THAT THE ATTACHMENT TO THE DECKING IS DISTRIBUTED ACROSS AT LEAST TWO RIBS AND SPACED AT LEAST 6 FEET APART IN ANY DIRECTION.
8. PROVIDE FULL DEPTH WEB STIFFENER PLATES AT EACH SIDE OF STEEL BEAMS AT ALL BEARING (EXCEPT SECONDARY FRAMING) POINTS. STIFFENER PLATES SHALL BE THICKNESS SHOWN UNLESS NOTED OTHERWISE AND SHALL BE WELDED BOTH SIDES WITH FILLET WELDS ALL AROUND.

FLANGE WIDTH	STIFFENER THICKNESS	WELD THICKNESS
< 8 1/4"	1/4"	3/16"
8 1/4" < BF < 12 1/2"	3/8"	1/4"
12 1/2" < BF < 18"	1/2"	5/16"

9. FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS.
10. WHEN DETERMINING THE FIRE RESISTANCE OF ASSEMBLIES, USE THE FOLLOWING: STEEL ROOF MEMBERS ARE CONSIDERED UN-RESTRAINED AND STEEL FLOOR FRAMING MEMBERS ARE CONSIDERED RESTRAINED.
11. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE ERECTED WITH THE NATURAL CROWN UP.
12. UNLESS OTHERWISE SHOWN OR DETAILED IN THE PLANS, ALL STEEL COLUMNS, BEAMS, BRACES, STRUTS, ETC. SHALL BE CONTINUOUS BETWEEN CONNECTIONS OR SUPPORTS. SPLICES IN MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD.

K. MASONRY

1. ALL HOLLOW MASONRY UNITS SHALL CONFORM TO ASTM C-90.
   f'm (MINIMUM, FACTORED) 2,000 PSI
   MINIMUM UNIT STRENGTH 1,900 PSI (TESTED IN ACCORDANCE WITH ASTM C-140)
   ACCEPTABLE RANGE OF UNIT WEIGHT : 105 PCF TO 125 PCF
2. ALL GROUT (SITE MIXED OR PRE-MIXED) SHALL CONFORM TO ASTM C-476 OR SECTION 2.2A OF TMS 602-13/ACI 530.1-13/ASCE 6-13. GROUT SHALL BE PLACED WITH SUFFICIENT WATER FOR POURING WITHOUT SEGREGATION. DO NOT USE MORTAR FOR GROUT. MECHANICALLY VIBRATE ALL GROUT.
3. GROUT STOPS SHALL BE AN APPROVED PRODUCT DESIGNED AND MANUFACTURED FOR USE AS A GROUT STOP. GROUT STOP SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW. OTHER GROUT STOP MATERIALS SUCH AS ASPHALT IMPREGNATED MATERIALS ARE NOT PERMITTED.
4. MORTAR SHALL BE TYPE S AND SHALL CONFORM TO ASTM C 270.
5. ALL MASONRY WORK SHALL CONFORM TO CHAPTER 21 OF THE IBC.
6. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING IN ALL 8" MASONRY WALLS SHALL BE AS FOLLOWS:
   a. VERTICAL : #5 BARS IN CELLS ADJACENT TO ALL OPENINGS, AT CORNERS AND AT A MAXIMUM SPACING OF 32" THROUGHOUT THE WALL. ALL VERTICAL REINFORCEMENT INCLUDING, BUT NOT LIMITED TO JAMBS, COLUMNS, AND WALL REINFORCING SHALL BE DOWELED INTO AND THROUGH THE FOUNDATION WALL AND INTO THE FOOTING BELOW UNLESS SPECIFICALLY DETAILED OTHERWISE.
   b. HORIZONTAL : (2) #4 BARS IN 8" DEEP "H" BLOCK BOND BEAM UNITS AT 48"O.C. AND AT FLOORS, ROOF AND TOP OF WALL. BOND BEAMS AT ROOF WILL SLOPE TO MATCH SLOPING ROOF.
7. ALL BLOCK CELLS CONTAINING REINFORCING, BOLTS, OR ANCHORS SHALL BE GROUTED SOLID.
8. PROVIDE (1) #5 (MINIMUM), IN GROUTED SPACE, ON ALL SIDES AND ADJACENT TO EVERY OPENING WHICH EXCEEDS 24" IN EITHER DIRECTION. HORIZONTAL BARS SHALL EXTEND 24" BEYOND THE CORNERS OF THE OPENING AND VERTICAL BARS SHALL EXTEND TO TOP OF WALL. VERTICAL REINFORCING SHALL BE PROVIDED AT ENDS, CORNERS AND EACH SIDE OF CONTROL JOINTS. SEE TYPICAL DETAILS FOR OPENINGS WHICH EXCEED 32" IN EITHER DIRECTION.
9. SOLID GROUTING OF MASONRY IS UNACCEPTABLE EXCEPT AS SPECIFICALLY NOTED ON PLANS AND SCHEDULES.
10. WHERE WALLS ARE NOT GROUTED SOLID, EACH GROUT POUR SHALL TERMINATE FLUSH WITH THE TOP OF THE UPPERMOST UNIT EXCEPT AT CELLS WITH VERTICAL REINFORCING WHERE GROUT SHALL BE 1-1/2" BELOW TOP OF UNIT TO PROVIDE CONSTRUCTION KEY. WHERE WALLS ARE GROUTED SOLID, EACH GROUT POUR SHALL TERMINATE 1-1/2" BELOW TOP OF UNIT.
11. GROUT POURS SHALL NOT EXCEED 5'-0" UNLESS HIGH LIFT GROUTING PROCEDURES ARE FOLLOWED.
12. THE USE OF HIGH LIFT GROUTING PROCEDURES REQUIRE THE APPROVAL OF THE ARCHITECT AND ENGINEER AND SHALL NOT EXCEED THE MAXIMUM HEIGHTS GIVEN IN TABLE 3.2.1 OF TMS 402-13/ACI 530-13/ASCE 5-13. GROUT DEMONSTRATION PANELS, AS PRESCRIBED BY THE ARCHITECT AND ENGINEER, SHALL BE REQUIRED WHERE REQUESTED GROUTING PROCEDURES DO NOT MEET THE LIMITS OF TABLE 3.2.1. ADDITIONALLY, ALL HIGH LIFT GROUTING SHALL REQUIRE SPECIAL INSPECTION PROCEDURES NEEDED TO VERIFY GROUT PLACEMENT DURING CONSTRUCTION. DURING THE SUBMITTAL FOR APPROVAL PROCESS, SUBMITTAL SHALL INCLUDE, BUT NOT BE LIMITED TO: STATEMENT OF PROCEDURE FOR MECHANICAL VIBRATION OF HIGH LIFT GROUT; NEW MIX DESIGNS FOR HIGH SLUMP, HIGH LIFT GROUT; FOR SELF-CONSOLIDATING GROUT, SUBMIT MIX DESIGNS, SLUMP FLOW RATES, VISUAL STABILITY INDEX (VSI), AND QUANTITIES OF ADMXTURES BEING USED.
13. ALL MASONRY BEAMS SHALL BE BUILT INTEGRAL WITH SUPPORT. NO TOOTHING OR DOWELING PERMITTED. UNITS WITH ONE END OPEN SHALL BE USED FOR ALL MASONRY BEAMS.
14. PROVIDE VERTICAL CONTROL JOINTS AT MAXIMUM SPACINGS NOTED BELOW UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS AND/OR ON ARCHITECTURAL ELEVATIONS AND AT ALL CHANGES IN WALL ELEVATION AND MASONRY THICKNESS. CONTROL JOINTS SHALL NOT BE LOCATED DIRECTLY OVER OR CLOSER THAN 24" TO WALL OPENINGS (DOORS, WINDOWS, MECHANICAL OPENINGS, ETC.), OR WITHIN MASONRY JAMBS.
    REINFORCED MASONRY : 40 FT
    SUSPENDED STRUCTURAL ELEMENTS.
15. HORIZONTAL REINFORCEMENT SHALL TERMINATE AT EACH SIDE OF CONTROL JOINTS EXCEPT AT FLOOR AND ROOF LEVEL BOND BEAMS AND AT TOP OF PARAPET.
16. CONTROL JOINTS SHALL BE PROVIDED AT THE MASONRY SIDE OF EMBEDDED STEEL COLUMNS TO CONTROL CRACKING OF FACE SHELLS.
17. SUPPORT NON-BEARING, NON-STRUCTURAL WALLS AT TOP OF MASONRY AS PER TYPICAL DETAILS AT LOCATIONS WHERE INTERSECTING OR PERPENDICULAR WALLS ARE 12'-0" OR MORE APART OR WHERE END OF WALL OCCURS 6'-0" OR MORE FROM INTERSECTING WALL.
18. EMBED CHANNELS AND PLATES TO BE PLACED SO AS TO CREATE FLUSH SURFACE WITH FACE OF MASONRY. FLANGES ON CHANNEL EMBEDS SHALL BE HORIZONTAL.
19. ALL VERTICAL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO GROUTING USING WIRE POSITIONERS OR OTHER ACCEPTABLE DEVICES. REINFORCING SHALL BE SECURED AT BAR-SPLICE LOCATIONS AND AT A SPACING NOT MORE THAN 120 BAR DIAMETERS.
20. UNLESS NOTED OTHERWISE, MASONRY WALLS SHALL BE CONSTRUCTED UTILIZING COMMON RUNNING-BOND WITH FULLY MORTARED BED JOINTS AROUND GROUTED CELLS.
21. MASONRY VENEER SHALL BE ANCHORED USING THE HOHMANN AND BARNARD VENEER ANCHOR ASSEMBLY SYSTEM, OR AN APPROVED EQUAL. REGARDLESS OF BACK-UP SYSTEM, PROVIDE A CONTINUOUS HORIZONTAL 9 GAUGE WIRE AT 16"O.C. IN VENEER MORTAR JOINTS FOR ANCHOR ATTACHMENT. POSITIVE ANCHORAGE TO THE WIRE USING THE SEISMICLIP INTERLOCK SYSTEM SHALL BE PROVIDED TO SUPPORT NOT MORE THAN 2 SQUARE FEET OF WALL, WITH A HORIZONTAL SPACING NOT EXCEEDING 18".
    a. WOOD AND METAL STUDS; USE HOHMANN AND BARNARD HB-213 S.I.S. (SEISMICLIP INTERLOCK SYSTEM) HEAVY DUTY ANCHORS OR AN APPROVED EQUAL. THE HB-213 ASSEMBLY SHALL BE ATTACHED TO WOOD STUDS USING A # 12 X 2" WOOD SCREWS OR TO METAL STUDS USING #10 SCREWS.
    b. BRICK AND BLOCK WALLS; USE HOHMANN AND BARNARD 270-ML-S.I.S. (SEISMICLIP INTERLOCK SYSTEM) MIGHTY-LOK SEISMIC ANCHORS OR AN APPROVED EQUAL, AT SPACINGS NOTED ABOVE. INSTALL A 2 WIRE 9 GAUGE LADDER TYPE JOINT REINFORCEMENT AT 16"O.C. IN THE BACK-UP WALL FOR ANCHORAGE ATTACHMENT.
    c. CONCRETE WALLS; USE HOHMANN AND BARNARD HB 303SV SEISMIC NOTCH DOVE TAIL ANCHOR SYSTEM OR AN APPROVED EQUAL AT SPACINGS NOTED ABOVE.
22. ELECTRICAL CONDUIT SHALL NOT BE PLACED IN CELLS THAT CONTAIN REBAR. CONDUIT IS ALLOWED TO PASS THROUGH REINFORCED CELLS WHEN IT OCCURS PERPENDICULAR TO THE REBAR. CONDUIT SHALL NOT CONTACT REBAR AS IT PASSES. THERE SHALL BE 1" CLEAR BETWEEN CONDUIT AND REBAR.

L. EXISTING BUILDING NOTES

1. ARW ENGINEERS EXPRESSLY DISCLAIMS RESPONSIBILITY FOR ANY PORTION OF THE EXISTING BUILDING NOT SPECIFICALLY ADDRESSED IN THESE DRAWINGS.
2. DRAWINGS AND DETAILS HAVE BEEN PREPARED TO REFLECT THE EXISTING CONDITIONS AND CONFIGURATIONS OF STRUCTURAL ELEMENTS. HOWEVER, THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND ALERTING THE ENGINEER OF ANY DISCREPANCIES FOUND PRIOR TO FABRICATING OR INSTALLING STRUCTURAL ELEMENTS.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT THE BUILDING AND ELEMENTS WITHIN THE BUILDING REMAIN STABLE UNTIL CONSTRUCTION IS COMPLETE. AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHORING OR OTHER TEMPORARY SUPPORT OF STRUCTURAL MEMBERS UNTIL THE FINAL CONFIGURATION HAS BEEN COMPLETED.

LEGEND OF SYMBOLS AND ABBREVIATIONS

AB	=	ANCHOR BOLT
ABV	=	ABOVE
ARCH	=	ARCHITECT
BLW	=	BELOW
CL	=	CENTERLINE
CMU	=	CONCRETE MASONRY UNIT
COL	=	COLUMN
CONC	=	CONCRETE
CP	=	CONCRETE PIER
DIA / Ø	=	DIAMETER
DBA	=	DEFORMED BAR ANCHOR
DBE	=	DECK BEARING ELEVATION
ELEV	=	ELEVATION
EOD	=	EDGE OF DECK
FDN	=	FOUNDATION
FTG	=	FOOTING
FFE	=	FINISHED FLOOR ELEVATION
GB	=	CONCRETE GRADE BEAM
HSA	=	HEADED STUD ANCHOR
KB	=	KICKER BRACE
MAX	=	MAXIMUM
MB	=	MASONRY BEAM
MC	=	MASONRY COLUMN
MECH	=	MECHANICAL
MEZZ	=	MEZZANINE
MIN	=	MINIMUM
MJ	=	MASONRY JAMB
MW	=	MASONRY WALL
NS, FS	=	NEAR SIDE, FAR SIDE
OAE	=	OR APPROVED EQUAL
OPP	=	OPPOSITE
PAF	=	POWDER ACTUATED FASTENER
PL	=	PLATE
REINF	=	REINFORCING
REQ'D	=	REQUIRED
SIM	=	SIMILAR
TOC	=	TOP OF CONCRETE SLAB
TOF	=	TOP OF FOOTING
TOM	=	TOP OF MASONRY
TYP	=	TYPICAL
UNO	=	UNLESS NOTED OTHERWISE

FOOTING MARK
TOP OF FOOTING ELEV.
SECTION MARK
SHEET NUMBER
TOP OF FOUNDATION WALL OR COLUMN PIER ELEV.
S — S FOOTING STEP
MASONRY WALL
MASONRY WALL W/ CONCRETE FOUNDATION BELOW
DEPRESS FDN./WALL AND POUR FLOOR SLAB OVER AT CONCRETE FOUNDATION WALL
MASONRY BEAM
ELEVATION
L FRAMING ANGLE SEE TYPICAL DETAIL
C FRAMING CHANNEL SEE TYPICAL DETAIL
(L) ITEMS, DETAILS, & SYSTEMS WHICH ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.
KB KICKER BRACE

IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

CLH ARCHITECTS ENGINEERS
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CONSULTANTS

STAMP

PROFESSIONAL STRUCTURAL ENGINEER
No. 374996
Troy M. Dye
STATE OF UTAH
03/26/18

PARKER

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	Author
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

SHEET TITLE

STRUCTURAL NOTES

SHEET NO:

S002

3/27/2018 9:01:57 AM

X:\DRAWINGS 2018\18039 - Parker Addition\S-18039-Parker Addition-2018.rvt

ROOF DECK SCHEDULE

AREA	DECK			ATTACHMENT							MIN. SHEAR CAPACITY	MAX. FLEXIBILITY FACTOR
				SUPPORTS		SIDE SEAMS			SUPPORTS PARALLEL TO FLUTES			
	DEPTH	TYPE	GA.	DIA. WELD	PATTERN	#12 TEK SCREWS	TOP SEAM WELD	PUNCH LOCK▽	Ø WELD	SPA.		
A	1 1/2	B	22	3/4	36/7	@24	---	---	3/4	6	329 PLF	14.1

FASTENING PATTERNS

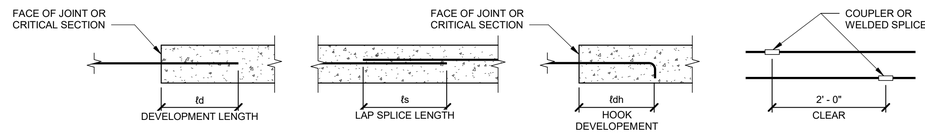
WELD PATTERN : 36/7

NOTES :
1. TOP SEAM WELDS SHALL BE 1-1/2" LONG AND SHALL BE ACCORDING TO SDI STANDARDS.
2. USE NESTABLE (OVERLAPPING) SIDE SEAMS AT SCREW ATTACHMENTS AND INTERLOCKING SIDE SEAMS AT WELDS.
3. IF N DECK IS NOT NESTABLE, N DECK END BUTT JOINTS OVER STEEL JOISTS SHALL USE 16 GA. x 6" CONTINUOUS SHEET BETWEEN DECK AND JOIST TOP CHORD ANGLES. DECK WELDS TO PENETRATE SHEET AND ENGAGE JOIST CHORD.
4. ALL DECK WITH A PROFILE DEPTH OF 2" OR LESS SHALL HAVE NESTED OR TELESCOPED END LAPS.
5. SUBMIT CURRENT ICC APPROVAL FOR ALL DECKS.
6. ALTERNATE SYSTEMS SHALL MEET OR EXCEED THE MINIMUM SHEAR CAPACITY AND SHALL PROVIDE LESS THAN OR EQUAL TO THE MAXIMUM FLEXIBILITY FACTOR LISTED IN THE SCHEDULE.
7. ALL ALTERNATE SYSTEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

KEY PLAN

2015 IBC CONC. REBAR LAP SPLICE SCHEDULE

FOR CONCRETE APPLICATIONS (ACI 318 - 14)



BAR LOCATION	CONCRETE		CONCRETE REINFORCING & SPLICE LENGTHS (IN) BAR SIZE																										COMMENTS
	TYPE	STRENGTH	#3			#4			#5			#6			#7			#8			#9		#10		#11				
			ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓdh	ℓd	ℓdh	ℓd	ℓdh		
VERT. WALL BARS, FILL ON METAL DECK	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30			
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30			
BEAM BOTTOM BARS, COLUMN BARS	NWC	3000 PSI	17	22	8	22	29	11	28	36	14	33	43	16	48	62	19	55	72	22	62	25	69	27	76	30			
FOOTING BOTTOM BARS	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	29	38	13	33	43	15	37	17	42	19	46	30			
BEAM TOP BARS	NWC	3000 PSI	22	29	8	29	38	11	36	47	14	43	56	16	63	82	19	72	94	22	81	25	90	27	98	30			
SLAB ON GRADE	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	32	42	13	42	55	15	53	17	69	19	76	30			

BAR LOCATION	CONCRETE		CONCRETE REINFORCING & SPLICE LENGTHS (IN) BAR SIZE																										COMMENTS
	TYPE	STRENGTH	#3			#4			#5			#6			#7			#8			#9		#10		#11				
			ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓdh	ℓd	ℓdh	ℓd	ℓdh		
VERT. WALL BARS, FILL ON METAL DECK	NWC	4000 PSI	15	20	7	19	25	7	24	31	8	29	38	10	42	55	12	48	62	13	54	15	60	17	66	26			
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4000 PSI	15	20	7	19	25	7	24	31	8	29	38	10	42	55	12	48	62	13	54	15	60	17	66	26			
BEAM BOTTOM BARS, COLUMN BARS	NWC	4000 PSI	15	20	7	19	25	9	24	31	12	29	38	14	42	55	17	48	62	19	54	21	60	24	66	26			
FOOTING BOTTOM BARS	NWC	4000 PSI	12	16	7	12	16	7	15	20	8	18	23	10	25	33	12	29	38	13	33	15	36	17	40	26			
BEAM TOP BARS	NWC	4000 PSI	19	25	7	25	33	9	31	40	12	37	48	14	54	70	17	62	81	19	70	21	78	24	85	26			
SLAB ON GRADE	NWC	4000 PSI	12	16	7	12	16	7	15	20	8	18	23	10	28	36	12	36	47	13	46	15	60	17	66	26			

BAR LOCATION	CONCRETE		CONCRETE REINFORCING & SPLICE LENGTHS (IN) BAR SIZE																										COMMENTS
	TYPE	STRENGTH	#3			#4			#5			#6			#7			#8			#9		#10		#11				
			ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓs	ℓdh	ℓd	ℓdh	ℓd	ℓdh	ℓd	ℓdh		
VERT. WALL BARS, FILL ON METAL DECK	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	14	56	16	62	25			
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	14	56	16	62	25			
BEAM BOTTOM BARS, COLUMN BARS	NWC	4500 PSI	14	18	7	18	23	9	23	30	11	27	35	13	40	52	16	45	59	18	51	20	56	22	62	25			
FOOTING BOTTOM BARS	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	24	31	11	27	35	13	31	14	34	16	37	25			
BEAM TOP BARS	NWC	4500 PSI	18	23	7	24	31	9	30	39	11	35	46	13	51	66	16	59	77	18	66	20	73	22	80	25			
SLAB ON GRADE	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	27	35	11	34	44	13	44	14	56	16	62	25			

NOTES :
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS INDICATED ABOVE.
2. DEVELOPMENT LENGTHS SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.
3. WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.
4. SPLICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.

IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

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ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

SHEET TITLE

SCHEDULES

SHEET NO:

S003

3/27/2018 9:01:59 AM

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STRUCTURAL STEEL SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2015 IBC SECTION 1705.2.1

INSPECTION TASKS PRIOR TO WELDING (TABLE N5.4-1)	FABRICATOR QUALITY CONTROL		SPECIAL INSPECTOR QUALITY ASSURANCE	
	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	●		●	
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	●		●	
MATERIAL IDENTIFICATION (TYPE / GRADE)		●		●
WELDER IDENTIFICATION SYSTEM [1]		●		●
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)				
* JOINT PREPARATION				
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)		●		●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
* BACKING TYPE AND FIT (IF APPLICABLE)				
CONFIGURATION AND FINISH OF ACCESS HOLES		●		●
FIT-UP OF FILLET WELDS				
* DIMENSIONS (ALIGNMENT, GAPS AT ROOT)		●		●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
CHECK WELDING EQUIPMENT		●		

[1] *THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.*

INSPECTION TASKS DURING WELDING (TABLE N5.4-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
USE OF QUALIFIED WELDERS		●		●
CONTROL AND HANDLING OF WELDING CONSUMABLES				
* PACKAGING		●		●
* EXPOSURE CONTROL				
NO WELDING OVER CRACKED TACK WELDS		●		●
ENVIRONMENTAL CONDITIONS				
* WIND SPEED WITHIN LIMITS		●		●
* PRECIPITATION AND TEMPERATURE				
WPS FOLLOWED				
* SETTINGS ON WELDING EQUIPMENT				
* TRAVEL SPEED				
* SELECTED WELDING MATERIALS		●		●
* SHIELDING GAS TYPE / FLOW RATE				
* PREHEAT APPLIED				
* INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX)				
* PROPER POSITION (F, V, H, OH)				
WELDING TECHNIQUES				
* INTERPASS AND FINAL CLEANING		●		●
* EACH PASS WITHIN PROFILE LIMITATIONS				
* EACH PASS MEETS QUALITY REQUIREMENTS				

INSPECTION TASKS AFTER WELDING (TABLE N5.4-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDS CLEANED		●		●
SIZE, LENGTH AND LOCATION OF WELDS	●		●	
WELDS MEET VISUAL ACCEPTANCE CRITERIA				
* CRACK PROHIBITION				
* WELD / BASE-METAL FUSION				
* CRATER CROSS SECTION	●		●	
* WELD PROFILES				
* WELD SIZE				
* UNDERCUT				
* POROSITY				
ARC STRIKES	●		●	
K-AREA [1]	●		●	
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	●		●	
REPAIR ACTIVITIES	●		●	
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	●		●	

[1] *WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75mm) OF THE WELD)*

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. QC AND QA INSPECTORS SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-10 CHAPTER N4.
6. NONDESTRUCTIVE TESTING PERSONNEL SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-10 CHAPTER N4.3.
7. NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL COMPLY WITH AISC 360-10 CHAPTER N5a AND b.
8. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. FOR STRUCTURAL STEEL, ALL PROVISIONS OF AWS D1.1 / D1.1M STRUCTURAL WELDING CODE - STEEL FOR STATICALLY LOADED STRUCTURES SHALL APPLY.
9. THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED BY QA USING MT OR PT, WHEN THE FLANGE THICKNESS EXCEEDS 2 IN. (50mm) FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 2 IN. (50mm) FOR BUILT-UP SHAPES. ANY CRACK SHALL BE DEEMED UNACCEPTABLE REGARDLESS OF SIZE OR LOCATION.
10. WHEN REQUIRED BY APPENDIX 3, TABLE A-3.1, WELDED JOINTS REQUIRING WELD SOUNDNESS TO BE ESTABLISHED BY RADIOGRAPHICS OR ULTRASONIC INSPECTION SHALL BE TESTED BY QA AS PRESCRIBED. REDUCTION IN THE RATE OF UT IS PROHIBITED.
11. REDUCTION OF RATE OF ULTRASONIC TESTING - THE RATE OF UT IS ONLY PERMITTED TO BE REDUCED IF APPROVED BY THE EOR AND THE AHJ PER AISC 360-10 CHAPTER N5e.
12. FOR STRUCTURES IN RISK CATEGORY II, WHERE THE INITIAL RATE FOR UT IS 10%, THE NDT RATE FOR AN INDIVIDUAL WELDER OR WELDING OPERATOR SHALL BE INCREASED TO 100% SHOULD THE REJECT RATE, THE NUMBER OF WELDS CONTAINING UNACCEPTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED, EXCEEDS 5% OF THE WELDS TESTED FOR THE WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEAST 20 COMPLETED WELDS FOR A JOB SHALL BE MADE PRIOR TO IMPLEMENTING SUCH AN INCREASE. WHEN THE REJECT RATE FOR THE WELDER OR WELDING OPERATOR, AFTER A SAMPLING OF AT LEAST 40 COMPLETED WELDS, HAS FALLEN TO 5% OR LESS, THE RATE OF UT SHALL BE RETURNED TO 10%. FOR EVALUATING THE REJECT RATE OF CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS 1 IN. (25mm) OR LESS, EACH 12 IN. (300mm) INCREMENT OR FRACTION THEREOF SHALL BE CONSIDERED AS ONE WELD. FOR EVALUATING THE REJECT RATE ON CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS GREATER THAN 1 IN. (25mm), EACH 6 IN. (150mm) OF LENGTH OR FRACTION THEREOF SHALL BE CONSIDERED ON WELD.
13. ALL NDT PERFORMED SHALL BE DOCUMENTED. FOR SHOP FABRICATION, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR FIELD WORK, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY LOCATION IN THE STRUCTURE, PIECE MARK, AND LOCATION IN THE PIECE. WHEN A WELD IS REJECTED ON THE BASIS OF NDT, THE NDT RECORD SHALL INDICATE THE LOCATION OF THE DEFECT AND THE BASIS OF REJECTION
14. DEMAND CRITICAL WELDS SHALL MEET THE PROVISION FOUND IN AISC 341-10 AND WELDING METHODS, PROCEDURES AND QUALITY CONTROL SHALL COMPLY WITH AWS D1.1 AND THE FOLLOWING:
    a. ARC STRIKES, GOUGES AND OTHER IMPERFECTIONS WITHIN OR ADJACENT TO THE JOINT, SHALL BE REPAIRED OR REMOVED.
    b. PREHEAT AND INTER-PASS REQUIREMENTS AS OUTLINED IN SECTION 3.5.
    c. UNREPAIRED CRACKS, GOUGES, AND NOTCHES WILL NOT BE PERMITTED IN THE JOINT AREA.
    d. USE ELECTRODES WITH CHARPY V-NOTCH ABSORBED ENERGY EQUAL TO OR GREATER THAN 20 FT-LBS AT 20 DEGREES FAHRENHEIT UNDER AWS A5 CLASSIFICATION TEST METHODS, AND 40 FT-LBS AT 70 DEGREES FAHRENHEIT USING TEST PROCEDURES PRESCRIBED IN APPENDIX X OF AISC 358. ACCEPTABLE ELECTRODES INCLUDE E70TG-K2, E71 T-1.

INSPECTION TASKS PRIOR TO BOLTING (TABLE N5.6-1)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		●	●	
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		●		●
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		●		●
PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL		●		●
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		●		●
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	●			●
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		●		●

INSPECTION TASKS DURING BOLTING (TABLE N5.6-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		●		●
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		●		●
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		●		●
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		●		●

INSPECTION TASKS AFTER BOLTING (TABLE N5.6-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	●		●	

INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT (TABLE N6.1)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
PLACEMENT AND INSTALLATION OF STEEL DECK	●		●	
PLACEMENT AND INSTALLATION OF STEEL STUD ANCHORS	●		●	
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	●		●	

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. FOR SNUG-TIGHT JOINTS, PRE-INSTALLATION VERIFICATION TESTING AS SPECIFIED IN TABLE N5.6-1 AND MONITORING OF THE INSTALLATION PROCEDURES AS SPECIFIED IN TABLE N5.6-2 ARE NOT APPLICABLE. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS IN SNUG-TIGHT JOINTS.
6. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT METHOD, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
7. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE CALIBRATED WRENCH METHOD OR THE TURN-OF-NUT METHOD WITHOUT MATCHMARKING, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI SHALL BE ENGAGED IN THEIR ASSIGNED INSPECTION DUTIES DURING INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
8. OBSERVATION OF BOLTING OPERATIONS SHALL BE THE PRIMARY METHOD USED TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP INCORPORATED IN CONSTRUCTION ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE PROVISIONS OF THE RCSC SPECIFICATION.

NOTES

1. O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. P - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. FOR THOSE ITEMS FOR QUALITY CONTROL (QC) THAT CONTAIN AN OBSERVE DESIGNATION, THE QC INSPECTION SHALL BE PERFORMED BY THE ERECTOR'S QUALITY CONTROL INSPECTOR (QCI).
6. FOR WELDING OF STEEL HEADED STUD ANCHORS, THE PROVISIONS OF AWS D1.1 / D1.1M, APPLY.
7. FOR WELDING OF STEEL DECK, OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. ALL APPLICABLE PROVISIONS OF AWS D1.3 / D1.3M, STRUCTURAL WELDING CODE - SHEET STEEL, SHALL APPLY. DECK WELDING INSPECTION SHALL INCLUDE VERIFICATION OF THE WELDING CONSUMABLES, WELDING PROCEDURE SPECIFICATIONS AND QUALIFICATIONS OF WELDING PERSONNEL PRIOR TO THE START OF THE WORK, OBSERVATIONS OF THE WORK IN PROGRESS, AND A VISUAL INSPECTION OF ALL COMPLETED WELDS. FOR STEEL DECK ATTACHED BY FASTENING SYSTEMS OTHER THAN WELDING, INSPECTION SHALL INCLUDE VERIFICATION OF THE FASTENERS TO BE USED PRIOR TO THE START OF THE WORK, OBSERVATIONS OF THE WORK IN PROGRESS TO CONFIRM INSTALLATION IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND A VISUAL INSPECTION OF THE COMPLETED INSTALLATION.

GENERAL STEEL SPECIAL INSPECTION NOTES :

1. QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT. THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE FABRICATOR.
2. QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE. THE QAI SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE ERECTOR.
3. WHERE A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA, IT IS PERMITTED TO COORDINATE THE INSPECTION FUNCTION BETWEEN THE QCI AND QAI SO THAT THE INSPECTION FUNCTIONS ARE PERFORMED BY ONLY ONE PARTY. WHERE QA RELIES UPON INSPECTION FUNCTIONS PERFORMED BY QC, THE APPROVAL OF THE ENGINEER OF RECORD AND THE AUTHORITY HAVING JURISDICTION IS REQUIRED.
4. THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS, SUCH AS PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE ERECTION DRAWINGS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
5. THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF THE CONCRETE.
6. THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
7. QUALITY ASSURANCE (QA) INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING (NDT), MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA. NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP MAY BE PERFORMED BY THAT FABRICATOR WHEN APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AGENCY SHALL REVIEW THE FABRICATOR'S NDT REPORTS.
8. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE FABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AT COMPLETION OF ERECTION, THE APPROVED ERECTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
9. IDENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, SHALL BE PERMITTED AT ANY TIME DURING THE PROGRESS OF THE WORK. HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE INSPECTOR OF THE OBLIGATION FOR TIMELY, IN-SEQUENCE INSPECTIONS. NONCONFORMING MATERIAL AND WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FABRICATOR OR ERECTOR, AS APPLICABLE.
10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINED BY THE ENGINEER OF RECORD.
11. CONCURRENT WITH THE SUBMITTAL OF SUCH REPORTS TO THE AHJ, EOR OR OWNER, THE QA AGENCY SHALL SUBMIT TO THE FABRICATOR AND ERECTOR:
    (1) NONCONFORMANCE REPORTS
    (2) REPORTS OF REPAIR, REPLACEMENT OR ACCEPTANCE OF NONCONFORMING ITEMS.

IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

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ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

SHEET TITLE

SCHEDULES

SHEET NO:

S004

3/27/2018 9:02:50 AM

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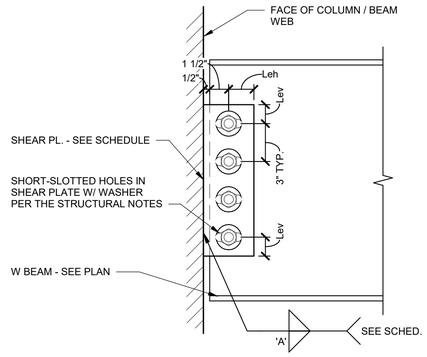
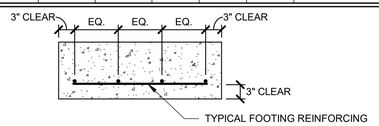
BEAM CONNECTION SCHEDULE

BEAM DEPTH	SHEAR PLATE INFORMATION			BOLTS W/ STANDARD WASHERS OVER SLOTS		WELD 'A'	COMMENTS
	PL. DIMENSIONS W/ SHORT-SLOTTED HOLES	Lev	Leh	No.	SIZE		
W8 x, W10 x	PL. 1/4" x 4"	1 1/2"	2"	2	3/4" Ø	3/16"	
W12 x	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W14 x 90 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W16 x 77 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	4	3/4" Ø	1/4"	
W18 x 65 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	5	3/4" Ø	1/4"	
W21 x 73 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	6	3/4" Ø	1/4"	
W24 x 94 & LIGHTER	PL. 3/8" x 4"	1 1/2"	2"	7	7/8" Ø	1/4"	
W27 x 114 & LIGHTER	PL. 3/8" x 4"	1 1/2"	2"	7	7/8" Ø	1/4"	
W30 x 124 & LIGHTER	PL. 1/2" x 4"	1 3/4"	2"	8	1" Ø	5/16"	
W33 x 130 & LIGHTER	PL. 1/2" x 4"	1 3/4"	2"	9	1" Ø	5/16"	
W36 x 160 & LIGHTER	PL. 1/2" x 4 1/2"	2"	2 1/4"	10	1-1/8" Ø	5/16"	



FOOTING SCHEDULE

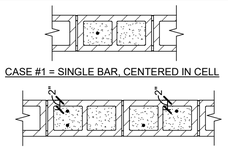
MARK	WIDTH	LENGTH	THICK	LENGTHWISE REINF.		CROSSWISE REINF.			REMARKS
				NO.	SIZE	NO.	SIZE	SPA.	
FC2	2'-0"	CONT.	12"	(2)	#5	--	--	--	



TYP. FOOTING SECTION

2015 IBC MASONRY REBAR LAP SPLICE SCHEDULE

FOR MASONRY APPLICATIONS (ACI 530 - 13)



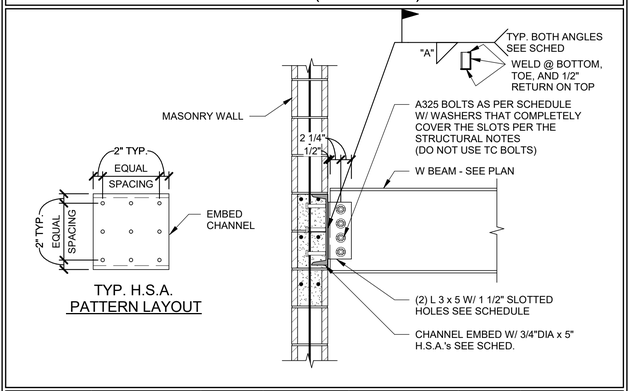
BAR LOCATION	MASONRY REINFORCING & SPLICE LENGTHS (IN) (f'm = 1500psi)									
	BAR SIZE									
	#3		#4		#5		#6		#7	
	CASE #		CASE #		CASE #		CASE #		CASE #	
	1	2	1	2	1	2	1	2	1	2
BEAM / WALL HORIZONTAL	19"		26"		32"		38"		45"	
WALL VERTICAL COLUMN AND JAMB	12"	16"	14"	29"	22"	45"	43"	54"	59"	63"

BAR LOCATION	MASONRY REINFORCING & SPLICE LENGTHS (IN) (f'm = 2000psi)									
	BAR SIZE									
	#3		#4		#5		#6		#7	
	CASE #		CASE #		CASE #		CASE #		CASE #	
	1	2	1	2	1	2	1	2	1	2
BEAM / WALL HORIZONTAL	19"		26"		32"		38"		45"	
WALL VERTICAL COLUMN AND JAMB	12"	14"	12"	25"	19"	40"	37"	54"	51"	63"

BAR LOCATION	MASONRY REINFORCING & SPLICE LENGTHS (IN) (f'm = 2500psi)									
	BAR SIZE									
	#3		#4		#5		#6		#7	
	CASE #		CASE #		CASE #		CASE #		CASE #	
	1	2	1	2	1	2	1	2	1	2
BEAM / WALL HORIZONTAL	19"		26"		32"		38"		45"	
WALL VERTICAL COLUMN AND JAMB	12"		12"	22"	17"	36"	33"	54"	46"	63"

NOTES :
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS INDICATED ABOVE.
2. DEVELOPMENT LENGTHS SHALL BE INCREASED BY 50% WHERE EPOXY COATED REBAR IS USED.
3. WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.
4. ALL REBAR #8 AND LARGER IN MASONRY SHALL BE SPLICED USING MECHANICAL SPLICES. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY.

BEAM INTO MASONRY (CHANNEL) SCHEDULE



TYP. H.S.A. PATTERN LAYOUT

BEAM SIZE	ANGLE SIZE (EA. SIDE)	WELD 'A'	BOLTS	EMBED CHANNEL	# OF H.S.A.	H.S.A. PATTERN
W6, W8, C8	3 x 5 x 1/4" x 0'-4"	3/16"	(2) 3/4"Ø	C8 x 13.75 x 0'-8"	4	∷
W10, C10	3 x 5 x 5/16" x 0'-7"	1/4"	(2) 3/4"Ø	C12 x 20.7 x 1'-4"	6	⁝∷
W12, C12	3 x 5 x 5/16" x 0'-9"	1/4"	(3) 3/4"Ø	C12 x 20.7 x 1'-4"	6	⁝∷
W14	3 x 5 x 5/16" x 0'-10"	1/4"	(3) 3/4"Ø	C15 x 33.9 x 1'-4"	9	⁝∷
W16	3 x 5 x 5/16" x 1'-0"	1/4"	(4) 3/4"Ø	C15 x 33.9 x 2'-0"	12	⁝⁝
W18	3 x 5 x 5/16" x 1'-3"	1/4"	(5) 3/4"Ø	(2) C12 x 20.7 x 2'-0"	12	⁝⁝

1. AT THE CONTRACTORS OPTION, (2) C8 x 13.7 MAY BE SUBSTITUTED FOR THE C15 x 33.9. HSA PATTERN SHALL BE RECONFIGURED & EQUALLY DISTRIBUTED BETWEEN THE TWO CHANNELS.
2. DOUBLE CHANNELS SHALL BE WELDED TOGETHER WITH A 2" STITCH WELD EVERY 4" AT THE FLANGE TOE.

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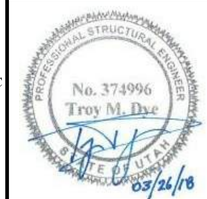

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

SHEET TITLE

SCHEDULES

SHEET NO:

S005

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SPECIAL INSPECTION SCHEDULE [1, 2]

ESTABLISHED PER 2015 IBC SECTION 110 AND CHAPTER 17

ITEM	CONTINUOUS[3]	PERIODIC[3]	REFERENCE	COMMENTS
PRE-FAB CONSTRUCTION (IBC 1704.2)			REFERENCE NOTES P1 & P2	P1. SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION, PROVIDED THE FABRICATOR COMPLIES WITH IBC. P2. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. SPECIAL INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. (SEE NOTE 2).
CONCRETE CONSTRUCTION (IBC 1705.3)			SEE IBC TABLE 1705.3 - REF. NOTE C1	C1. SPECIAL INSPECTION IS NOT REQUIRED FOR CONC. ISOLATED SPREAD FOOTINGS, CONTINUOUS FOOTINGS, NON-STRUCTURAL SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS, AND SIDEWALKS PROVIDED THE REQUIREMENTS OF IBC 1705.3 ARE MET. C2. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. C3. PERFORM AIR, SLUMP AND TEMP. TESTS WHEN CONCRETE SAMPLES ARE CAST. C4. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR VERIFICATION OF IN-SITU CONCRETE STRENGTH FOR POST-TENSIONED CONCRETE PRIOR TO TENSIONING TENDONS OR REMOVING SHORING OR FORMS. C5. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT. AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
REINFORCING STEEL PLACEMENT		●		
WELDING OF REINFORCING STEEL	●	●	REFERENCE NOTE C2	
EMBEDDED BOLTS & PLATES	●			
VERIFYING REQUIRED DESIGN MIX		●		
CONCRETE PLACEMENT / SAMPLING	●		REFERENCE NOTE C3	
CURING TEMPERATURE / TECHNIQUES		●		
VERIFICATION OF IN-SITU STRENGTH		●	REFERENCE NOTE C4	
EPOXY / EXPANSION ANCHOR PLACEMENT	●	●	REFERENCE NOTE C5	
MASONRY CONSTRUCTION (IBC 1705.4)			SEE TMS 402/ACI 550 TABLE 1.19.2 (NON-ESSENTIAL)	M1. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706 IN ACCORDANCE WITH ANSI / AWS D1.4. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINUOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. M2. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR ESSENTIAL FACILITIES (TMS 402/ACI 530 TABLE 1.19.3). M3. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
AS MASONRY CONSTRUCTION BEGINS, VERIFY:				
SITE PREPARED MORTAR		●		
MORTAR JOINTS		●		
REINFORCEMENT / CONNECTORS		●		
INSPECTION SHALL VERIFY:				
SIZE & LOCATION OF STRUCTURAL ELEMENTS		●		
TYPE, SIZE, & LOCATION OF ANCHORS		●	REFERENCE NOTE M2	
SIZE, GRADE & TYPE OF REINFORCEMENT		●		
WELDING OF REINFORCING BARS	●		REFERENCE NOTE M1	
HOT OR COLD WEATHER PROTECTION		●		
PRIOR TO GROUTING, VERIFY:				
CLEAN GROUT SPACE		●	REFERENCE NOTE M2	
PLACEMENT OF REINFORCEMENT CONNECTORS, TENDONS AND ANCHORS.		●		
PROPORTIONS OF SITE PREPARED GROUT		●		
CONSTRUCTION OF MORTAR JOINTS		●		
GROUT PLACEMENT	●			
PREPARATION OF TEST SPECIMENS / PRISMS	●			
COMPLIANCE W/ CONST. DOCS. / SUBMITTALS		●		
EPOXY / EXPANSION ANCHOR PLACEMENT	●	●	REFERENCE NOTE M3	
VERIFICATION OF f'm		●		
SELF CONSOLIDATING GROUT:				
VERIFY SLUMP FLOW AND VSI	●			
SOILS (IBC 1705.6)			REFERENCE NOTE F1	F1. SPECIAL INSPECTION OF SOILS SHALL REFERENCE THE APPROVED SOILS REPORT TO DETERMINE COMPLIANCE. F2. WHERE SOILS REPORT IS NOT PROVIDED SPECIAL INSPECTIONS ARE REQUIRED TO VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D 1557.
VERIFY ADEQUATE MATERIALS BELOW FOOTINGS		●	REFERENCE NOTE F1	
EXCAVATIONS EXTEND TO PROPER DEPTH AND REACH PROPER MATERIAL		●	REFERENCE NOTE F2	
CLASSIFY & TEST CONTROLLED FILL MATERIALS		●	REFERENCE NOTE F2	
PERFORM MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	●		REFERENCE NOTE F1	
PROPERLY PREPARED SITE AND SUB-GRADE PRIOR TO FILL.		●	REFERENCE NOTE F1	

GENERAL SPECIAL INSPECTION NOTES :

1. THE ITEMS MARKED WITH A "●" IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER PRIOR TO COMPLETION OF THAT PHASE OF WORK. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT.
3. CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK. (IBC SECTION 1702).

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Troy M. Dye
STATE OF UTAH
03/26/18

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

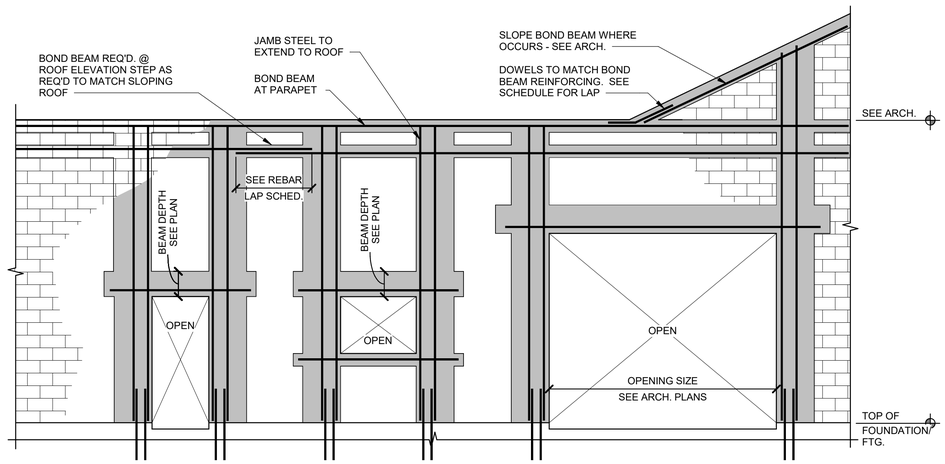
SHEET TITLE

SCHEDULES

SHEET NO:

S006

TYPICAL MASONRY / JAMB REINFORCING SCHEDULE



NOTES:
1. USE OPEN-END UNITS AT INTERSECTIONS OF BEAMS AND JAMBS.
2. TYPICAL HORIZONTAL BOND BEAMS MAY BE ADJUSTED UP OR DOWN BY ONE COURSE PROVIDED THE OVERALL NUMBER OF REQUIRED BOND BEAMS ARE INSTALLED.
3. TYPICAL HORIZONTAL AND VERTICAL WALL REINFORCING NOT SHOWN FOR CLARITY, SEE PLAN AND SCHEDULE FOR TYPICAL WALL REINFORCING.
4. JAMB REINFORCING SHOWN IS SCHEMATIC. SEE SCHEDULE & DETAILS FOR ACTUAL JAMB REINF.

MASONRY BEAM SCHEDULE

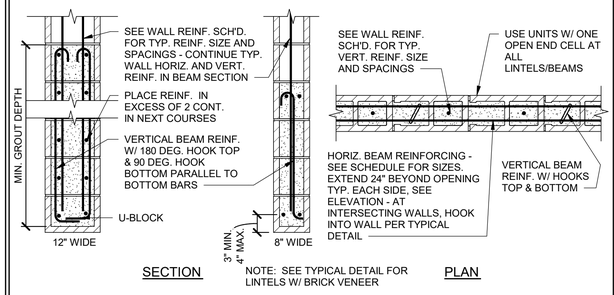
MARK	NOMINAL THICKNESS	BOTTOM REINF.	TOP REINF.	VERTICAL REINF.	MIN. GROUT DEPTH	OPENING ① SIZE	COMMENTS
MB-1	8"	(2) #5	(2) #5	#4 @ 32"	24"	2'-8" TO 6'-0"	
MB-2	8"	(2) #5	(2) #5	#4 @ 32"	32"	6'-1" TO 10'-0"	

NOTES:
1. WHERE SPECIFIC BEAMS ARE NOT NOTED ON THE PLANS - REFER TO OPENING SIZE FOR REQUIRED BEAM DEPTH AND REINFORCING.
2. FIRST VERTICAL BAR TO BE WITHIN 8" OF END OF BEAM.
3. SEE TYPICAL ELEVATION - VIEW OF BEAM.
4. VERTICAL REINFORCING SHALL HAVE HOOKS TOP AND BOTTOM.

