Mark I. Payne Building

UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

State of Utah–Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

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

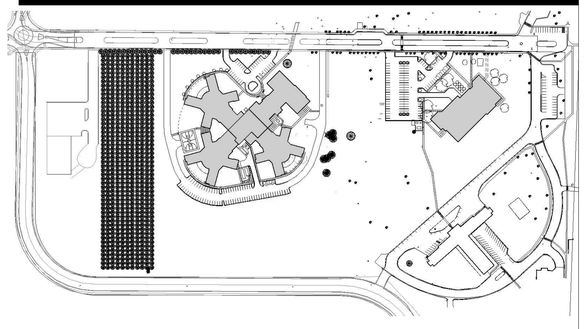
Utah State Hospital

UTAH DEPARTMENT OF HUMAN SERVICES

APPROVALS

Keith Davis, Director of Administrative Support	Utah Department of Human Services Bureau of Administative Support	Date
Dallas Earnshaw, Superintendent	Utah State Hospital	Date
Peggy Grusendorf, Asst. Superintendent	Utah State Hospital	Date
Jim Russell, Project Manager	Utah Department of Administative Services Division of Facilities Construction & Management	Date
Enzo Calfa, Building Official	State of Utah	Date

SITE MAP



VICINITY MAP

DEFERRED SUBMITTALS

SPEC SECTION	SPEC SECTION	ESTIMATED DATE OF SUBMITTAL	DATE SUBMITTED
211000	FIRE SUPPRESSION	February 2013	
283111	FIRE ALARM	June 2013	

*See additional notes under Deferred Submittal Section on sheet G100

PROJECT TEAM

PROJECT ARCHITECT
FFKR Architects
730 Pacific Avenue
Salt Lake City, Utah 84104
Phone - 801-521-6186

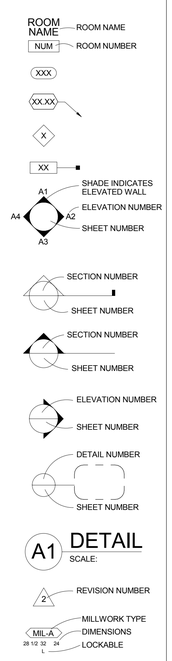
STRUCTURAL ENGINEER
Reaveley Engineers + Associates
675 East 500 South, Suite 400
Salt Lake City, Utah 84102
Phone - 801-486-3883

MECHANICAL ENGINEER
Van Boerum & Frank Associates Inc.
330 South 300 East
Salt Lake City, Utah 84111
Phone - 801-530-3150

ELECTRICAL ENGINEER
Spectrum Engineers
324 South State Street, Suite 400
Salt Lake City, Utah 84111
Phone - 801-3285151

CIVIL ENGINEER
Van Boerum & Frank Associates Inc.
330 South 300 East
Salt Lake City, Utah 84111
Phone - 801-530-3150

SYMBOLS LEGEND



MATERIAL LEGEND

- CONCRETE
- STUD WALL
- GRAVEL
- COMPACTED FILL AND/OR EARTH
- CMU (CONCRETE MASONRY UNIT)
- BATT INSULATION
- RIGID INSULATION

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
B.O.	BOTTOM OF
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT
EQ	EQUAL
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
O.C.	ON CENTER
OPH	OPPOSITE HAND
SPEC	SPECIFICATION
SIM	SIMILAR
TYP	TYPICAL
T.O.	TOP OF

DRAWING INDEX

GENERAL

G100	GENERAL INFO/CODE
G101	LIFE SAFETY
G160	MOCK-UP PLANS, ELEVATIONS & DETAILS
GS100	SITE LIFE SAFETY

CIVIL

C100	OVERALL SITE UTILITY PLAN
C200	SWPPP PLAN
C501	DETAILS AND SECTIONS
C502	DETAILS
C503	DETAILS

SURVEY

V101	SURVEY
V102	SURVEY
V103	SURVEY
V104	SURVEY
V105	SURVEY

LANDSCAPE

L-R100	IRRIGATION PLAN - OVERALL
L-R101	IRRIGATION PLAN - PAYNE
L-R102	IRRIGATION PLAN - PAYNE
L-R103	IRRIGATION PLAN - PAYNE
L-R104	IRRIGATION PLAN - PAYNE
L-R501	IRRIGATION PLAN - PAYNE
L-R502	IRRIGATION DETAILS - PAYNE
L-L100	LANDSCAPE PLAN - OVERALL
L-L101	LANDSCAPE PLAN - PAYNE
L-L102	LANDSCAPE PLAN - PAYNE
L-L103	LANDSCAPE PLAN - PAYNE
L-L104	LANDSCAPE PLAN - PAYNE
L-L501	LANDSCAPE DETAILS - PAYNE

STRUCTURAL

S001	GENERAL STRUCTURAL NOTES
S002	GENERAL STRUCTURAL NOTES
S003	GENERAL STRUCTURAL NOTES
S101	FOOTING & FOUNDATION PLAN
S111	ROOF FRAMING PLAN
S401	SKYLIGHT FRAMING PLAN & DETAILS
S501	FOOTING & FOUNDATION DETAILS
S502	FOOTING & FOUNDATION DETAILS
S503	FOOTING & FOUNDATION DETAILS
S504	FOOTING & FOUNDATION DETAILS

STRUCTURAL

S511	ROOF FRAMING DETAILS
S512	ROOF FRAMING DETAILS
S513	ROOF FRAMING DETAILS
S514	ROOF FRAMING DETAILS
S515	ROOF FRAMING DETAILS
S601	STRUCTURAL SCHEDULES
S602	STRUCTURAL SCHEDULES
S603	STRUCTURAL SCHEDULES
S604	STEEL STUD SCHEDULES & TYPICAL DETAILS
S605	STEEL STUD TYPICAL DETAILS

ARCHITECTURAL SITE

AS001	SITE KEY PLANS
AS101	EXISTING SITE & DEMOLITION PLAN
AS102	OVERALL SITE PLAN
AS103	SITE PLAN
AS105	ENLARGED SITE PLANS
AS501	SITE DETAILS

ARCHITECTURAL

A101	LEVEL 1 FLOOR PLAN
A102	ROOF PLAN
A111	REFLECTED CEILING PLAN
A201	EXTERIOR ELEVATIONS
A301	BUILDING SECTIONS
A302	WALL SECTIONS
A303	WALL SECTIONS
A401	ENLARGED FLOOR PLAN
A501	SECTION DETAILS
A502	SECTION DETAILS
A503	PLAN DETAILS
A504	CEILING DETAILS
A610	PARTITION TYPES
A611	PARTITION FIRE RESISTIVE RATINGS
A612	PARTITION JOINT SYSTEMS
A620	HM FRAME AND DOOR / WINDOW SCHEDULE
A621	ALUMINUM DOOR AND WINDOW SCHEDULE
A701	INTERIOR ELEVATIONS
A702	INTERIOR ELEVATIONS
A703	INTERIOR ELEVATIONS
A704	INTERIOR ELEVATIONS
A801	MILLWORK SCHEDULE & DETAILS
AF101	LEVEL 1 FINISH FLOOR PLAN
AF401	FINISH ENLARGED PLAN
AF601	DOOR/ROOM SIGNAGE SCHEDULE

MECHANICAL

M001	MECHANICAL SYMBOLS ABBREV. & GENERAL NOTES
M101	LEVEL 1 