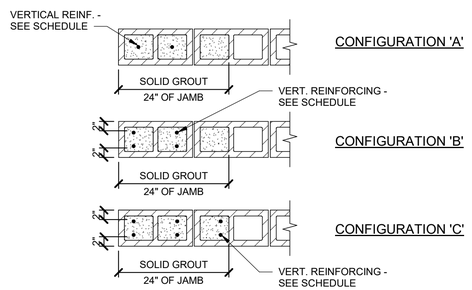
MASONRY JAMB SCHEDULE

MARK	NOMINAL THICKNESS	VERTICAL REINF.	TIES	CONFIG.	OPENING ① SIZE	COMMENTS
MJ-1	8"	(2) #5	---	A	2'-8" TO 6'-0"	
MJ-2	8"	(4) #5	---	B	6'-1" TO 8'-0"	
MJ-3	8"	(6) #5	---	C	8'-1" TO 10'-0"	

NOTES:
1. WHERE SPECIFIC JAMBS ARE NOT NOTED ON THE PLANS - REFER TO OPENING SIZE FOR REQUIRED REINFORCING AND CONFIGURATION.
2. ALL VERT. REINFORCING SHALL HAVE MATCHING DOWELS CAST INTO FOUNDATIONS.
3. HORIZONTAL REINFORCING NOT SHOWN.
4. JAMBS TO BE GROUTED SOLID.



NOTE: SEE TYPICAL DETAIL FOR LINTELS W/ BRICK VENEER



MASONRY WALL SCHEDULE

MARK	THICK.	VERT. REINF. SIZE	VERT. REINF. SPACE	HORIZ. BOND BEAM REINF. NO.	HORIZ. BOND BEAM REINF. SIZE	HORIZ. BOND BEAM REINF. SPACE	@ ROOF	@ ELEVATED FLOOR	COMMENTS
MW-1	8	#5	32	(2)	#4	48	(2) #5	--	

NOTES:
1. FOR ANY CMU WALLS NOT SPECIFICALLY CALLED OUT IN PLANS, USE MW1
2. VERT. REINFORCING TO BE @ CL. OF WALL UNLESS OTHERWISE NOTED.
3. SOLID GROUTING OF WALLS IS UNACCEPTABLE EXCEPT WHERE SPECIFICALLY NOTED.
4. SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
5. A BOND BEAM SHALL BE LOCATED IN THE FIRST COURSE ABOVE THE FOUNDATION IF VERTICAL DOWELS HAVE BEEN BENT TO ALIGN WITH VERTICAL CELLS, WHETHER OR NOT MASONRY WEBS HAVE BEEN CUT

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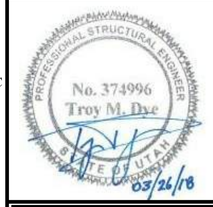

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	Author
CHK'D BY:	S. Ericksen

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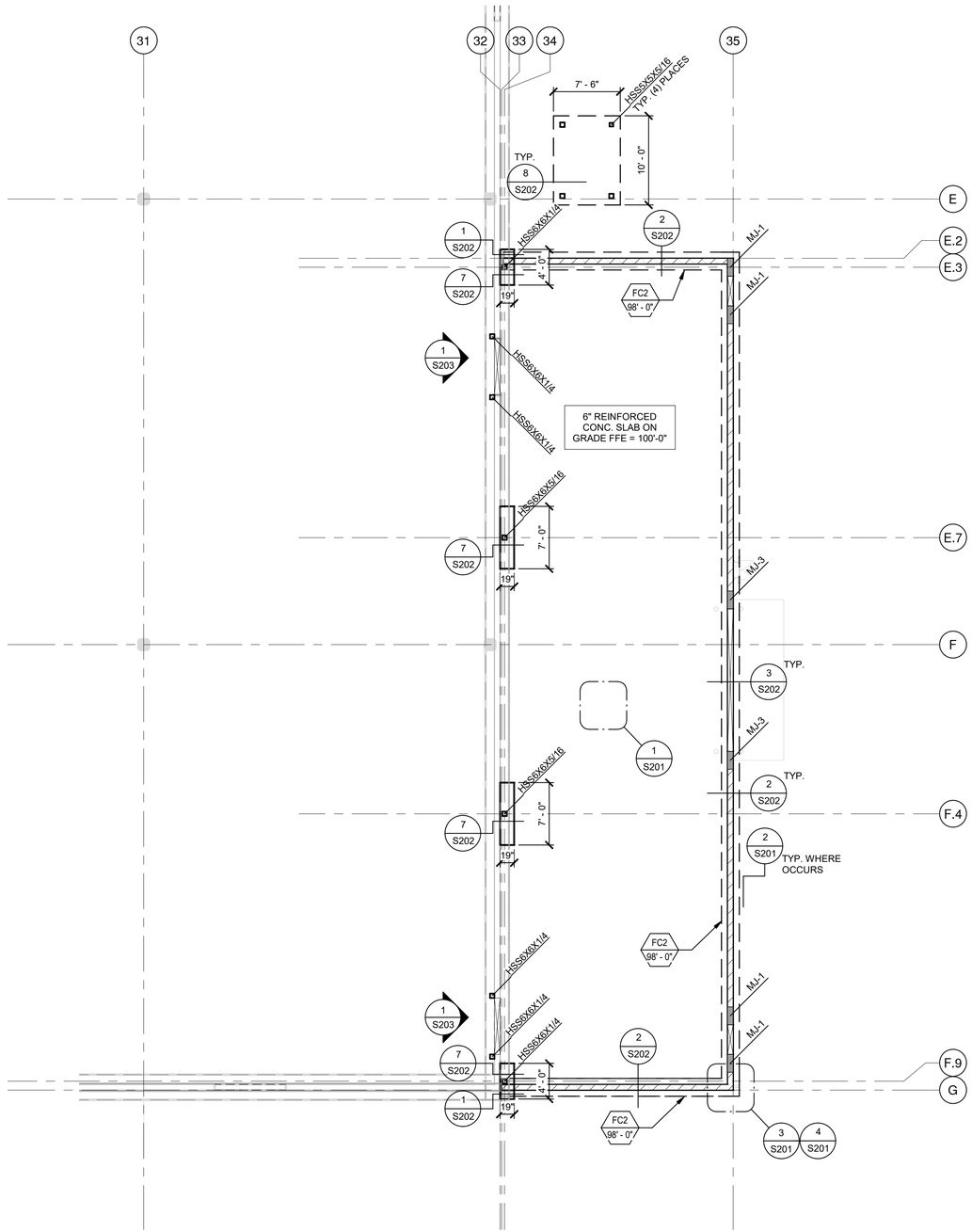
26 Mar, 2018

SHEET TITLE

SCHEDULES

SHEET NO:

S007



FOOTING & FOUNDATION PLAN

SCALE : 1/8" = 1'-0"

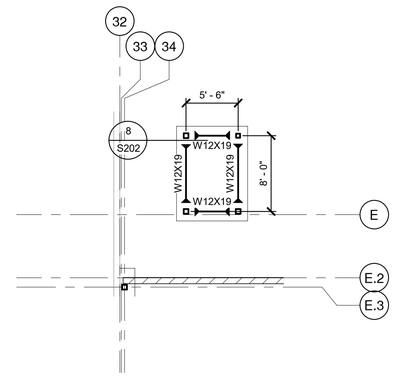
A S101

FOOTING & FOUNDATION NOTES

1. SEE SHEET S001 FOR GENERAL STRUCTURAL NOTES.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL WHICH HAS BEEN PREPARED FOR THE BEARING PRESSURE SHOWN IN THE STRUCTURAL NOTES.
3. VERIFY ALL DIMENSIONS WITH DRAWINGS AND NOTIFY ENGINEER OF ANY DISCREPANCIES FOUND.
4. SOLID GROUT ALL MASONRY COURSES BELOW FINISHED FLOOR OR EXTERIOR GRADE (WHICHEVER IS HIGHER).
5. SEE SHEET S001 FOR FOOTING SCHEDULE.
6. PROVIDE DOWELS IN FOOTINGS / FOUNDATIONS TO MATCH VERTICAL WALL REINFORCING U.N.O.
7. SEE SHEET S005 FOR TYPICAL FOOTING AND FOUNDATION DETAILS.
8. ALL EXTERIOR WALL FOOTINGS TO BEAR A MINIMUM DIMENSION BELOW EXTERIOR GRADE AS NOTED IN GENERAL STRUCTURAL NOTES.
9. FOUNDATION WALLS ARE DESIGNED AND DETAILED FOR THE COMPLETED CONDITION. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. BACKFILLED WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION AND BACKFILLING TO PRODUCE PLUMB AND TRUE FINISHED WALLS.
10. ALL ANCHORS, HOLDOWNS, ANCHOR BOLTS, DOWELS, EMBEDDED ITEMS, ETC. SHALL BE HELD IN PLACE PRIOR TO AND DURING CONCRETE AND/OR GROUT PLACEMENT.
11. COORDINATE ALL FOOTING DEPTHS (INTERIOR AND EXTERIOR) WITH DRAINS, CONDUITS, ETC. THAT MAY INTERFERE WITH FOOTINGS.

CONCRETE SLAB NOTES

1. SLAB ON GRADE SHALL BE 6" THICK CONCRETE U.N.O. SLAB SHALL BE UNDERLAIN BY FREE DRAINING MATERIAL AS PRESCRIBED IN THE SOILS REPORT.
2. SEE SHEET S201 FOR CONTROL AND CONSTRUCTION JOINT INFORMATION.



COOLING TOWER FRAMING

SCALE : NONE

B S101

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03/24/18

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ADDITION TO THE
CONTROL SYSTEMS DIV.
PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

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SHEET TITLE

FOOTING AND FOUNDATION PLAN

SHEET NO:

S101

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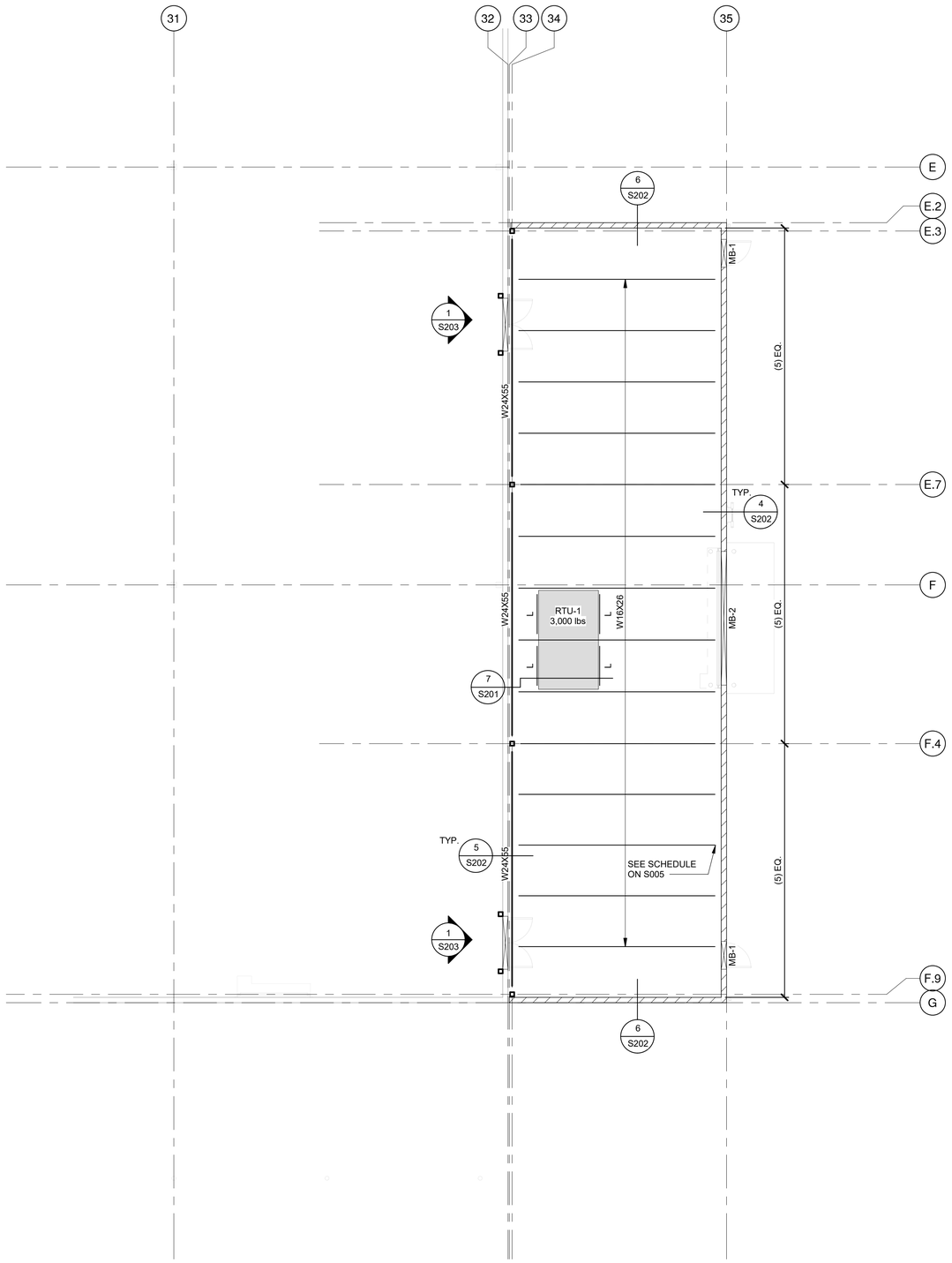

ROOF FRAMING PLAN

SCALE : 1/8" = 1'-0"

A
S102

IF SHEET IS LESS THAN 22"x 34"
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REDUCE SCALE ACCORDINGLY

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03/24/18

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ADDITION TO THE
CONTROL SYSTEMS DIV.
PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

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PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

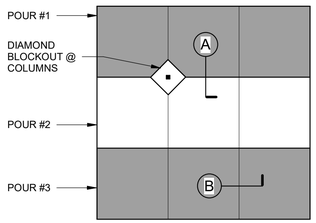
26 Mar, 2018

SHEET TITLE

ROOF FRAMING PLAN

SHEET NO:

S102

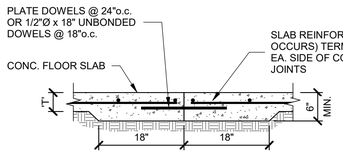


NOTES:
1. JOINTS SHALL OCCUR AT MAIN COLUMN/GRID LINES W/ 10'-0" MAX. SPACING BETWEEN JOINTS @ 4" SLABS; 12'-0" MAX. @ 5" SLABS, & 15'-0" MAX. @ 6" SLABS.
2. SEE PLAN FOR SLAB THICKNESS 'T' AND REINFORCING SIZE AND SPACING.

TYPICAL CONCRETE SLAB JOINTS

SCALE : NONE

1 / S201

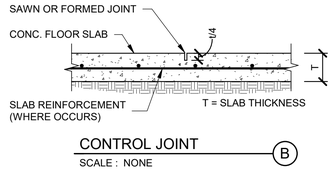


NOTE: THICKENING OF SLAB NOT REQUIRED FOR SLABS WITH T = 6" OR GREATER

T = SLAB THICKNESS

CONSTRUCTION JOINT (A)

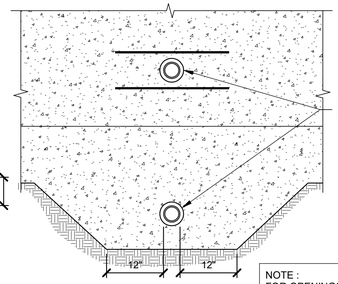
SCALE : NONE



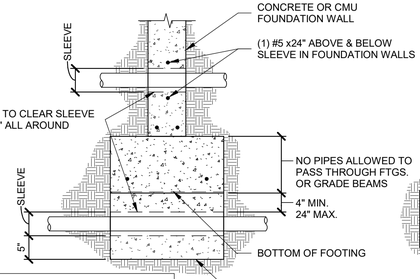
CONTROL JOINT (B)

SCALE : NONE

ENGINEER'S NOTE: VERIFY THAT YOU WANT THE REINFORCING CONTINUOUS THROUGH THE CONTROL JOINT. IE, IS THE SLAB CRACK SENSITIVE, IS IT INTENDED TO PROVIDE FIXITY AT THE BASE OF A WALL, ETC.?



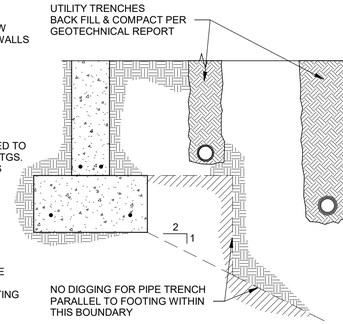
NOTE:
TYPICAL FOUNDATION WALL REINF. NOT SHOWN FOR CLARITY.



NOTE :
FOR OPENINGS LARGER THAN 12" IN ANY DIRECTION - SEE STRUCTURAL NOTE E-7.

NOTE :
1. DETAIL IS SIMILAR AT MASONRY FOUNDATION WALLS.
2. SEE TYPICAL DETAIL FOR MULTIPLE WALL PENETRATIONS.

PIPE CROSSING FOOTING / FOUNDATION WALL



PIPE PARALLEL TO FOOTING

ALLOWABLE PIPING LOCATIONS @ FOOTING DETAIL

SCALE : NONE

2 / S201

NOTES :
1. THIS DETAIL APPLIES TO ROOF OPENINGS LARGER THAN 18" IN EITHER DIRECTION.
2. MECHANICAL CURB ATTACHMENT TO STRUCTURE IS BY OTHERS.
3. THIS DETAIL OCCURS UNDER THE CURB AND AROUND THE OPENING. WHERE NO OPENING OCCURS, FRAME OCCURS BELOW CURB ONLY.

TYPICAL HORIZONTAL REINFORCING DETAIL

SCALE : NONE

3 / S201

NOTES:
1. ALL VERTICAL REINFORCING SHALL HAVE MATCHING DOWELS CAST INTO FOUNDATIONS / FOOTINGS.
2. HORIZONTAL REINFORCEMENT NOT SHOWN FOR CLARITY.
3. TYPICAL WALL, VERTICAL REINFORCING NOT SHOWN - SEE PLAN FOR SIZE AND SPACING

TYPICAL VERTICAL REINF. DETAIL

SCALE : NONE

4 / S201

TYPICAL ANCHOR BOLT EMBEDMENT DETAIL

SCALE : NONE

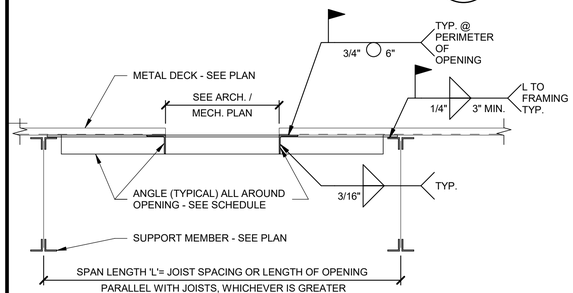
5 / S201

NOTES :
1. USE DETAIL FOR THE FOLLOWING CONDITIONS :
   - NO ADDED LOAD NOTED ON PLANS
   - (1) TO (3) DECK FLUTES ARE PENETRATED
2. FOR OPENINGS GREATER THAN THREE FLUTES (18"), SEE TYPICAL DETAIL FOR ADDITIONAL FRAMING.

TYP. FRAMING @ SMALL ROOF OPENINGS DETAIL

SCALE : NONE

6 / S201



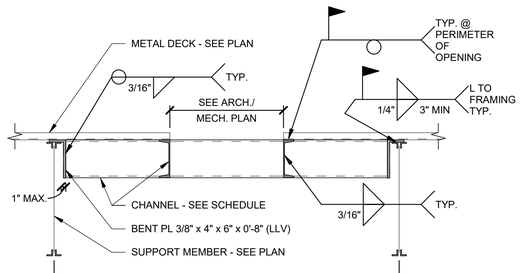
SPAN	ANGLE SIZE
L ≤ 6'-0"	L 4 x 4 x 1/4
L ≤ 8'-0"	L 4 x 4 x 3/8
L ≤ 10'-0"	L 5 x 5 x 3/8

NOTES :
1. THIS DETAIL APPLIES TO ROOF OPENINGS LARGER THAN 18" IN EITHER DIRECTION.
2. MECHANICAL CURB ATTACHMENT TO STRUCTURE IS BY OTHERS.
3. THIS DETAIL OCCURS UNDER THE CURB AND AROUND THE OPENING. WHERE NO OPENING OCCURS, FRAME OCCURS BELOW CURB ONLY.

TYP. FRAMING @ ROOF OPENINGS & ROOFTOP EQUIPMENT DETAIL

SCALE : NONE

7 / S201



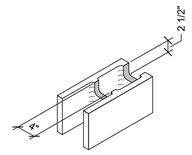
SPAN	CHANNEL
L ≤ 6'-0"	C6 x 8.2
L ≤ 8'-0"	C6 x 8.2
L ≤ 10'-0"	C8 x 11.5

NOTES:
1. THIS DETAIL APPLIES TO ROOF OPENINGS LARGER THAN 18" IN EITHER DIRECTION.
2. WHERE THERE IS NO OPENING IN ROOF, PLACE FRAME UNDER CURB.

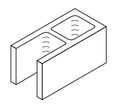
TYPICAL FRAMING @ ROOF OPENINGS @ ROOFTOP EQUIPMENT

SCALE : NONE

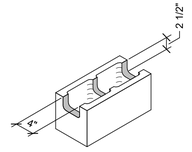
8 / S201



TYPICAL 8" OPEN-END BOND BEAM CMU
(FOR USE IN CMU BEAMS) ABOVE BOTTOM COURSE



TYPICAL 8" OPEN-END CMU
(FOR USE IN ALL CMU BEAMS) ABOVE BOTTOM COURSE, U.N.O.



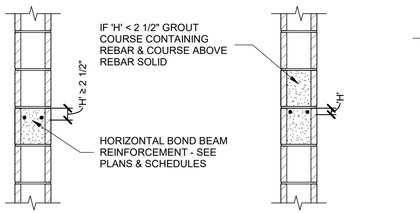
TYPICAL 8" BOND BEAM CMU ("H" BLOCK)
(FOR USE IN ALL BOND BEAMS, U.N.O.)

NOTES:
1. ALL 8" OPEN-END AND BOND-BEAM CMU UNITS SHALL MEET THE MINIMUM DIMENSIONS SHOWN.
2. STANDARD 8" CMU UNITS MAY BE CUT, CHIPPED, OR MODIFIED TO CREATE OPEN-END OR BOND BEAM UNITS, PROVIDED THE FINAL CONFIGURATION MEETS THE MINIMUM DIMENSIONS SHOWN.

TYPICAL CMU BLOCK

SCALE : NONE

9 / S201



TYPICAL BOND BEAM GROUTING

ALTERNATE BOND BEAM GROUTING
WHEN 'H' ≤ 2 1/2"

TYP. BOND BEAM GROUTING

SCALE : NONE

10 / S201

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CONSULTANTS

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PROFESSIONAL STRUCTURAL ENGINEER
No. 374996
Troy M. Dye
STATE OF UTAH
03/26/18

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

SHEET TITLE

DETAILS

SHEET NO:

S201

3/27/2018 9:02:05 AM

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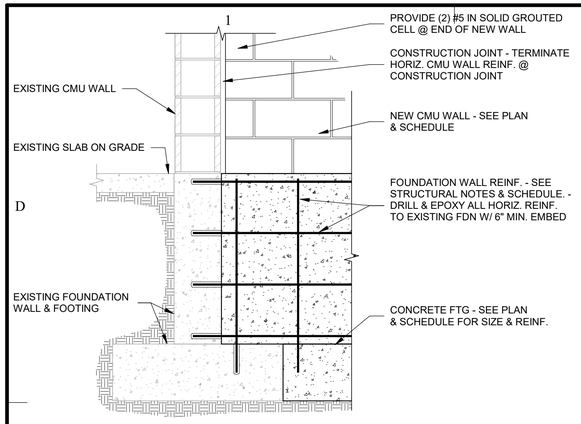
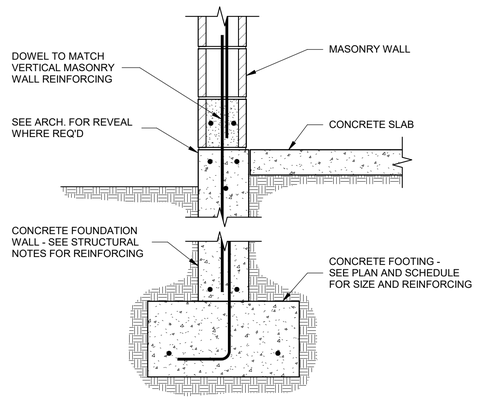


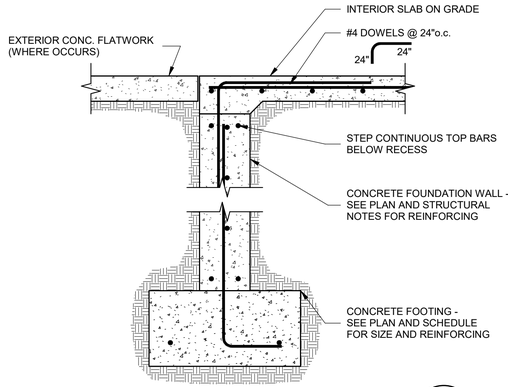
TYP. FOOTING & FOUNDATION INTO EXISTING FOOTING & FOUNDATION — 1 / S202

SCALE : NONE



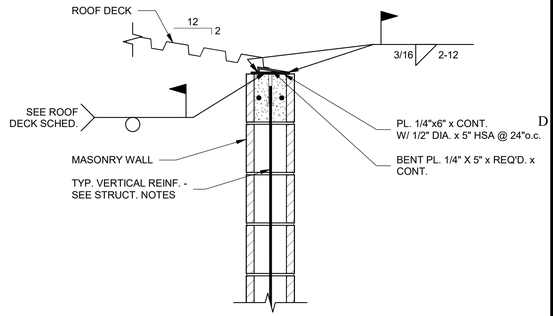
TYP. MASONRY ON CONC. FNDN. WALL DETAIL — 2 / S202

SCALE : NONE



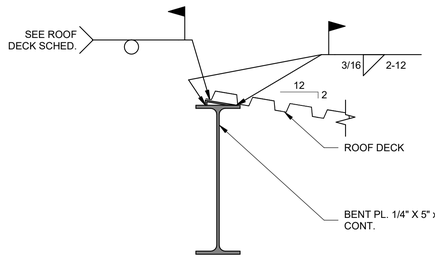
CONCRETE FOUNDATION @ OPENING — 3 / S202

SCALE : NONE



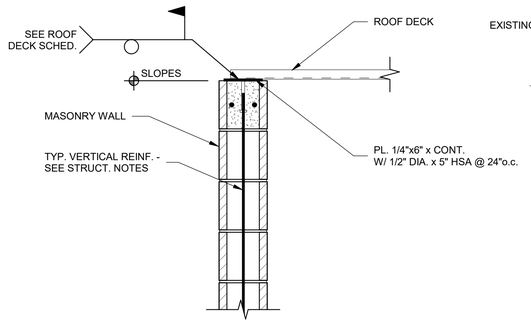
DETAIL — 4 / S202

SCALE : NONE



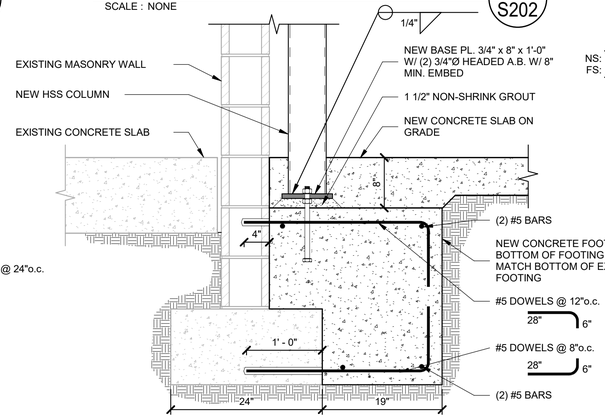
DETAIL — 5 / S202

SCALE : NONE



DECK ACROSS MASONRY — 6 / S202

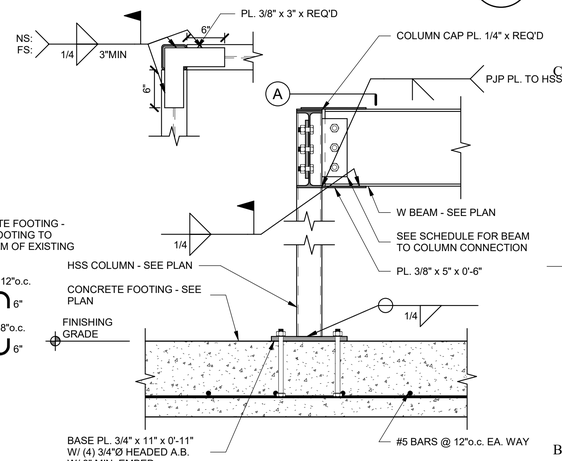
SCALE : NONE



NOTE: FOOTING SHALL BE PLACED ON MINIMUM O F2'-0" OF COMPACTED FILL MECHANICALLY COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM-D-1557)

DETAIL — 7 / S202

SCALE : NONE



MOMENT FRAME CONNECTION DETAIL — 8 / S202

SCALE : NONE

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Parker

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1425 WEST 2675 NORTH OGDEN, UTAH

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CAD DWG FILE:	
DRAWN BY:	D.Bartelson
CHK'D BY:	S. Ericksen

PERMIT SET

26 Mar, 2018

SHEET TITLE

DETAILS

SHEET NO:

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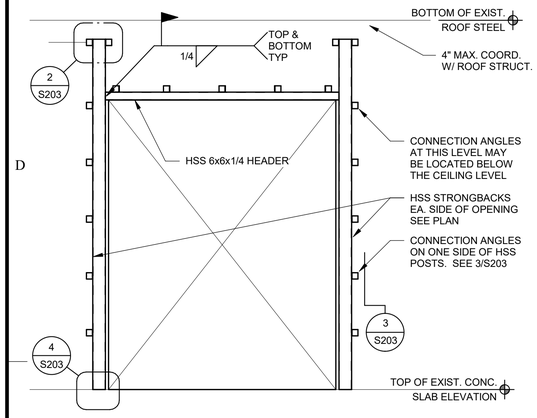
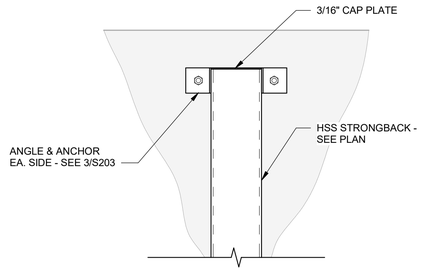
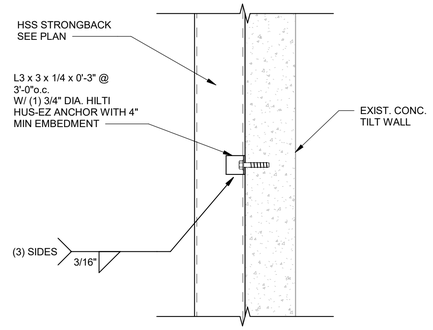


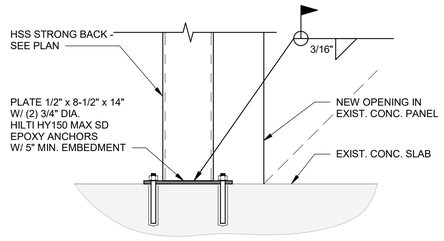
DETAIL 1 S203
SCALE : NONE



DETAIL 2 S203
SCALE : NONE



DETAIL 3 S203
SCALE : NONE



DETAIL 4 S203
SCALE : NONE

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ISSUE DATE:	26 March, 2018
PROJECT NO:	18110
ARW PROJECT NO:	18039
CAD DWG FILE:	
DRAWN BY:	Author
CHK'D BY:	Checker

PERMIT SET
26 Mar, 2018

SHEET TITLE
DETAILS

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S203

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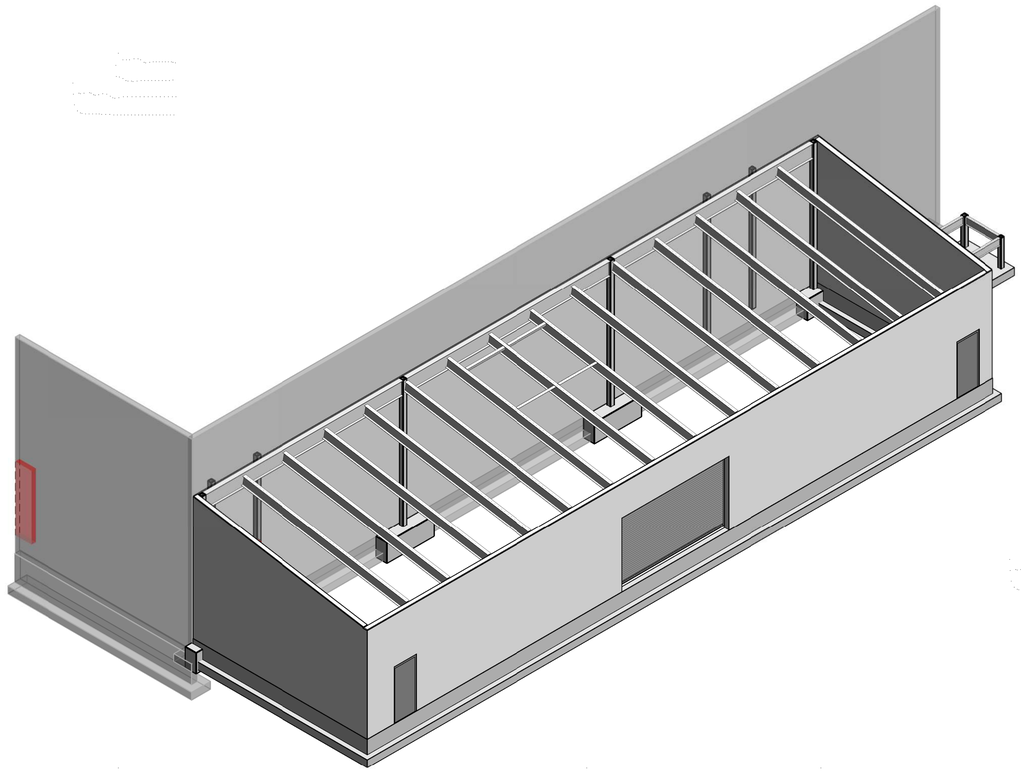

3D REFERENCE VIEW

SCALE : NONE

A
S401

NOTE: THIS VIEW REPRESENTS A SCHEMATIC RENDERING ONLY AND IS NOT INTENDED TO CONVEY CONSTRUCTION INFORMATION. ALL CONSTRUCTION SHALL COMPLY WITH SPECIFIC NOTES AND DETAILS WITHIN THE STRUCTURAL DRAWINGS.

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26 Mar, 2018

SHEET TITLE

SCHEMATIC REFERENCE

SHEET NO:

S401

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ARCHITECTURAL NOTES

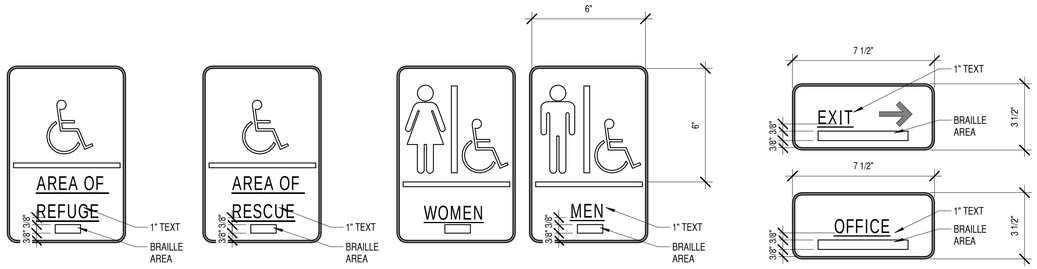
1. THE ARCHITECTURAL DRAWINGS ARE THE PRIMARY CONTRACT DOCUMENTS. ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS AND/OR DRAWINGS OF OTHER DISCIPLINES SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO AY WORK. ITEMS AND DIMENSIONS BETWEEN EXISTING AND NEW PORTIONS OF THE PROJECT SHALL BE VERIFIED TO ENSURE COORDINATION.
3. THE CONTRACTOR SHALL SUBMIT ANY PROPOSED CHANGES OR MODIFICATIONS OF THE CONTRACT DOCUMENTS, IN WRITING, TO THE ARCHITECT BEFORE PROCEEDING WITH ANY ACTION.
4. WHERE SPECIFIC DETAILS ARE NOT PROVIDED, TYPICAL OR SIMILAR INDUSTRY STANDARD DETAILS SHALL APPLY. IF FURTHER DETAIL IS REQUIRED CONTACT ARCHITECT.
5. DETAILS ARE PROVIDED FOR VISUAL REPRESENTATION OF DESIGN INTENT. OFTEN THE DETAILS ARE BASED ON A BASIS-OF-DESIGN PRODUCT AND/OR MATERIAL AND MAY BE DIAGRAMMATIC IN NATURE.
6. IF A DIFFERENT PRODUCT OR MATERIAL FROM THAT INDICATED ON THE DRAWINGS OR SPECIFICATIONS IS SUBSTITUTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALTERNATE DETAILS AS REQUIRED FOR THE ARCHITECT TO REVIEW.
7. GENERALLY, DIMENSIONS SHOWN OF ARCHITECTURAL DRAWINGS ARE TAKEN FROM THE CORE STRUCTURE FACE (IE. CONCRETE WALL=FACE OF WALL; STUD WALL=FACE OF STUD).
8. ANY ADDITIONAL BLOCKING, BRACING, TRIM, FLASHING, SEALANTS, ETC. REQUIRED FOR INSTALLATION OF COMPLETE SYSTEMS_ PERTAINING TO DOORS, WINDOWS, OPENINGS, PENETRATIONS, ETC. ARE EXPECTED TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
9. ASSUME ALL GYP. BD. WALLS TO HAVE TOPSET RUBBER BASE INSTALLED UNLESS NOTED OTHERWISE.
10. PROVIDE SEALANT OR TRIM AS APPROPRIATE WHERE DISSIMILAR MATERIALS COME IN CONTACT.
11. PROVIDE FLOORING TRANSITION WHERE DISSIMILAR FLOORING MATERIALS OCCUR.
12. PAINT ALL MISCELLANEOUS SURFACES, SUPPORTS, METALS, ETC. IF PERMANENTLY ATTACHED TO PAINTED SURFACE OR EXPOSED TO THE ELEMENTS.

SYMBOLS

1 View Name, 1/8" = 1'-0"	VIEW TITLE
0 — 1" — 2"	GRAPHIC SCALE
	NORTH ARROW w/ TRUE NORTH
0	GRID INDICATOR
1 / A101 SIM	SECTION CALLOUT
1 / A101 SIM	DETAIL CALLOUT
1 / A101 SIM	DETAIL CALLOUT
1 Ref / A101 / 1 Ref	ELEVATION CALLOUT
Name / Elevation	LEVEL / ELEVATION CALLOUT
100'-0"	SPOT ELEVATION CALLOUT
1:12	ROOF SLOPE INDICATOR
Room name 101	ROOM TAG
101A	DOOR TAG
A	WALL TAG
11	WINDOW TAG
A	DEMOLITION KEYNOTE
/E\	FIRE RISER

ABBREVIATIONS

&	AND	JAN	JANITOR
L	ANGLE	JST	JOIST
@	AT	JT	JOINT
#	POUND OR NUMBER		
		K.O.	KNOCK OUT
AC	ACOUSTICAL		
A.F.F.	ABOVE FINISH FLOOR	LAM	LAMINATE
ALUM	ALUMINUM	LAV	LAVATORY
APPROX	APPROXIMATE		
ARCH	ARCHITECTURAL	MAX	MAXIMUM
ASPH	ASPHALT	MAS	MASONRY
		MECH	MECHANICAL
BD	BOARD	MEMB	MEMBRANE
BITUM	BITUMINOUS	MTL	METAL
BLDG	BUILDING	MFTR	MANUFACTURER
BLKG	BLOCKING	MH	MANHOLE
BRG	BEARING	MIN	MINIMUM
BTM	BOTTOM	MISC	MISCELLANEOUS
		M.O.	MASONRY OPENING
C	TOP OF FINISH CONCRETE	MTD	MOUNTED
C.I.	CAST IRON		
C.J.	CONTROL JOINT	N	NORTH
C.L.	CENTER LINE	N.I.C.	NOT IN CONTRACT
CLG	CEILING	NO or #	NUMBER
CLR	CLEAR	NOM	NOMINAL
C.M.U.	CONCRETE MASONRY UNIT	N.T.S.	NOT TO SCALE
C.O.	CLEAN OUT		
C.O.T.G.	CLEAN OUT AT GRADE	O.C.	ON CENTER
COL	COLUMN	O.D.	OUTSIDE DIAMETER (DIM)
CONC	CONCRETE	OFF	OFFICE
CONN	CONNECTION	OH	OVERHEAD
CONSTR	CONSTRUCTION	OPNG	OPENING
CONT	CONTINUOUS	OPP	OPPOSITE
C.T.	CERAMIC TILE		
CTR	CENTER	PL	PLATE
		PLAM	PLASTIC LAMINATE
D.C.W.	DOMESTIC COLD WATER	PLYWD	PLYWOOD
D.H.W.	DOMESTIC HOT WATER	P.O.C.	POINT OF CONNECTION
D.F.	DRINKING FOUNTAIN	PNL	PANEL
DTL	DETAIL	PR	PAIR
DIA	DIAMETER	PT	POINT
DIM	DIMENSION		
DISP	DISPENSER	Q.T.	QUARRY TILE
DN	DOWN		
DRN	DRAIN	RAD	RADIUS
DS	DOWNSPOUT	R.D.	ROOF DRAIN
DWG	DRAWING	REF	REFERENCE
		REINF	REINFORCED
E	EAST	REQD	REQUIRED
EA	EACH	RESIL	RESILIENT
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM	RFG	ROOFING
E.J.	EXPANSION JOINT	RM	ROOM
EL	ELEVATION	RS	RESINOUS FLOORING
ELEC	ELECTRICAL	R.O.	ROUGH OPENING
ENGR	ENGINEER		
EQ	EQUAL	S	SOUTH
EQUIP	EQUIPMENT	SCH	SCHEDULE
(E)	EXISTING	SECT	SECTION
EXP	EXPANSION	SHT	SHEET
EXT	EXTERIOR	SIM	SIMILAR
		SPECS	SPECIFICATION
F.A.	FIRE ALARM	SQ	SQUARE
F.D.	FLOOR DRAIN	S.S.	SANITARY SEWER
FDN	FOUNDATION	S.ST	STAINLESS STEEL
F.E.	FIRE EXTINGUISHER	STD	STANDARD
F.E.C.	FIRE EXTINGUISHER CABINET	STL	STEEL
FIN	FINISH	STOR	STORAGE
FLR	FLOOR	STR	STRUCTURAL
FLASH	FLASHING	SUSP	SUSPENDED
FLUOR	FLUORESCENT	SYM	SYMMETRICAL
F.O.	FACE OF	SYS	SYSTEM
F.R.	FIRE RATED		
FT	FOOR OR FEET	TLT	TOILET (ROOM)
FTG	FOOTING	TRTD	TREATED (PRESERVATIVE
FUT	FUTURE	T & B	TOP & BOTTOM
		T.O.	TOP OF
GA	GAUGE	TRANS	TRANSFORMER
GALV	GALVANIZED	TYP	TYPICAL
GND	GROUND		
GR	GRADE	U.N.O.	UNLESS NOTED OTHERWISE
G.W.B.	GYPSUM WALL BOARD	UT	URINAL
GYP	GYPSUM		
		VERT	VERTICAL
H.B.	HOSE BIBB	VEST	VESTIBULE
HC	HANDICAP		
H.M.	HOLLOW METAL	W	WEST
HORIZ	HORIZONTAL	w/	WITH
HGT	HEIGHT	WC	WATER CLOSET
		WD	WOOD
I.D.	INSIDE DIAMETER (DIM)	W/O	WITHOUT
IN	INCH, INCHES	WP	WATERPROOF
INSUL	INSULATION		
INT	INTERIOR		



A1 TYP. SIGNS
3" = 1'-0"

IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

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STATE OF UTAH
STEVEN J. PETERSON
6830295-0301
LICENSED ARCHITECT
4/2/18

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

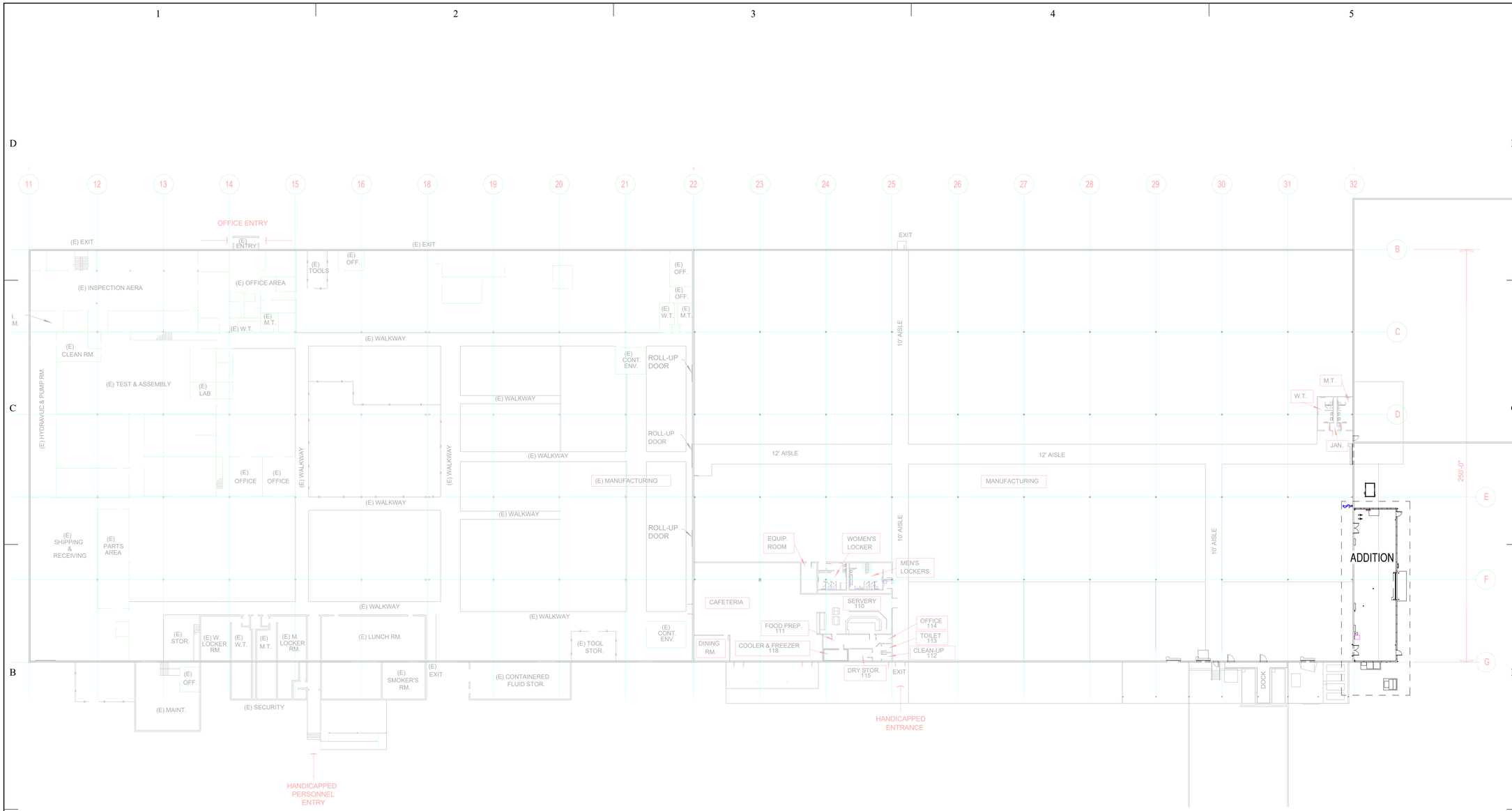
ISSUE DATE:	27 MARCH, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	Author
CHK'D BY:	Checker

PERMIT SET
27 MARCH, 2018

SHEET TITLE
ARCHITECTURAL NOTES

SHEET NO:
A001

4/2/2018 8:27:08 AM



A1 OVERALL GROUND FLOOR PLAN

1/32" = 1'-0"

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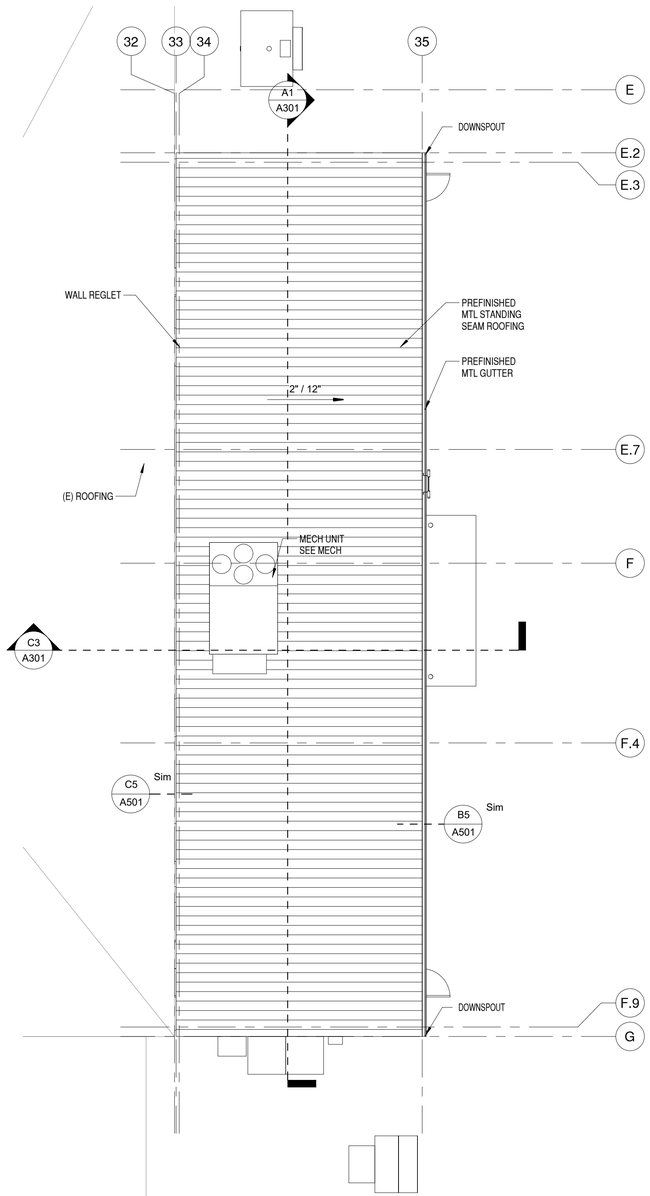
SHEET TITLE

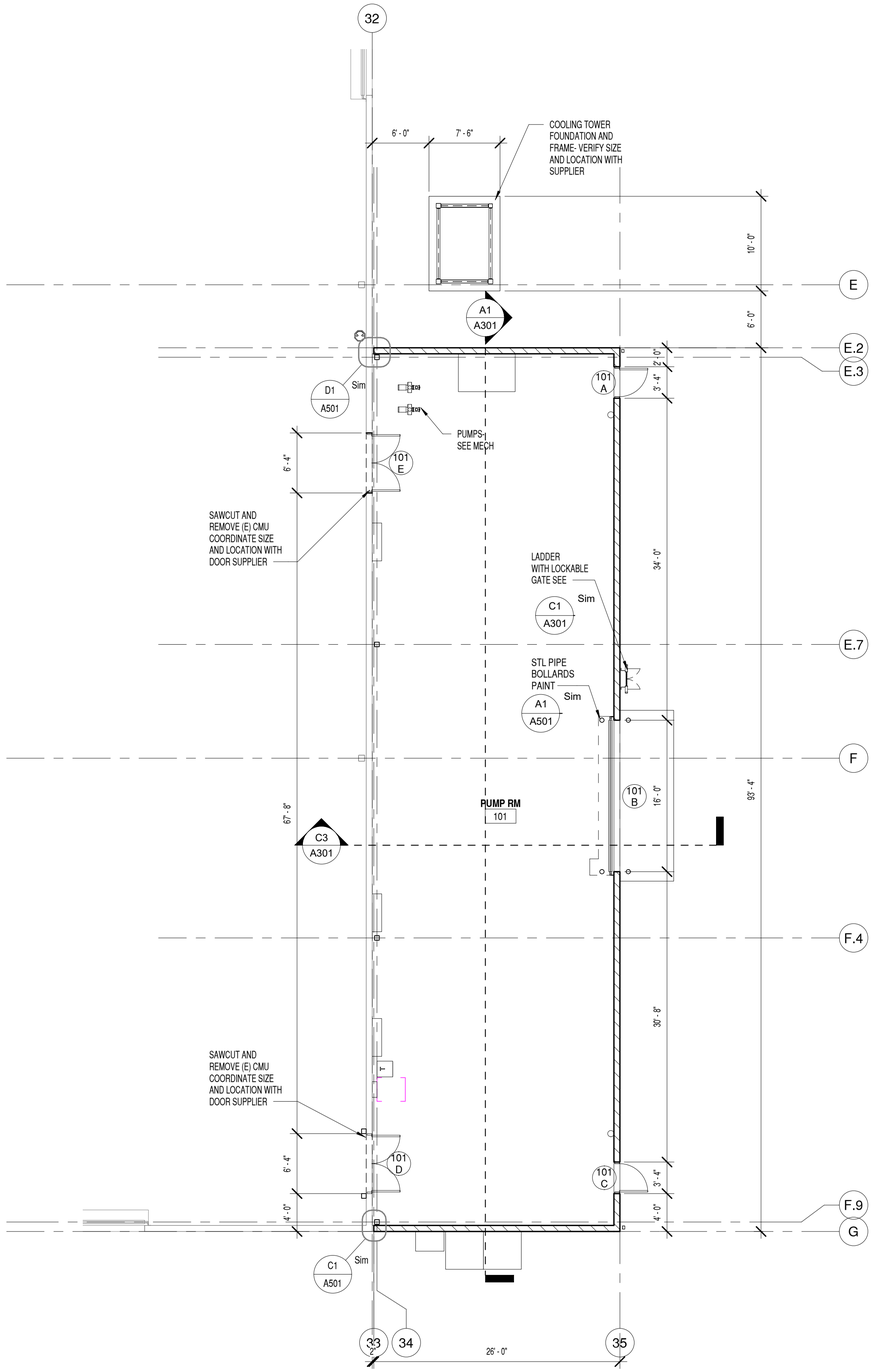
OVERALL FLOOR PLAN

SHEET NO:

A100



A1 ROOF PLAN
1/8" = 1'-0"



A3 GROUND FLOOR ADDITION PLAN
1/8" = 1'-0"

0 4' 8' 16'

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PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

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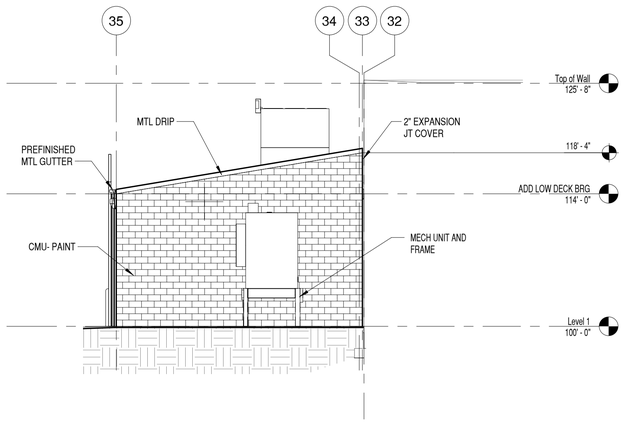
SHEET TITLE

FLOOR PLAN

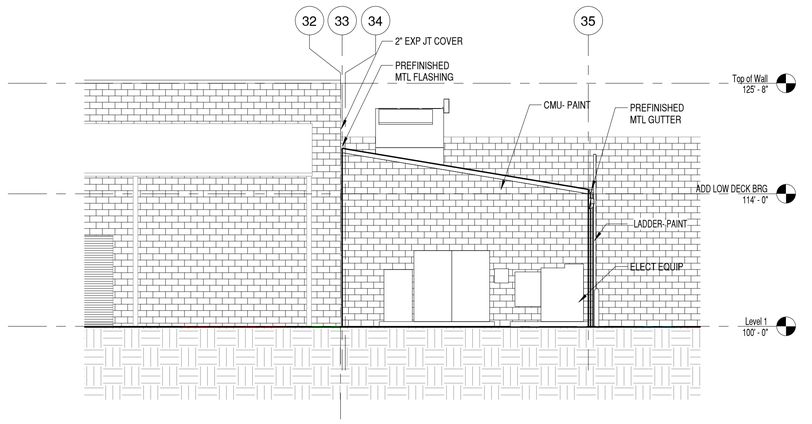
SHEET NO:

A101

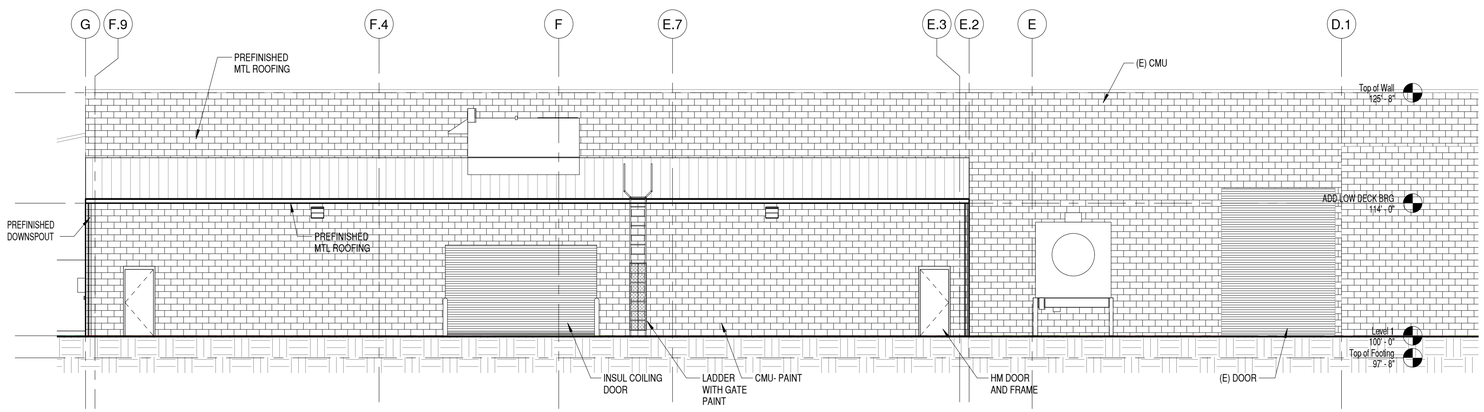
EXTERIOR FINISH SCHEDULE		
MATERIAL	FINISH	COLOR
CMU	PAINT TO MATCH (E) WALLS	MATCH (E) COLOR
METAL TRIM	PREFINISHED	MATCH (E) COLOR
GUTTERS AND DOWNSPOUTS	PREFINISHED	MATCH (E) COLOR
LADDER	PAINT	MATCH (E) COLOR
PIPE BOLLARD	PAINT	SAFETY YELLOW
STRUCTURAL STEEL	PAINT	MATCH (E) COLOR
METAL ROOFING	PREFINISHED	MATCH (E) COLOR
HM DOOR AND FRAME	PAINT	MATCH (E) COLOR
OH COILING DOOR	PREFINISHED	MATCH (E) COLOR



C1 NORTH EXTERIOR ELEVATION
1/8" = 1'-0"
0 4' 8' 16'



C3 SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"
0 4' 8' 16'



A1 EAST EXTERIOR ELEVATION
1/8" = 1'-0"
0 4' 8' 16'

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ADDITION TO THE
CONTROL SYSTEMS DIV.
PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

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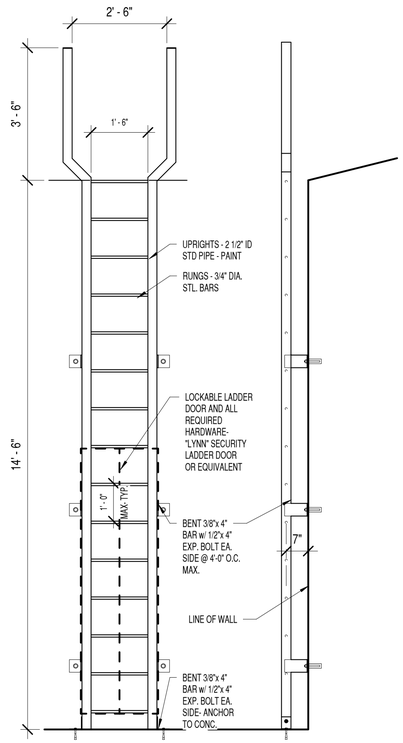
SHEET TITLE

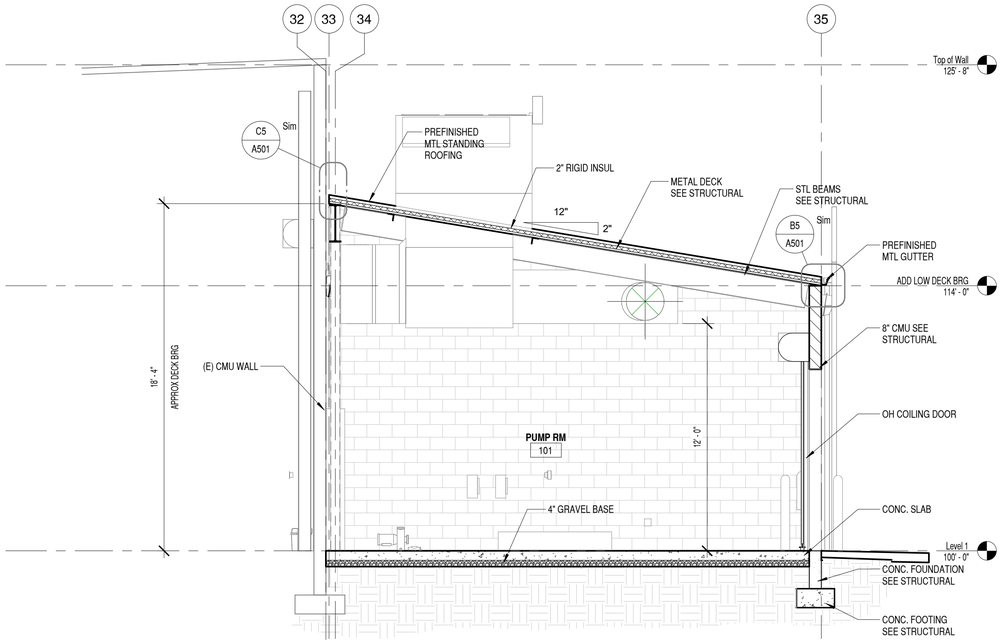
EXTERIOR
ELEVATIONS

SHEET NO:

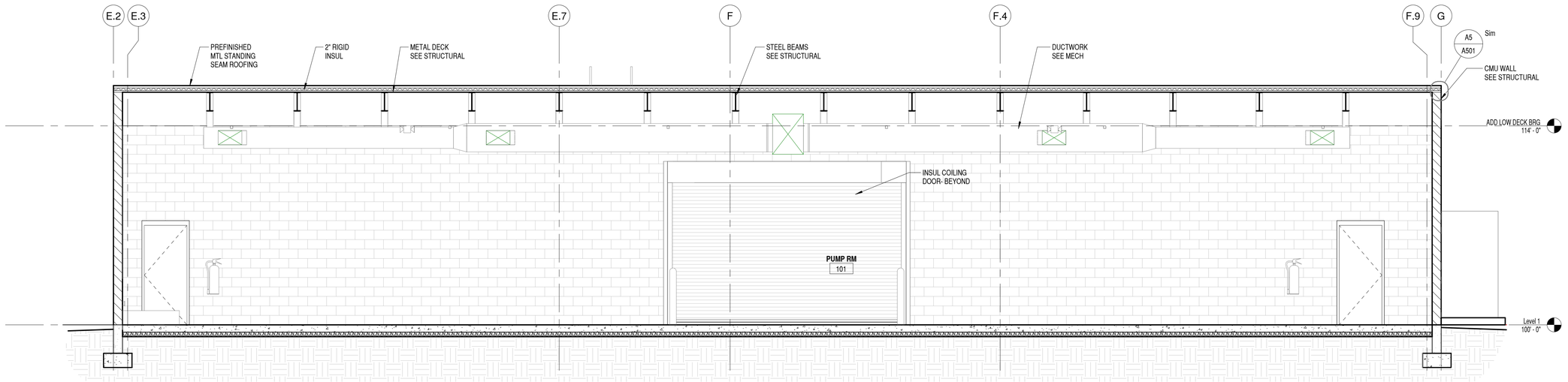
A201



C1 PIPE LADDER DETAIL
1/2" = 1'-0"



C3 BUILDING SECTION
1/4" = 1'-0"



A1 BUILDING SECTION
1/4" = 1'-0"

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PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

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DRAWN BY:	Author
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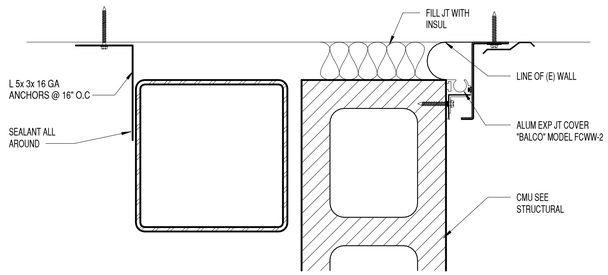
27 MARCH, 2018

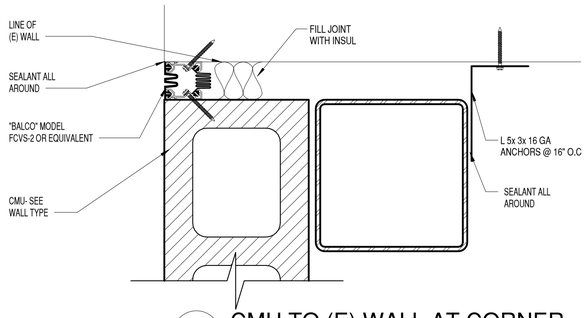
SHEET TITLE
BUILDING SECTION

SHEET NO:
A301

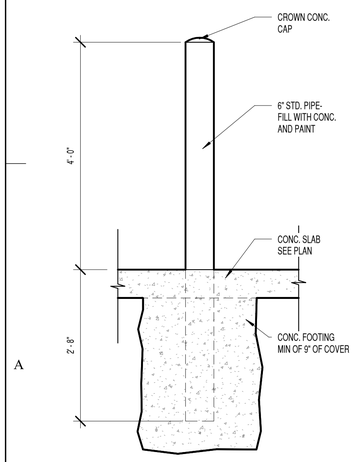
4/2/2018 8:27:51 AM



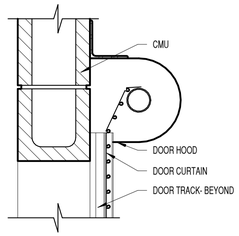
D1 CMU TO (E) CMU
3" = 1'-0"



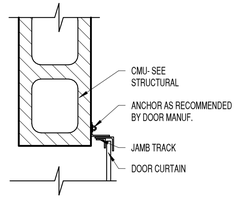
C1 CMU TO (E) WALL AT CORNER
3" = 1'-0"



A1 STEEL PIPE BOLLARD
3/4" = 1'-0"

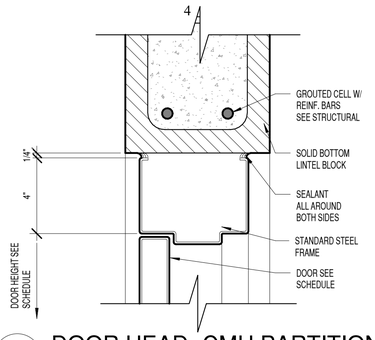


D3 OH DOOR HEAD- CMU
1 1/2" = 1'-0"

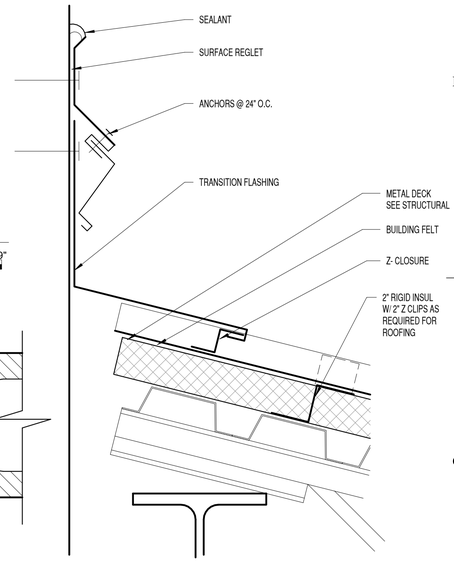


C3 OH DOOR JAMB- CMU
1 1/2" = 1'-0"

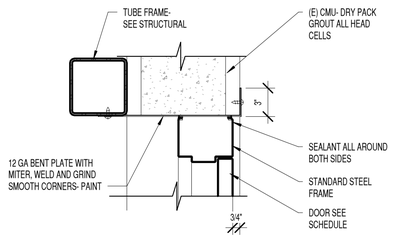
C4 DOOR JAMB- CMU PARTITION
3" = 1'-0"



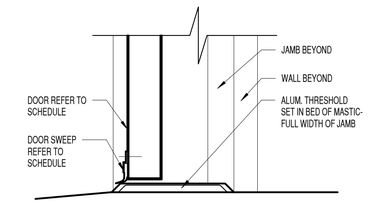
D4 DOOR HEAD- CMU PARTITION
3" = 1'-0"



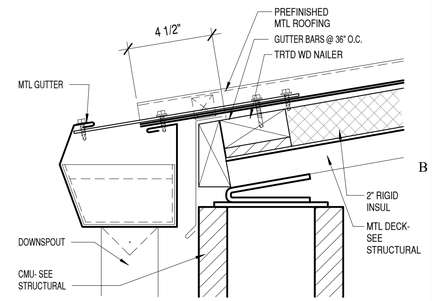
C5 WALL REGLET
3" = 1'-0"



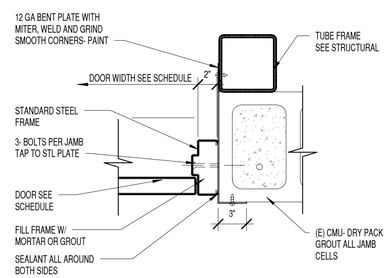
B3 DOOR HM (E) CMU HEAD
1 1/2" = 1'-0"



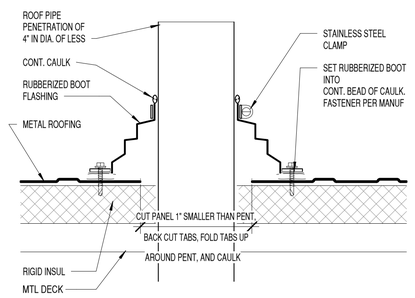
B4 DOOR THRESHOLD
3" = 1'-0"



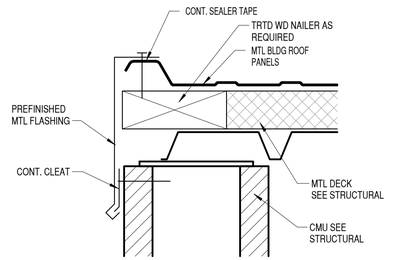
B5 MTL GUTTER
3" = 1'-0"



A3 DOOR HM (E) CMU JAMB
1 1/2" = 1'-0"



A4 ROOF PENT
3" = 1'-0"



A5 END WALL FASCIA
3" = 1'-0"

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Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

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CHK'D BY:	Checker

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SHEET TITLE

DETAILS

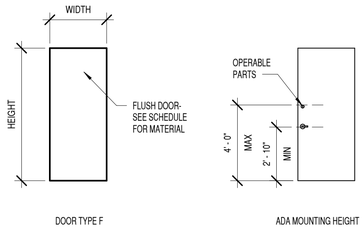
SHEET NO:

A501

4/2/2018 8:28:06 AM

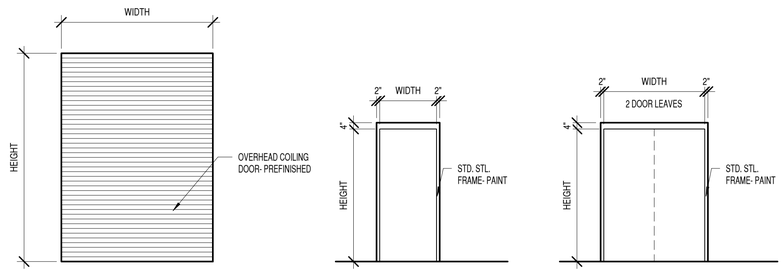
DOOR SCHEDULE

DOOR NUMBER	TYPE	DOOR				FRAME		DETAILS			GLAZING	FIRE RATING	COMMENTS	HINGES						LOCKSETS								STOPS		DOOR SEAL						MISC.				
		MATERIAL	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	HEAD	JAMB	THRESHOLD				NUMBER	PIVOTS	BALL BEARING	BRONZE/BRASS	STAINLESS STEEL	N.R. PINS	ENTRANCE	EXIT DEVICE	OFFICE	PASSAGE	PRIVACY	STORE ROOM	FLUSH BOLTS	SURFACE BOLTS	WALL STOP	FLOOR STOP	SMOKE STRIP	WEATHER STRIP	ASTRAGAL	SWEEP	THRESHOLD	CLOSER	PUSH/PULL	COORDINATOR	KICK PLATE	ARMOR PLATE
101 A	F	HM	3' - 0"	7' - 0"	1 3/4"	M1	HM	D4/A501	C4/A501	B4/A501						X		X	X	X									X		X		X	X	X				
101 B	OH1	STL	16' - 0"	10' - 0"			STL	D3/A501	C3/A501				ALL HARDWARE BY DOOR MANUF																											
101 C	F	HM	3' - 0"	7' - 0"	1 3/4"	M1	HM	D4/A501	C4/A501	B4/A501						X		X	X	X									X		X		X	X	X				
101 D	F	HM	3' - 0"	7' - 0"	1 3/4"	M2	HM	B3/A501	A3/A501				PAIR OF DOORS IN (E) WALL			X		X			X						X		X		X	X	X				X	
101 E	F	HM	3' - 0"	7' - 0"	1 3/4"	M2	HM	B3/A501	A3/A501				PAIR OF DOORS IN (E) WALL			X		X			X						X		X		X	X	X				X	



DOOR TYPE F

ADA MOUNTING HEIGHT



DOOR TYPE OH 1

FRAME TYPE M1

FRAME TYPE M2

A3 DOOR AND FRAME TYPES

1/4" = 1'-0"

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SHEET TITLE

DOOR TYPE AND SCHEDULE

SHEET NO:

A601

PACKAGE HVAC UNIT SCHEDULE

MARK	MANUFACTURER & MODEL	DESCRIPTION	AREA SERVED	REFRIG	ACFM	OUTSIDE AIR CFM	EXTERNAL STATIC PRESSURE (IN)	FAN RPM	HEATING ELECTRICAL					UNIT ELECTRICAL (NOT INCLUDING ELECTRIC HEAT)				COOLING COIL					DIMENSIONS LxWxH (IN)	WEIGHT (LBS)	NOTES
									EDB	LDB	KW	TOTAL MBH	VOLTS/ PHASE	MCA	MOP	VOLTS/PHASE	EER RATING	ROWS	FPI	EDB/EWB (°F)	LDB/LWB (°F)	TOTAL MBH			
RTU 1	CARRIER 50TC-D28D1A6	ROOF TOP UNIT	PUMP ROON	R-410A	7,800	--	0.5	774	60.0	70.9	23	785	460 / 3	51.9	60	460 / 3	10.0	--	--	75 / 60	48 / 47.9	238.6	142x87x57	2877	2 STAGE ELECTRIC HEAT, SUPPLY AND RETURN DUCT DETECTORS, SEISMIC RATED SLOPED ROOF CURB, ECONOMIZER w/ BAROMETRIC RELIEF, NON-FUSED DISCONNECT, 2-SPEED INDOOR FAN MOTOR CONTROLLED BY VFD, LOW AMBIENT CONTROL, WINTER START PACKAGE, COMFORT PRO PROGRAMMABLE THERMOSTAT, 16x25x2 FILTERS - QTY (9).

NOTE: ALL PERFORMANCE BASED ON SITE ELEVATION OF 4400 FT ABOVE SEA LEVEL.

MECHANICAL GENERAL NOTES:

1. ALL EQUIPMENT MANUFACTURES SHOWN AS A BASIS OF DESIGN. NOT INTENDED TO SOLE SOURCE EQUIPMENT MANUFACTURER.
2. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST STATE ADOPTED EDITION OF THE INTERNATIONAL MECHANICAL CODE AND SMACNA.
3. MECHANICAL PLANS ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER TRADES, AND ACTUAL JOB SITE CONDITIONS. CONTRACTOR TO FIELD VERIFY QUANTITIES AND DIMENSIONS.
4. CONTRACTOR TO PROVIDE ALL NECESSARY MATERIALS, DUCTWORK, HANGERS, FITTINGS, OFFSETS, INSULATION AND ACCESSORIES LOGICALLY REQUIRED FOR A COMPLETE FUNCTIONAL AIR DELIVERY SYSTEM.
5. DUCT DIMENSIONS ON DRAWINGS ARE INSIDE DIMENSIONS. MINIMUM DUCTWORK GAUGE TO BE 26 GAUGE.
6. CONTRACTOR SHALL COORDINATE ALL SUPPLY DIFFUSER PLACEMENTS.
7. ALL SQUARE ELBOWS IN SUPPLY AND RETURN DUCTWORK SHALL HAVE SINGLE THICKNESS TURNING VANES.
8. CONNECTIONS TO SUPPLY DIFFUSERS TO BE MADE WITH A RIDGED CONNECTION SO THAT CLEAR AND UNOBSTRUCTED AIRFLOW IS ACHIEVED.
9. MOUNT BOTTOM OF THERMOSTAT 48 INCHES ABOVE FINISHED FLOOR. RUN WIRING FROM THERMOSTAT LOCATION TO AIR HANDLER AND TERMINATE TO PROVIDE FOR A FULLY FUNCTIONAL SYSTEM. REFER TO THE CONTROL DRAWINGS FOR SPECIFICS.
10. CONTRACTOR TO FURNISH FILTERS.
11. CONTRACTOR TO FURNISH AND INSTALL CONDENSATE P-TRAP ON ALL NEW AIR HANDLERS PER DETAILS SHOWN ON DRAWING.
12. ALL PIPING THAT COMES IN CONTACT WITH A DISSIMILAR METAL TO BE PROTECTED AGAINST GALVANIC CORROSION.
13. SEISMIC SUPPORTS ARE NOT REQUIRED FOR HVAC DUCTWORK IF DUCTS ARE SUSPENDED FROM HANGARS 12 INCH OR LESS IN LENGTH.
14. REFER TO STRUCTURAL DETAILS FOR ALL EQUIPMENT AND DUCT PENETRATIONS THROUGH ROOF. IF DETAIL IS NOT PRESENT THEN CONTACT ENGINEER.
15. ALL EXPOSED DUCTWORK TO HAVE ALL LABELS AND WRITING REMOVED FROM DUCT.
16. AFTER AIR AND HYDRONIC SYSTEM BALANCING HAS BEEN COMPLETED, MARK ALL BALANCING DAMPER AND BALANCING VALVES TO PERMANENTLY INDICATE FINAL POSITION; IE AN ARROW OR DRAWING AN OUTLINE OF BALANCING HANDLE POSITION.
17. PIPING SEISMIC SUPPORTS SHALL NOT BE REQUIRED IF PIPING IS SUPPORTED BY ROD HANGERS; HANGERS IN THE PIPE RUN 12 INCH OR LESS IN LENGTH FROM TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. PIPING WITH ROD HANGERS; HANGERS IN THE PIPE RUN OVER 12 INCHES IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORT STRUCTURE WILL BE REQUIRED TO BE SEISMICALLY RESTRAINED.
18. EXISTING UTILITY LOCATIONS AND SIZES ARE ESTIMATED. CONTRACTOR TO FIELD VERIFY.

PUMP SCHEDULE

MARK	MANUFACTURER & MODEL	SYSTEM SERVED	TYPE	GPM	HEAD (FT)	FLUID	FLUID TEMP (°F)	IMPELLER DIA (IN)	ELECTRICAL			WEIGHT	NOTES
									RPM	HP	VOLT/ PHASE		
P 1	ARMSTRONG 4280-4x3x8-7.5	CT 1	CENTRIFUGAL	225	57.75	WATER	75	8	1765	7.5	460 / 3	256	4" INLET, 3" OUTLET, SG-44 SUCTION GUIDE PREMIUM EFFICIENT MOTOR, PROVIDE YASKAWA VFD.
P 2	ARMSTRONG 4280-4x3x8-7.5	CT 1	CENTRIFUGAL	225	57.75	WATER	75	8	1765	7.5	460 / 3	256	4" INLET, 3" OUTLET, SG-44 SUCTION GUIDE PREMIUM EFFICIENT MOTOR, PROVIDE YASKAWA VFD.

PIPING AND EQUIPMENT INSULATION SCHEDULE

SYMBOL	SYSTEM	EXPOSED	CONCEALED	ABOVE CEILING	EXTERIOR EXPOSED	THICKNESS	INDOOR FIELD APPLIED JACKET	OUTDOOR FIELD APPLIED JACKET
CS CR	CONDENSER	PRE-FORMED MINERAL FIBER	PRE-FORMED MINERAL FIBER	PRE-FORMED MINERAL FIBER	--	SEE THICKNESS TABLE BELOW	--	ALUMINUM

MINIMUM PIPE INSULATION THICKNESS TABLE

FLUID DESIGN OPERATING TEMP. RANGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (in.)				
	CONDUCTIVITY Btu·in/(h·ft²·°F)	MEAN RATING TEMP. °F	<1"	1" TO <1 1/2"	1 1/2" TO <4"	4" TO <8"	≥ 8"
HEATING SYSTEMS (HOT WATER HEATING)							
141-200	0.25-0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.22-0.28	100	1.0	1.0	1.5	1.5	1.5
COOLING SYSTEMS (CHILLED WATER, AND REFRIGERANT)							
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0
<40	0.20-0.26	50	0.5	1.0	1.0	1.0	1.5

NOTES:
1. ANY PIPE ON THIS SCHEDULE WITHIN THE FACILITY TO BE INSULATED AS DEFINED.
2. PIPING INSULATION IS NOT REQUIRED BETWEEN THE CONTROL VALVE AND COIL ON RUN-OUTS WHEN THE CONTROL VALVE IS LOCATED WITHIN 4 FT OF THE COIL AND THE PIPE SIZE IS 1 IN. OR LESS.
3. THESE THICKNESSES ARE BASED ON ENERGY EFFICIENCY CONSIDERATIONS ONLY. ISSUES SUCH AS WATER VAPOR PERMEABILITY OR SURFACE CONDENSATION SOMETIMES REQUIRE VAPOR RETARDERS OR ADDITIONAL INSULATION.

PIPING MATERIAL SCHEDULE

SYSTEM	MATERIAL	JOINTS	NOTES
DOMESTIC HOT & COLD WATER	TYPE 'L' COPPER	3" & SMALLER BELOW GRADE BRAZED 3" & SMALLER ABOVE GRADE SOLDERED	OR POLYPROPYLENE OR PRO PRESS
CONDENSER WATER	SCH 40 BLACK STEEL	GROVED COUPLING (VICTAULIC OR EQUAL)	
COMPRESSED AIR	GALVANIZED STEEL	THREADED	
CONDENSATE DRAIN	OUTDOOR; COPPER INDOOR; PVC	O; PRO PRESS I; SOLVENT CEMENT	

COOLING TOWER SCHEDULE

MARK	MANUFACTURER & MODEL	HEAT REJECTION MBH	GPM	EWT/LWT (°F)	AMB WB (°F)	MAKE-UP WATER SIZE (IN)	PIPING CONN SIZE (IN)	ELECTRICAL				DIMENSIONS	OPERATING WEIGHT (LBS)	NOTES
								FAN			BASIN HEATER	LxWxH (FT)		
								RPM	MOTOR HP	VOLT/ PHASE	KW			
CT 1	MARLEY 495K	810	225	82.2 / 75	67	3/4	6	1800	5	460 / 3	4.5	8 x 6.5 x 9	3853	PROVIDE YASKAWA VFD.

SUMP PUMP SCHEDULE

MARK	MANUFACTURER & MODEL	SYSTEM SERVED	TYPE	GPM	HEAD (FT)	FLUID	FLUID TEMP	MOTOR			WEIGHT (LBS)	NOTES
								RPM	HP	VOLT/ PHASE		
SP 1	LIBERTY 405-LTS	COOLING TOWER BLOWDOWN	DRAIN PUMP	23	25	WATER	AMBIENT	3450	1/2	120 / 1	23	10 FT CORD, 2 IN DISCHARGE, AUTOMATIC OPERATION, 2 IN INLET, 2 IN VENT

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER PIPING (DCW)
CA	COMPRESSED AIR PIPING
CS	CONDENSER SUPPLY
CR	CONDENSER RETURN
OR	MANUAL VOLUME CONTROL DAMPER
OR	EXHAUST AIR DUCT - UP / DOWN
OR	RETURN/OUTSIDE AIR DUCT - UP / DOWN
OR	SUPPLY AIR DUCT - UP / DOWN
	MITERED ELBOW W/ TURNING VANES
	GATE VALVE
	GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CALIBRATED BALANCING VALVE
	CHECK VALVE
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	STRAINER WITH BLOWDOWN
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	VENTURI
	THREADED END FOR HOSE CONNECTION
	BALL VALVE W/ NIPPLE AND CAP
	FLEX CONNECTION
	DIRECTION OF FLOW
	BLIND FLANGE OR CAP
	PIPING DOWN
	PIPING UP
	PIPING TEE DOWN
	FLANGE
	UNION
	THERMOMETER
	PRESSURE GAUGE
	AIR LINE QUICK CONNECT
	PUMP
T	THERMOSTAT
	EQUIPMENT SYMBOL
DET# SHT#	DETAIL SYMBOL
M1	SHEET KEYNOTE
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	AIRFLOW DIRECTION
AFF	ABOVE FINISH FLOOR
(E)	EXISTING
N.I.C.	NOT IN CONTRACT
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
TYP	TYPICAL

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LICENSED PROFESSIONAL ENGINEER 8557421 MICHAEL P. MORGAN STATE OF UTAH
03/27/18

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	27 MARCH, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	GM, JAC
CHK'D BY:	MPM

PERMIT SET

27 MARCH, 2018

SHEET TITLE

MECHANICAL SCHEDULES

SHEET NO:

M001

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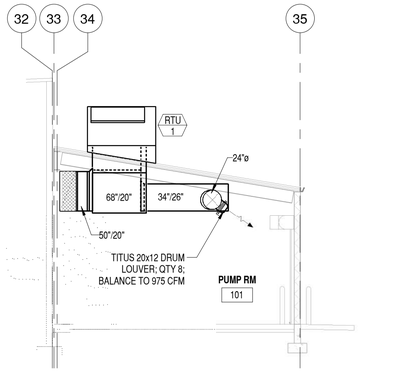
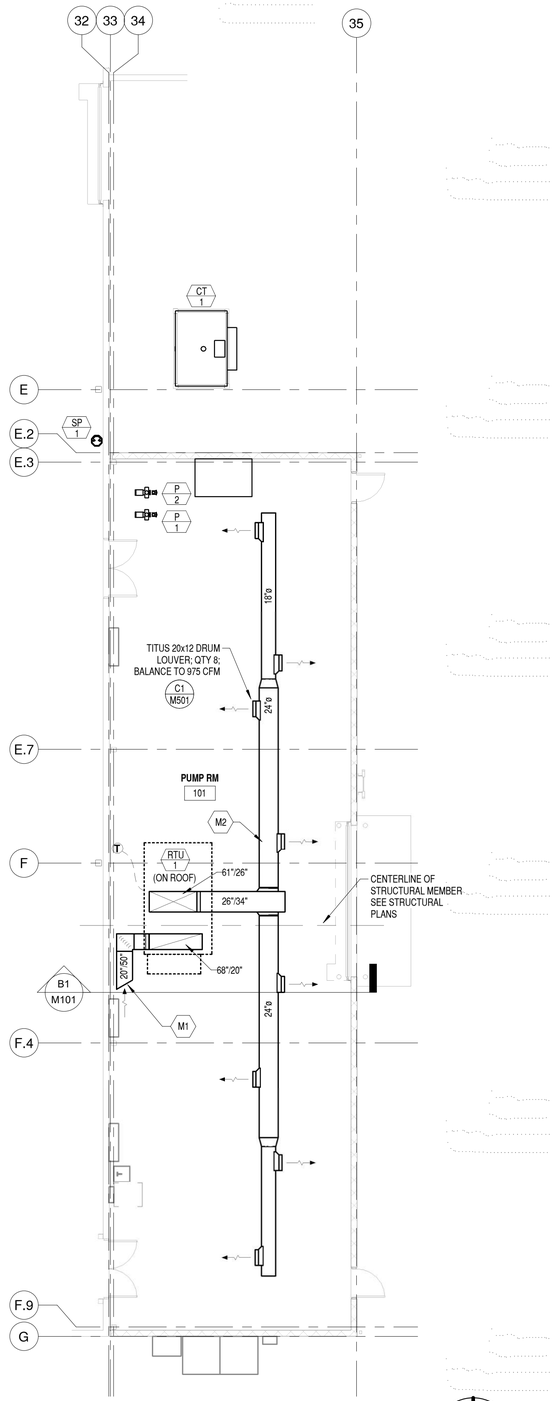


B1 MECHANICAL SECTION

1/8" = 1'-0"

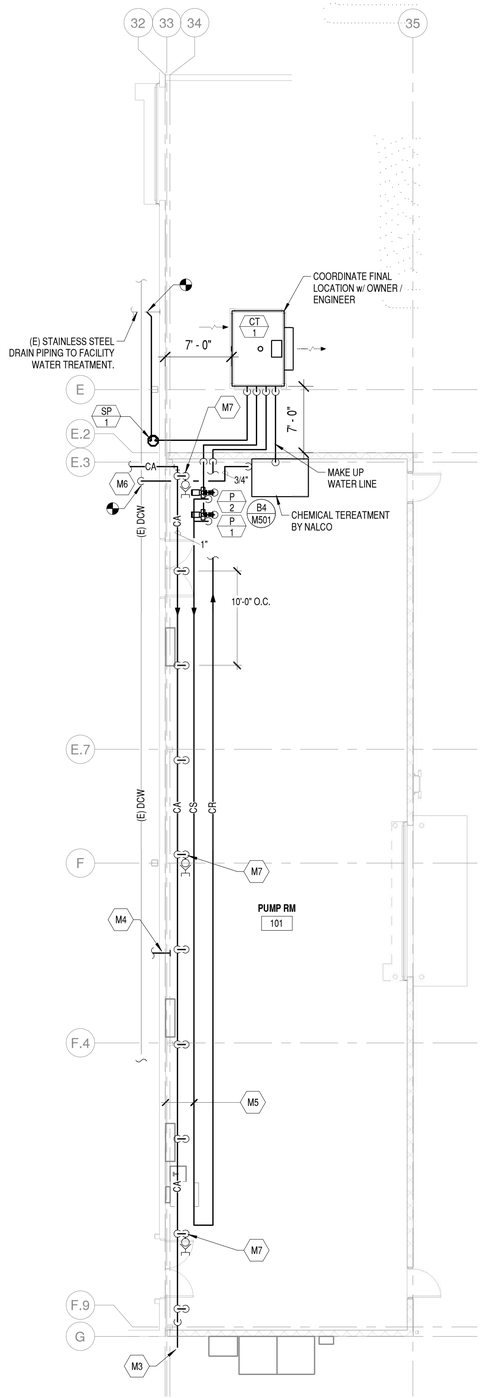
0 4' 8' 16'



A2 MECHANICAL PLAN

1/8" = 1'-0"

0 4' 8' 16'



A4 MECHANICAL PIPING PLAN

1/8" = 1'-0"

0 4' 8' 16'

MECHANICAL KEYED NOTES

MARK	NOTE
M1	PROVIDE DUCT OPENING w/ WIRE MESH BIRD SCREEN.
M2	ROUTE DUCTS TIGHT TO STRUCTURE.
M3	DAYLIGHT COMPRESSED AIR END LINE DRAIN 0'-6" ABOVE FINISHED GRADE.
M4	EXISTING WALL HYDRANT TO REMAIN AND BE FUNCTIONAL.
M5	MOUNT COOLING TOWER SUPPLY NAD RETURN PIPING 3'-0" OFF OF THE WALL.
M6	COMPRESSED AIR LINES TO TIE INTO EXISTING COMPRESSED AIR MAIN.
M7	PROVIDE COMPRESSED AIR DOWN ALONG WALL TO QUICK CONNECT. ALL OTHER DROPS SHOWN TO BE STUB OUTS FOR FUTURE USE. SEE DETAIL C4/M501.

GENERAL NOTE:

ALL PIPES AND DUCTS TO BE MOUNTED A MINIMUM 12'-0" AFF.

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03/27/18

Parker

ADDITION TO THE
CONTROL SYSTEMS DIV.
PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

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DRAWN BY:	GM, JAC
CHK'D BY:	MPM

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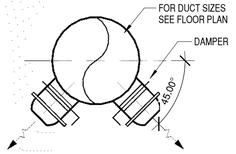
27 MARCH, 2018

SHEET TITLE

MECHANICAL PLANS

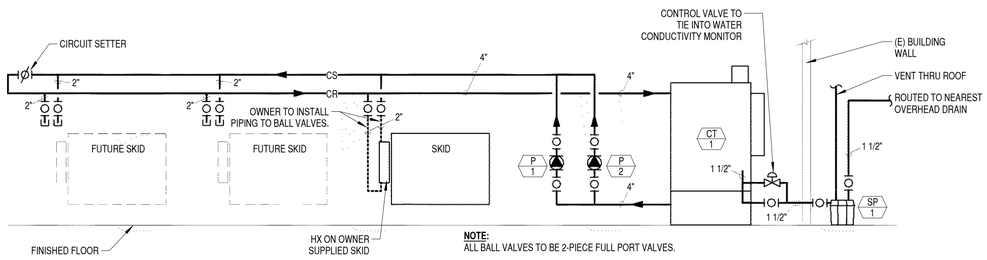
SHEET NO:

M101



C1 DRUM LOUVER INSTALLATION DETAIL

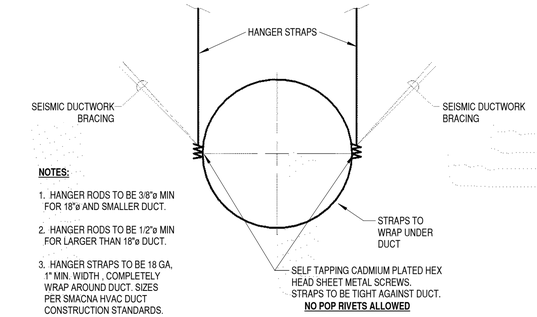
NO SCALE



NOTE:
ALL BALL VALVES TO BE 2-PIECE FULL PORT VALVES.

C2 CHILLED WATER PIPING SCHEMATIC

NO SCALE

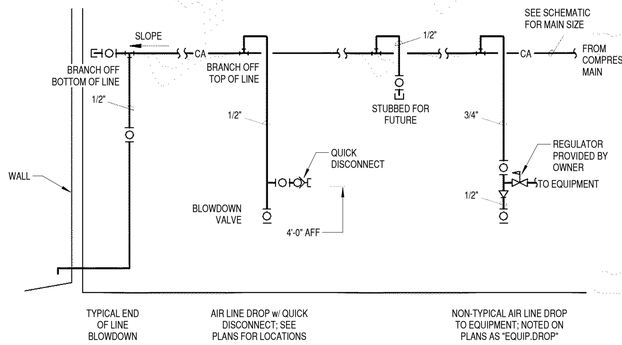


NOTES:

1. HANGER RODS TO BE 3/8"ø MIN FOR 18"ø AND SMALLER DUCT.
2. HANGER RODS TO BE 1/2"ø MIN FOR LARGER THAN 18"ø DUCT.
3. HANGER STRAPS TO BE 18 GA, 1" MIN. WIDTH , COMPLETELY WRAP AROUND DUCT. SIZES PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

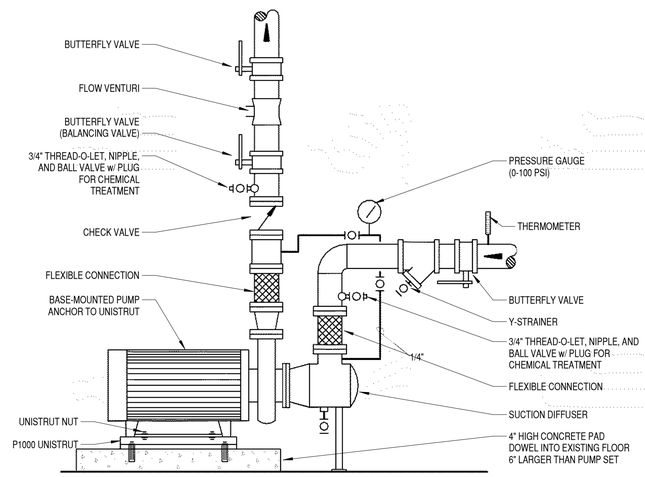
C4 ROUND DUCT HANGER WITH SEISMIC BRACING DETAIL

NO SCALE



B2 COMPRESSED AIR LINE BLOWDOWN AND AIR DROP DETAILS

NO SCALE



B4 PUMP PIPING DETAIL

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1425 WEST 2675 NORTH OGDEN, UTAH

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CHK'D BY:	MPM

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27 MARCH, 2018

SHEET TITLE

MECHANICAL DETAILS

SHEET NO:

M501

LIGHTING

- FIXTURE - CHAIN, RECESSED, SURFACE OR PENDANT HUNG NUMBER INDICATES FIXTURE TYPE
- FIXTURE - RECESSED OR SURFACE MOUNT WITH EMERGENCY BATTERY PACK, NUMBER INDICATES FIXTURE TYPE
- WALL MOUNTED LIGHT FIXTURE, NUMBER INDICATES TYPE OF FIXTURE

SWITCHES (+48" UNLESS NOTED)

- SINGLE POLE SWITCH
- THREE-WAY SWITCH
- FOUR-WAY SWITCH

CIRCUITING

- WIRING CONCEALED IN CEILING OR WALL
- WIRING CONCEALED IN FLOOR
- WIRING EXISTING
- CROSSLINES INDICATE NUMBER OF #12 CONDUCTORS. GROUND IS REPRESENTED BY CROSSLINE WITH DOT ON TOP. OTHER CONDUCTORS AND 1/2" CONDUIT AS INDICATED.
- A-1,3 BRANCH CIRCUIT HOMERUN TO PANELBOARD; NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATION IDENTIFIES PANEL AND CIRCUIT NUMBER(S).

PANELBOARDS AND POWER EQUIPMENT

- SURFACE MOUNTED PANELBOARD AND CABINET
- SWITCHBOARD OR DISTRIBUTION PANELBOARD (AS NOTED)
- MANUAL MOTOR STARTER
- MAGNETIC MOTOR STARTER
- COMBINATION STARTER & DISCONNECT SWITCH
- F FUSED DISCONNECT
- 1/2 MOTOR OUTLET, HORSEPOWER AS INDICATED
- PUSHBUTTON STATION
- REFERS TO MECHANICAL OR OWNERS EQUIPMENT ITEM SEE SCHEDULES

RECEPTACLES (+18" UNLESS NOTED)

- DUPLEX RECEPTACLE, NEMA 5-20R, GROUNDING TYPE
- QUAD RECEPTACLE (DOUBLE DUPLEX), NEMA 5-20R, GROUNDING TYPE
- 30A SPECIAL PURPOSE OUTLET - 208 V., 1 PHASE - NUMBER INDICATES AMPERAGE. NO NUMBER INDICATES 20 AMPS
- 50A SPECIAL PURPOSE OUTLET - 208 V., 3 PHASE - NUMBER INDICATES AMPERAGE. NO NUMBER INDICATES 20 AMPS
- 30A SPECIAL PURPOSE OUTLET - 480 V., 1 PHASE - NUMBER INDICATES AMPERAGE. NO NUMBER INDICATES 20 AMP
- 50A SPECIAL PURPOSE OUTLET - 480 V., 3 PHASE - NUMBER INDICATES AMPERAGE. NO NUMBER INDICATES 20 AMPS
- J JUNCTION BOX
- TVSS TRANSIENT VOLTAGE SURGE SUPRESSOR
- GROUND ROD - 3/4" x 10'-0"
- T THERMOSTAT

FIRE ALARM/MNS SYSTEM

- F MANUAL PULL STATION (+48" AFF)
- 15 FIRE ALARM - STROBE SPEAKER/HORN, NUMBER INDICATES STROBE CANDELLA RATING MOUNT NO HIGHER THAN 6'-6" AFF
- 15 CEILING MOUNTED FIRE ALARM STROBE SPEAKER/HORN, NUMBER INDICATES STROBE CANDELLA RATING
- SMOKE DETECTOR
- S SMOKE DETECTOR SLEEPING ROOM
- SD DUCT SMOKE DETECTOR

ONE-LINE DIAGRAM

- TRANSFORMER
- MOLDED CASE CIRCUIT BREAKER
- 3 CURRENT TRANSFORMER, NUMBER AS INDICATED
- 200 AT / 225 AF CIRCUIT BREAKER TRIP SETTING / CIRCUIT BREAKER FRAME SIZE

EXTERIOR (NEW)

- UNDERGROUND DUCT LINE
- EP PRIMARY CIRCUIT
- UG SECONDARY CIRCUIT
- G 4/0 BARE COPPER GROUND WIRE PLACED IN OR ALONGSIDE FOOTINGS
- T TRANSFORMER

ABBREVIATIONS

EP1	KEYED NOTE CALLOUT - NUMBER AS INDICATED
3R	NEMA 3R ENCLOSURE
12	NEMA 12 ENCLOSURE
4	NEMA 4 ENCLOSURE
4X	NEMA 4X ENCLOSURE
A	AMPERE
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
APPROX	APPROXIMATELY
BC	BARE COPPER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CO	CONDUIT ONLY
CONC	CONCRETE
CT	CURRENT TRANSFORMER
CU	COPPER
(E)	EXISTING
EMCS	ENERGY MONITORING AND CONTROL SYSTEM
EMT	ELECTRICAL METALLIC TUBING
FA	FIRE ALARM
FLR	FLOOR
FT	FEET
GFI	GROUND FAULT CIRCUIT-INTERRUPTER
GND or GRD	GROUND
IN	INCHES
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT CAPACITANCE
KWH	KILOWATTHOUR
LED	LIGHT EMITTING DIODE
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURING ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT ON UNSWITCHED CIRCUIT
OFOI	OWNER FURNISHED OWNER INSTALLED
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
O.C.	ON CENTER
O.H.	OVERHEAD
RM	ROOM
RGC	RIGID GALVANIZED CONDUIT
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATT
w/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
+12"	MOUNTING HEIGHT ABOVE FINISHED FLOOR OR GRADE

LIGHTING FIXTURE SCHEDULE

NOTE: ALL INTERIOR & EXTERIOR LIGHTING CONTROLS TO BE COMMISSIONED

NO.	DESCRIPTION	VOLTS	MTG.	LENS	FINISH	LAMPS					BALLASTS				MAXIMUM INPUT WATTS	MANUFACTURER & CATALOG NUMBER (NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL)	DETAILS
						TYPE			NO. OF LAMPS	WATTS/LAMP TYPE		TYPE		NO. PER LUMINAIRE			
						LED	F	H			S	E	O				
1	LED STRIPLIGHT	120/277	-	ACRYLIC	WHITE	*			1	LED 5000K		*		1	104	LITHONIA TZL1N-L96-14000LM-FST-MVOLT-50K-80CRI-CS93W-WH-ZACVH	
1E	LED STRIPLIGHT	120/277	-	ACRYLIC	WHITE	*			1	LED 5000K		*		1	104	LITHONIA TZL1N-L96-14000LM-FST-MVOLT-50K-80CRI-E7W-CS93W-WH-ZACVH	
2	LED WALLPACK	120/277	WALL + 15 FT.	ACRYLIC	DARK BRONZE	*			1	LED 5000K		*		1	85	CREE C-WP-A-TRAD-8L-50K-DB	
3	-	-	-	-	-		*		-	-		*		-	-	-	
4	-	-	-	-	-		*		-	-		*		-	-	-	
EXIT	EXIT LIGHT	120/277	WALL OR CEILING SURFACE	NONE	-		*		-	-		*		-	3	-	

EQUIPMENT SCHEDULE

CRKT.	EQUIP. NO.	DESCRIPTION	VOLTS	PHASE	WATTS H.P.	BRK	STARTERS	CONTROL		PILOT		CONTACTS		CONTROL TRANS.	REMARKS
							SIZE	H.O.A.	P.B.	GRN	RED	N.O.	N.C.		
PH49 -11	RTU 1	ROOFTOP UNIT	480	3	43 KW	60	F								FUSE PER MANUFACTURER NEMA 3R
PH50 -11	P 1	CIRC. PUMP	480	3	7.5 HP	20	1	●		●	●	2	2	●	YASKAWA VFD FURNISHED WITH PUMP
PH50 -12	P 2	CIRC. PUMP	480	3	7.5 HP	20	1	●		●	●	2	2	●	YASKAWA VFD FURNISHED WITH PUMP
PH50 -13	CT 1	COOLING TOWER	480	3	5 HP	20	1	●		●	●	2	2	●	YASKAWA VFD FURNISHED WITH TOWER NEMA 3R
PH50 -14	CT 1	SUMP HEATER	480	3	4.5 KW	20	F								NEMA 3R
PL48 -3	SP 1	COOLING TOWER DRAIN PUMP	120	1	1/2 HP	20	$								MOTOR RATED SWITCH

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LICENSED PROFESSIONAL ENGINEER 129383 KEVIN J. LEWIS STATE OF UTAH

03/27/2018

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	27 MARCH, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	J.M.S.
CHK'D BY:	K.J.L.

PERMIT SET

27 MARCH, 2018

SHEET TITLE

ELECTRICAL LEGEND, SCHEDULES & DETAILS

SHEET NO:

E001

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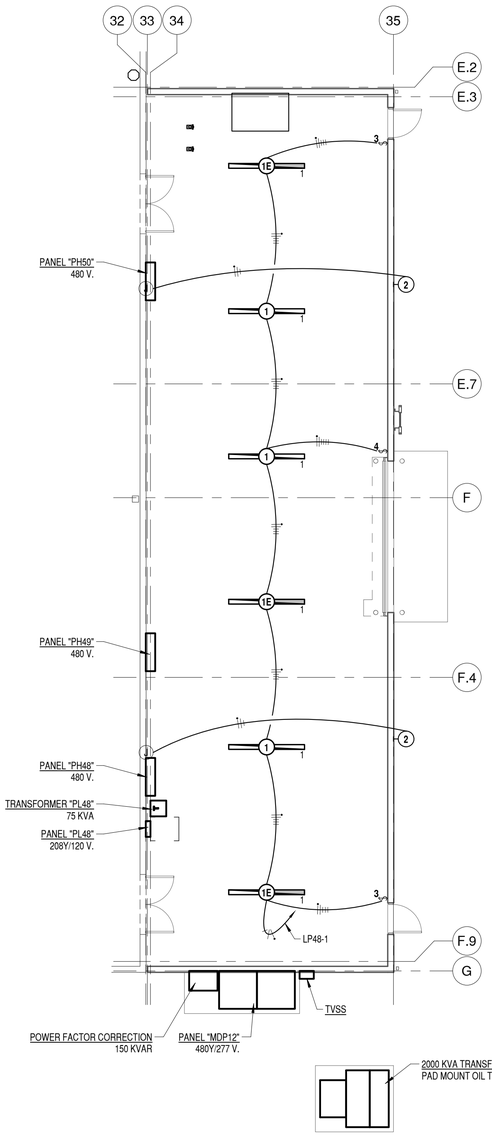
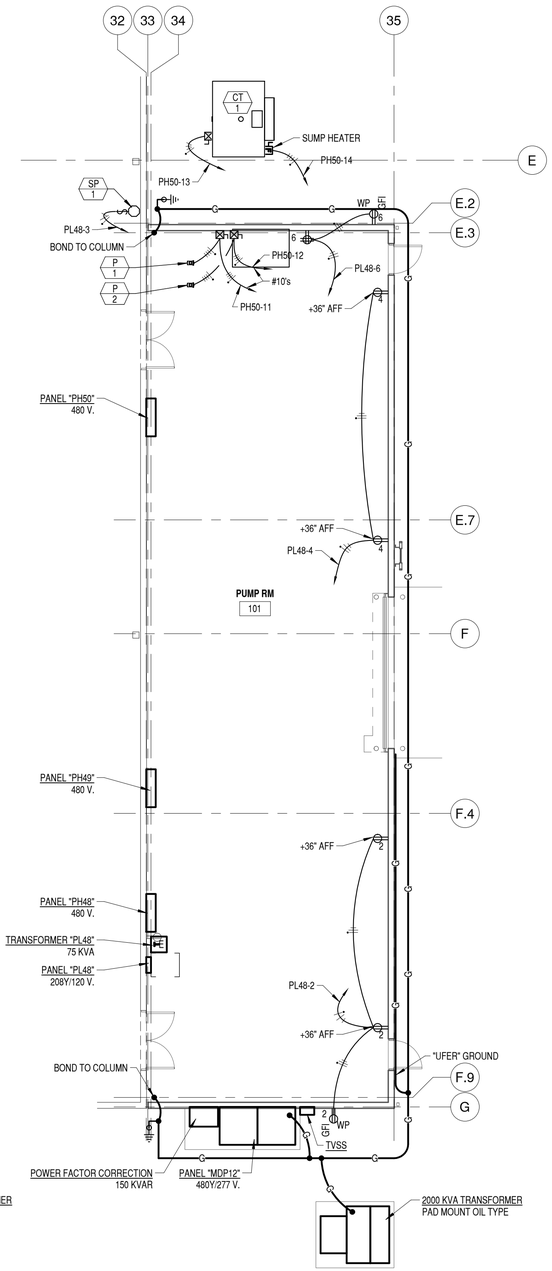
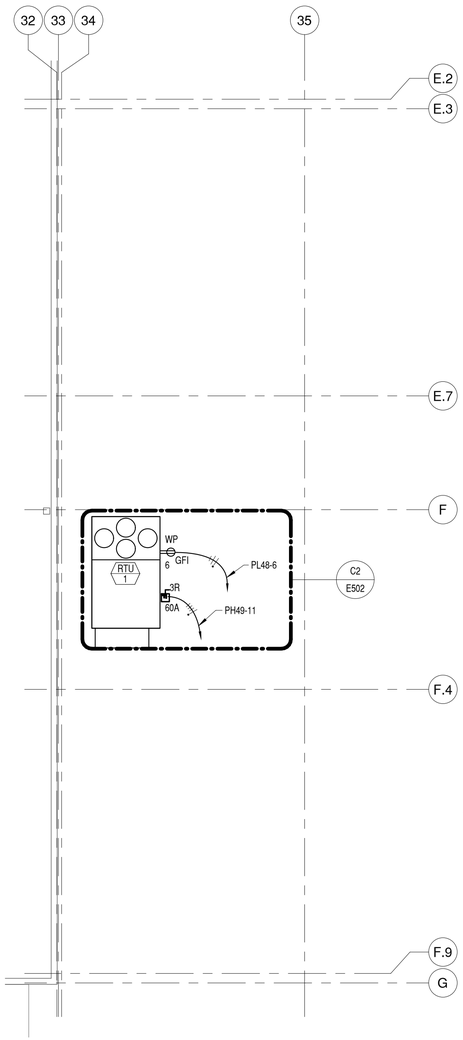


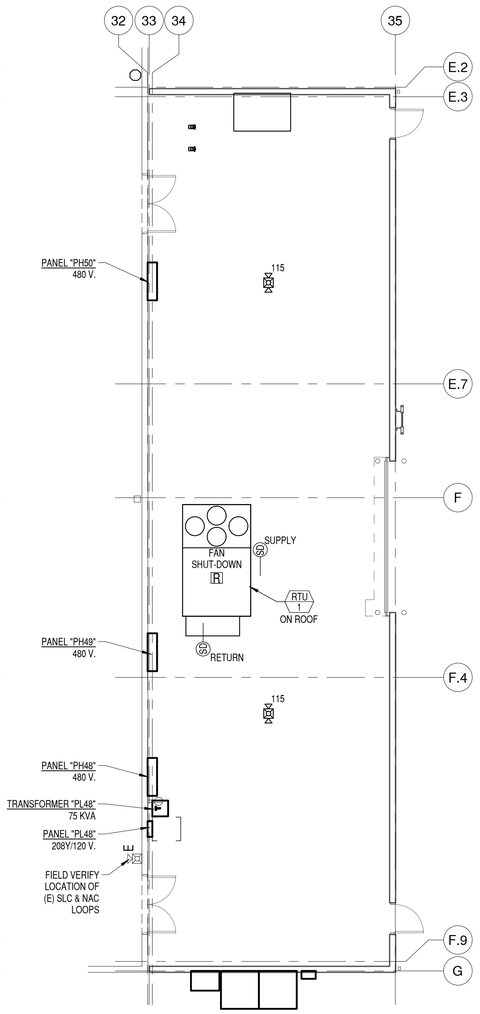
A1 ELECTRICAL LIGHTING PLAN
1/8" = 1'-0"
0 4' 8' 16'



A2 ELECTRICAL POWER PLAN
1/8" = 1'-0"
0 4' 8' 16'



A3 ELECTRICAL POWER PLAN - ROOF
1/8" = 1'-0"
0 4' 8' 16'



A4 ELECTRICAL FIRE ALARM PLAN
1/8" = 1'-0"
0 4' 8' 16'

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CONSULTANTS

STAMP

LICENSED PROFESSIONAL ENGINEER
129383
KEVIN J.
LEWIS
STATE OF UTAH

03/27/2018

Parker

ADDITION TO THE
CONTROL SYSTEMS DIV.
PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	27 MARCH, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	J.M.S.
CHK'D BY:	K.J.L.

PERMIT SET

27 MARCH, 2018

SHEET TITLE

ENLARGED
ELECTRICAL
PLANS

SHEET NO:

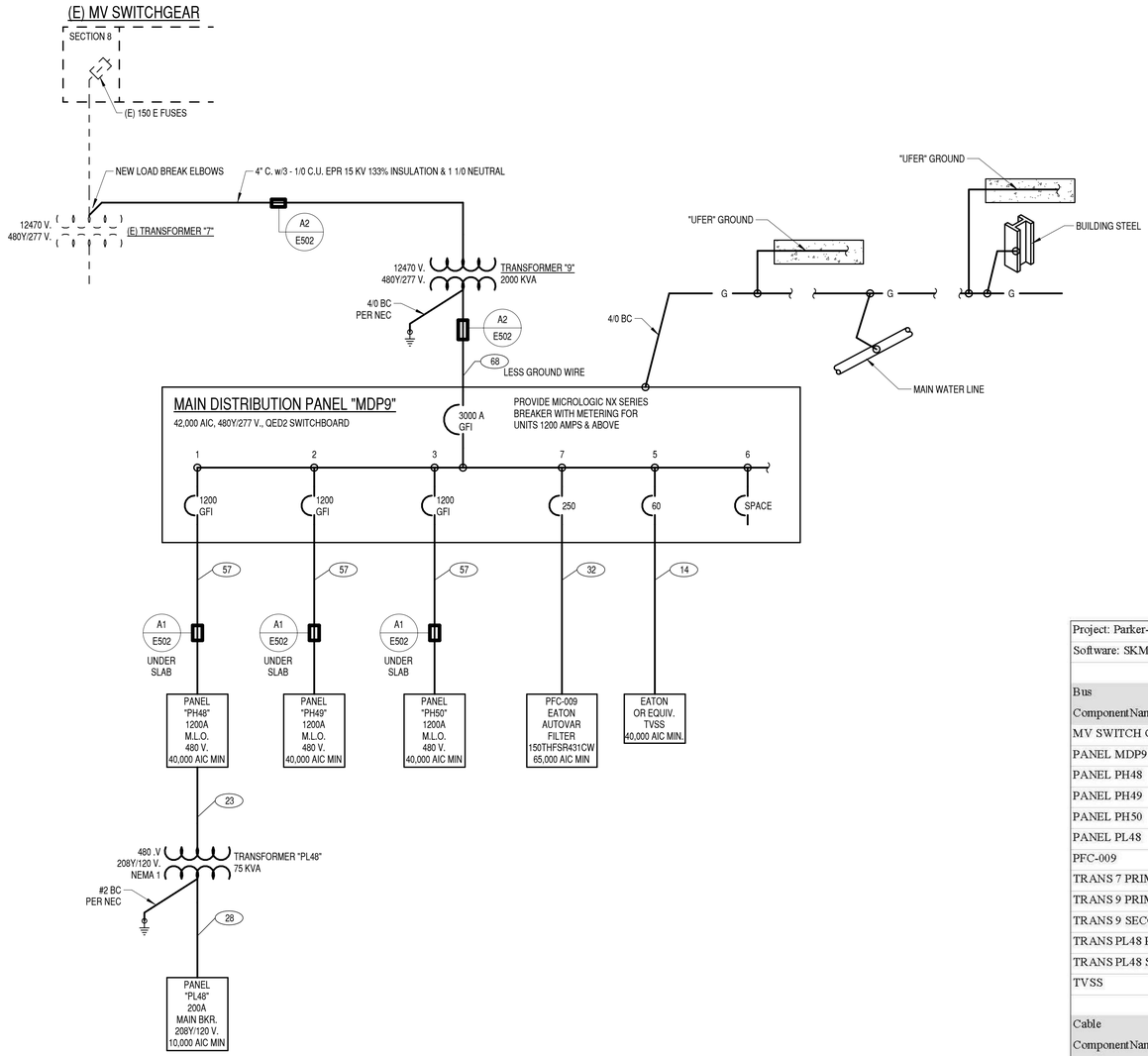
E101

CONDUIT AND CONDUCTOR SCHEDULE (COPPER)

TYPE	AMPS (1)	CONDUIT SIZE (3)	CONDUCTOR			NOTES
			QTY	SIZE (1)	GND (2)	
1	20	0.75	2	12	12	-
2	20	0.75	3	12	12	-
3	20	0.75	4	12	12	-
4	30	0.75	2	10	10	-
5	30	0.75	3	10	10	-
6	30	0.75	4	10	10	-
7	40	0.75	2	8	10	-
8	40	0.75	3	8	10	-
9	40	0.75	4	8	10	-
10	55	0.75	2	6	8	-
11	55	0.75	3	6	8	-
12	55	1	4	6	8	-
13	70	1	2	4	8	-
14	70	1	3	4	8	-
15	70	1.25	4	4	8	-
16	85	1.25	2	3	8	-
17	85	1.25	3	3	8	-
18	85	1.25	4	3	8	-
19	95	1.25	3	2	6	-
20	95	1.25	4	2	6	-
21	110	1.25	3	1	6	-
22	110	1.5	4	1	6	-
23	150	1.5	3	1/0	6	-
24	150	2	4	1/0	6	-
25	175	2	3	2/0	6	-
26	175	2	4	2/0	6	-
27	200	2	3	3/0	6	-
28	200	2	4	3/0	6	-
29	230	2.5	3	4/0	4	-
30	230	2.5	4	4/0	4	-
31	255	2.5	3	250	4	-
32	255	2.5	4	250	4	-
33	310	2.5	3	350	3	-
34	310	3	4	350	3	-
35	380	3	3	500	3	-
36	380	4	4	500	3	-
37	400	2 EA 2	3	3/0	3	-
38	400	2 EA 2	4	3/0	3	-
39	420	3	3	600	2	-
40	420	4	4	600	2	-
41	460	2 EA 2	3	4/0	2	-
42	460	2 EA 2.5	4	4/0	2	-
43	510	2 EA 2.5	3	250	1	-
44	510	2 EA 2.5	4	250	1	-
45	620	2 EA 2.5	3	350	1/0	-
46	620	2 EA 3	4	350	1/0	-
47	760	2 EA 3	3	500	1/0	-
48	760	2 EA 4	4	500	1/0	-
49	820	2 EA 3	3	600	2/0	-
50	820	2 EA 4	4	600	2/0	-
51	855	3 EA 2.5	3	300	2/0	-
52	855	3 EA 3	4	300	2/0	-
53	1000	3 EA 3	3	400	2/0	-
54	1000	3 EA 3	4	400	2/0	-
55	1140	3 EA 3	3	500	3/0	-
56	1140	3 EA 4	4	500	3/0	-
57	1240	4 EA 2.5	3	350	3/0	-
58	1240	4 EA 3	4	350	3/0	-
59	1260	3 EA 3	3	600	3/0	-
60	1260	3 EA 4	4	600	3/0	-
61	1675	5 EA 3	4	400	4/0	-
62	1680	4 EA 4	4	600	4/0	-
63	2010	6 EA 3	4	400	250	-
64	2100	5 EA 4	4	600	250	-
65	2520	6 EA 4	4	600	350	-
66	2660	7 EA 4	4	500	350	-
67	2940	7 EA 4	4	600	400	-
68	3040	8 EA 4	4	500	400	-
69	4180	11 EA 4	4	500	500	-
70	4200	10 EA 4	4	600	500	-

NOTES:

1. CONDUCTOR SIZE USING NEC TABLE 310-16; 60 DEG. C UP TO #1 AWG PER NEC 110.14(C)(1)(A)
2. SIZED USING NEC TABLE 250.122
3. CONDUIT SIZED FOR THHN OR THWN OR THWN-2 IN RNC (SCH 40)



B2 ELECTRICAL POWER RISER DIAGRAM

NONE

Project: Parker-Hannifin East Pump Room			
Software: SKM			
Bus ComponentName	InitSymRMS 3P (A)	LF VD% (%)	
MV SWITCH GEAR SECTION 8	9259828.00	0.00	
PANEL MDP9	40768.00	2.72	
PANEL PH48	39043.34	2.79	
PANEL PH49	37426.86	2.84	
PANEL PH50	35913.13	2.92	
PANEL PL48	5501.01	1.83	
PFC-009	35893.07	2.72	
TRANS 7 PRIMARY	95449.31	0.05	
TRANS 9 PRIMARY	65678.98	0.08	
TRANS 9 SECONDARY	41408.39	2.66	
TRANS PL48 PRIMARY	32601.44	2.82	
TRANS PL48 SECONDARY	5872.70	1.73	
TVSS	36541.55	2.72	
Cable ComponentName	CableSize (kcmil)	Length (ft)	Rpos (Ohms/1000 ft)
CBL-MDP9	8-500	20.0	0.0276
CBL-PFC-009	250	15.0	0.0552
CBL-PNL PH48	4-350	30.0	0.0368
CBL-PNL PH49	4-350	60.0	0.0368
CBL-PNL PH50	4-350	90.0	0.0368
CBL-PNL PL48	3/0	15.0	0.0805
CBL-TRANS 7	1/0 AL 15 KV	350.0	0.2100
CBL-TRANS 9	1/0 CU 15 KV	250.0	0.1304
CBL-TRANS PL48	1/0	15.0	0.1280
CBL-TVSS	4	5.0	0.3210

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REDUCE SCALE ACCORDINGLY

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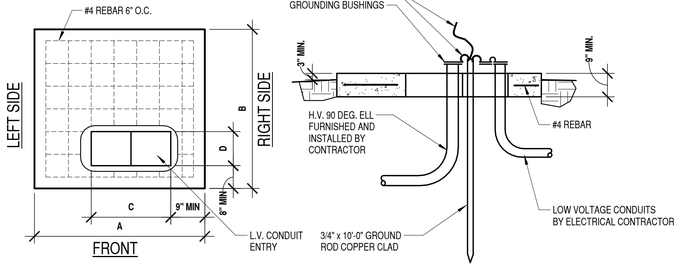
ELECTRICAL DETAILS

SHEET NO:

E501

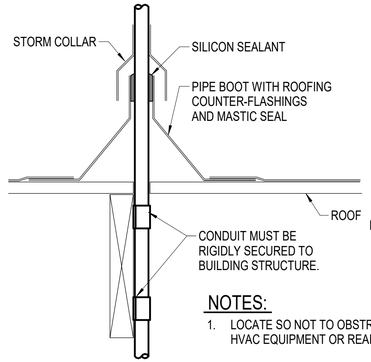
3/28/2018 8:10:10 AM

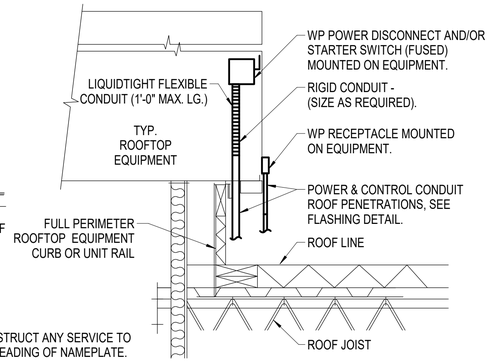
A	100"
B	105"
C	60"
D	16"
E	30"



C1 TYPICAL TRANSFORMER PAD INSTALLATION

NONE



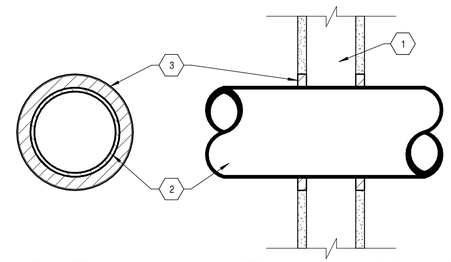


NOTES:

1. LOCATE SO NOT TO OBSTRUCT ANY SERVICE TO HVAC EQUIPMENT OR READING OF NAMEPLATE.
2. DO NOT INSTALL CONDUIT THRU CURBS. USE SEPERATE ROOF PENETRATIONS.
3. PITCH POCKETS ARE NOT PERMITTED.

C2 ROOF MOUNTED HVAC EQUIPMENT DISCONNECT AND CONDUIT MOUNTING DETAIL

NONE



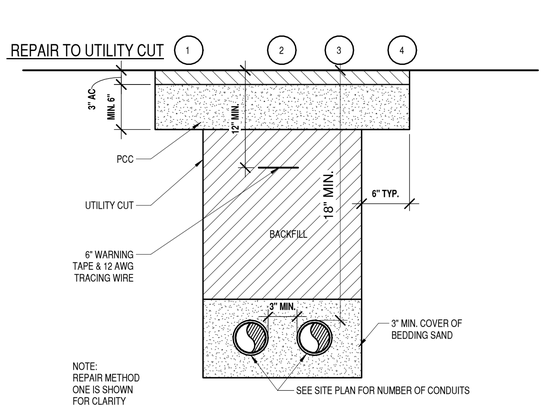
HILTI SYSTEM NO. W-L-1054, 3M SYSTEM NO. W-L-7033, OR EQUIVALENT
F RATINGS - 1 AND 2 HOUR

NOTES:

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY. SEE ARCHITECTURAL.
2. THROUGH - PENETRANTS - ONE METALLIC CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN. 0 IN. TO MAX. 2 1/4 IN. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING MAY BE INSTALLED AT AN ANGLE ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING SIZES OF METALLIC CONDUIT MAY BE USED:
   A. CONDUIT - NOMINAL 4 IN. DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. (OR SMALLER) DIAMETER STEEL CONDUIT.
3. FILL, VOID OR CAVITY MATERIAL - SEALANT - MIN. 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN CONDUIT AND WALL A MIN. 1/2 IN. DIAMETER BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONDUIT WALL INTERFACE ON BOTH SURFACES OF WALL.
4. SEALANT CONTAINERS TO BEAR THE UL CLASSFIFICATION MARK.

C4 FIRE STOPPING DETAIL - 1 & 2 HOUR

NONE'



NOTE:
REPAIR METHOD ONE IS SHOWN FOR CLARITY

CONDITION: A CUT FOR UTILITY INSTALLATION OR REPAIR. OBTAIN A DIGGING PERMIT PRIOR TO ANY EXCAVATIONS.

REPAIR METHOD: 1 MATCH EXISTING BASE COURSE AND ASPHALT WITH A MINIMUM OF 8" UNTREATED BASE COMPACTED TO 95% AND 3" ASPHALT.

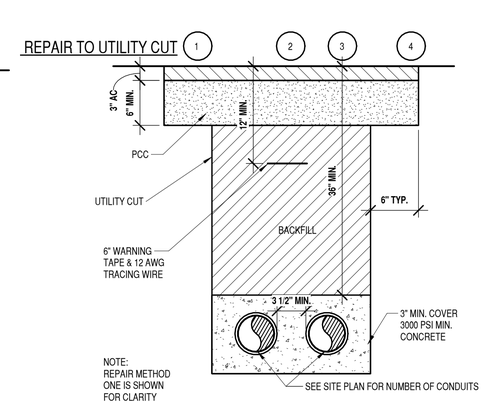
REPAIR METHOD: 2 4000 PSI CONCRETE. MATCH EXISTING THICKNESS.

REPAIR METHOD: 3 COMPACTED BACK FILL- 4" COMPACTED TOPSOIL SOD TO MATCH EXISTING GRASS, OR 3" LAYER OF 3/4" "WILDCAT RED" DECORATIVE ROCK AS NEEDED.

REPAIR METHOD: 4 UNDERSLAB - COMPACTED BACKFILL, CONTRACTOR TO MATCH FLOOR THICKNESS, 12"- #4 DOWELS 18" O.C.

A1 TYPICAL UNDERGROUND CONDUIT

NONE



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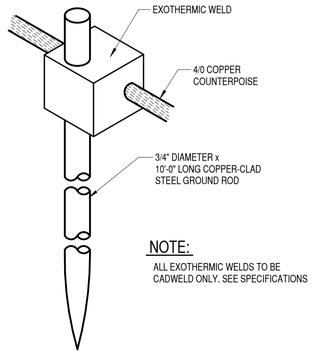
REPAIR METHOD: 2 4000 PSI CONCRETE. MATCH EXISTING THICKNESS.

REPAIR METHOD: 3 COMPACTED BACK FILL- 4" COMPACTED TOPSOIL SOD TO MATCH EXISTING GRASS, OR 3" LAYER OF 3/4" "WILDCAT RED" DECORATIVE ROCK AS NEEDED.

REPAIR METHOD: 4 COMPACTED BACK FILL USING NATIVE SOIL.

A2 TYPICAL UNDERGROUND CONDUIT-CONCRETE ENCASED

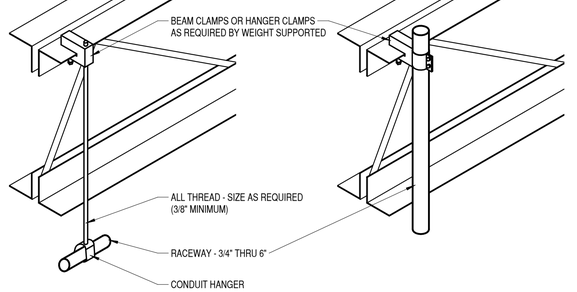
NONE

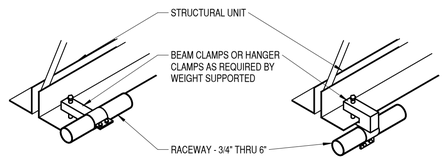


NOTE:
ALL EXOTHERMIC WELDS TO BE CADWELD ONLY. SEE SPECIFICATIONS

A3 GROUND ROD DETAIL-EXOTHERMIC

NONE





NOTE:
WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGAR SYSTEM.
DO NOT SUPPORT ANY RACEWAY LARGER THAN 1" FROM BOTTOM CORD OF STEEL TRUSSES.

A4 TYPICAL RACEWAY SUPPORT METHODS

NONE

IF SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

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SHEET TITLE

ELECTRICAL DETAILS

SHEET NO:

E502

PANEL:	MDP9	MAIN BREAKER		3000	VOLTAGE:	480	Y/	277	PHASE:	3	WIRE:	4	NEMA:	1
MAINS:	3000 AMPS	MOUNTING:		PAD	LOCATION	SE CORNER PUMP RM			REMARKS:		NEMA 3R, SQUARE D I-LINE			

LOAD DESCRIPTION	WIRE	P	AMP	CKT	KVA PWR	KVA LTS	KVA C.O.	PHASE A	PHASE B	PHASE C	KVA C.O.	KVA LTS	KVA PWR	CKT	AMP	P	WIRE	LOAD DESCRIPTION
PANEL PH48	4-350	3	1200	1	748.0	6.4	18.0	515.1	515.1	515.1	0.0	0.0	773.0	2	1200	3	4-350	PANEL PH49
PANLE PH50	4-350	3	1200	3	740.0	0.0	0.0	246.7	246.7	246.7				4	250	3	250	PFC-009
TVSS	4	3	60	5				0.0	0.0	0.0				6		3		BLANK
BLANK		3		7				0.0	0.0	0.0				8		3		BLANK
BLANK		3		9				0.0	0.0	0.0				10		3		BLANK
BLANK		3		11				0.0	0.0	0.0				12		3		BLANK
BLANK		3		13				0.0	0.0	0.0				14		3		BLANK
SUB-TOTAL (KVA)					1488.0	6.4	18.0	761.8	761.8	761.8	0.0	0.0	773.0					

			TYPE OF LOAD	CONNECTED	DIVERSITY	DEMAND
			LIGHTING	6.4	100%	6.4
			POWER	2261.0	50%	1130.5
			C.O.	18.0	NEC 220.44	14.0
PANEL LOADING	46%		TOTAL	2285.4	KVA	1150.9
3/8/2018 9:17			TOTAL	2749	AMPS	1385

PANEL:	PH48	MAIN BREAKER		NONE	VOLTAGE:	480			PHASE:	3	WIRE:	4	NEMA:	1
MAINS:	1200 AMPS	MOUNTING:		PAD	LOCATION	EAST PUMP RM			REMARKS:		SQUARE D I-LINE			

LOAD DESCRIPTION	WIRE	P	AMP	CKT	KVA PWR	KVA LTS	KVA C.O.	PHASE A	PHASE B	PHASE C	KVA C.O.	KVA LTS	KVA PWR	CKT	AMP	P	WIRE	LOAD DESCRIPTION
100 HP MOTOR	2/0	3	200	1	100.0			66.7	66.7	66.7			100.0	2	200	3	2/0	100 HP MOTOR
100 HP MOTOR	2/0	3	200	3	100.0			66.7	66.7	66.7			100.0	4	200	3	2/0	100 HP MOTOR
100 HP MOTOR	2/0	3	200	5	100.0			66.7	66.7	66.7			100.0	6	200	3	2/0	100 HP MOTOR
40 HP MOTOR	6	3	90	7	40.0			21.7	21.7	21.7			25.0	8	70	3	8	25 HP MOTOR
40 HP MOTOR	6	3	90	9	40.0			21.7	21.7	21.7			25.0	10	70	3	8	25 HP MOTOR
SPARE		3	20	11	5.0			15.5	15.5	15.5	16.2	6.4	19.0	12	125	3	1/0	TRANSFORMER PL48
SPARE		3	20	13	5.0			3.3	3.3	3.3			5.0	14	30	3		SPARE
SUB-TOTAL (KVA)					390.0	0.0	0.0	262.2	262.2	262.2	16.2	6.4	374.0					

			TYPE OF LOAD	CONNECTED	DIVERSITY	DEMAND
			LIGHTING	6.4	100%	6.4
			POWER	764.0	50%	382.0
			C.O.	16.2	NEC 220.44	13.1
PANEL LOADING	40%		TOTAL	786.6	KVA	401.5
3/22/2018 14:36			TOTAL	947	AMPS	483

PANEL:	PH49	MAIN BREAKER		NONE	VOLTAGE:	480			PHASE:	3	WIRE:	4	NEMA:	1
MAINS:	1200 AMPS	MOUNTING:		PAD	LOCATION	EAST PUMP RM			REMARKS:		SQUARE D I-LINE			

LOAD DESCRIPTION	WIRE	P	AMP	CKT	KVA PWR	KVA LTS	KVA C.O.	PHASE A	PHASE B	PHASE C	KVA C.O.	KVA LTS	KVA PWR	CKT	AMP	P	WIRE	LOAD DESCRIPTION
100 HP MOTOR	2/0	3	200	1	100.0			66.7	66.7	66.7			100.0	2	200	3	2/0	100 HP MOTOR
100 HP MOTOR	2/0	3	200	3	100.0			66.7	66.7	66.7			100.0	4	200	3	2/0	100 HP MOTOR
100 HP MOTOR	2/0	3	200	5	100.0			66.7	66.7	66.7			100.0	6	200	3	2/0	100 HP MOTOR
40 HP MOTOR	6	3	90	7	40.0			21.7	21.7	21.7			25.0	8	70	3	8	25 HP MOTOR
40 HP MOTOR	6	3	90	9	40.0			21.7	21.7	21.7			25.0	10	70	3	8	25 HP MOTOR
RTU	6	3	60	11	43.0			16.0	16.0	16.0			5.0	12	30	3		SPARE
SPARE		3	20	13	5.0			3.3	3.3	3.3			5.0	14	30	3		SPARE
SUB-TOTAL (KVA)					428.0	0.0	0.0	262.7	262.7	262.7	0.0	0.0	360.0					

			TYPE OF LOAD	CONNECTED	DIVERSITY	DEMAND
			LIGHTING	0.0	100%	0.0
			POWER	788.0	50%	394.0
			C.O.	0.0	NEC 220.44	0.0
PANEL LOADING	40%		TOTAL	788.0	KVA	394.0
3/22/2018 14:35			TOTAL	948	AMPS	474

PANEL:	PH50	MAIN BREAKER		NONE	VOLTAGE:	480			PHASE:	3	WIRE:	4	NEMA:	1
MAINS:	1200 AMPS	MOUNTING:		PAD	LOCATION	EAST PUMP RM			REMARKS:		SQUARE D I-LINE			

LOAD DESCRIPTION	WIRE	P	AMP	CKT	KVA PWR	KVA LTS	KVA C.O.	PHASE A	PHASE B	PHASE C	KVA C.O.	KVA LTS	KVA PWR	CKT	AMP	P	WIRE	LOAD DESCRIPTION
100 HP MOTOR	2/0	3	200	1	100.0			66.7	66.7	66.7			100.0	2	200	3	2/0	100 HP MOTOR
100 HP MOTOR	2/0	3	200	3	100.0			66.7	66.7	66.7			100.0	4	200	3	2/0	100 HP MOTOR
100 HP MOTOR	2/0	3	200	5	100.0			66.7	66.7	66.7			100.0	6	200	3	2/0	100 HP MOTOR
40 HP MOTOR	6	3	90	7	40.0			21.7	21.7	21.7			25.0	8	70	3	8	25 HP MOTOR
40 HP MOTOR	6	3	90	9	40.0			21.7	21.7	21.7			25.0	10	70	3	8	25 HP MOTOR
PUMP 1	12	3	20	11	7.5			5.0	5.0	5.0			7.5	12	20	3	12	PUMP 2
COOLING TOWER	5	3	20	13	4.0			2.8	2.8	2.8			4.5	14	30	3		CT SUMP HEATER
SUB-TOTAL (KVA)					391.5	0.0	0.0	251.2	251.2	251.2	0.0	0.0	362.0					

			TYPE OF LOAD	CONNECTED	DIVERSITY	DEMAND
			LIGHTING	0.0	100%	0.0
			POWER	753.5	50%	376.8
			C.O.	0.0	NEC 220.44	0.0
PANEL LOADING	38%		TOTAL	753.5	KVA	376.8
3/22/2018 14:40			TOTAL	907	AMPS	454

PANEL:	PL48	MAIN BREAKER		200	VOLTAGE:	208	Y/	120	PHASE:	3	WIRE:	4	NEMA:	1
MAINS:	225 AMPS	MOUNTING:		SURFACE	LOCATION	EAST PUMP RM			REMARKS:		SQUARE D ONLY			

LOAD DESCRIPTION	WIRE	P	AMP	CKT	KVA PWR	KVA LTS	KVA C.O.	PHASE A	PHASE B	PHASE C	KVA C.O.	KVA LTS	KVA PWR	CKT	AMP	P	WIRE	LOAD DESCRIPTION
LTS	12	1	20	1		1.2		1.8			0.6			2	*20	1	12	RECEPT
COOLING TOWER DRAIN PUMP	12	1	20	3	1.0				1.4		0.4			4	*20	1	12	RECEPT
SPARE	12	1	20	5		1.0				2.2	0.2		1.0	6	*20	1	12	EXT OUTLET, CHEM FEED
SPARE	12	1	20	7		1.0		2.0			1.0			8	20	1	12	SPARE
SPARE	12	1	20	9		1.0			2.0		1.0			10	20	1	12	SPARE
SPARE	12	1	20	11		1.0				2.0	1.0			12	20	1	12	SPARE
SPARE	12	1	20	13		1.2		2.2			1.0			14	20	1	12	SPARE
SPARE	12	1	20	15	1.0				2.0		1.0			16	20	1	12	SPARE
SPARE	12	1	20	17	1.0					2.0	1.0			18	20	1	12	SPARE
SPARE	12	1	20	19	1.0			2.0			1.0			20	20	1	12	SPARE
SPARE	12	1	20	21	1.0				2.0		1.0			22	20	1	12	SPARE
SPARE	12	1	20	23	1.0					2.0	1.0			24	20	1	12	SPARE
SPARE	12	1	20	25	1.0			2.0					1.0	26	20	1	12	SPARE
SPARE	12	1	20	27	1.0				2.0				1.0	28	20	1	12	SPARE
SPARE	12	1	20	29	1.0					2.0			1.0	30	20	1	12	SPARE
SPARE	12	1	20	31			1.0	2.0					1.0	32	20	1	12	SPARE
SPARE	12	1	20	33			1.0		2.0				1.0	34	20	1	12	SPARE
SPARE	12	1	20	35			1.0			2.0			1.0	36	20	1	12	SPARE
SPARE	12	1	20	37			1.0	2.0					1.0	38	20	1	12	SPARE
SPARE	12	1	20	39			1.0		2.0				1.0	40	20	1	12	SPARE
SPARE	12	1	20	41			1.0			2.0			1.0	42	20	1	12	SPARE
SUB-TOTAL (KVA)					9.0	6.4	6.0	14.0	13.4	14.2	10.2	0.0	10.0					

*PROVIDE GFCI BREAKER			TYPE OF LOAD	CONNECTED	DIVERSITY	DEMAND
			LIGHTING	6.4	100%	6.4
			POWER	19.0	50%	9.5
			C.O.	16.2	NEC 220.44	13.1
PANEL LOADING	41%		TOTAL	41.6	KVA	29.0
3/28/2018 7:55			TOTAL	116	AMPS	81

IF SHEET IS LESS THAN 22"x 34"
IT IS A REDUCED PRINT.
REDUCE SCALE ACCORDINGLY

CLH ARCHITECTS ENGINEERS
Case, Lowe & Hart, Inc. •2484 Washington Blvd.
Suite 510 • Ogden, Utah• 84401
801.399.5821 • www.clhae.com

CONSULTANTS

STAMP

LICENSED PROFESSIONAL ENGINEER
129383
KEVIN J. LEWIS
STATE OF UTAH

03/27/2018

Parker

ADDITION TO THE CONTROL SYSTEMS DIV. PLANT
PARKER/HANNIFIN CORP.
1425 WEST 2675 NORTH OGDEN, UTAH

MARK	DATE	DESCRIPTION

ISSUE DATE:	27 MARCH, 2018
PROJECT NO:	18110
CAD DWG FILE:	
DRAWN BY:	J.M.S.
CHK'D BY:	K.J.L.

PERMIT SET

27 MARCH, 2018

SHEET TITLE

ELECTRICAL PANEL SCHEDULES

SHEET NO:

E701

3/28/2018 8:10:28 AM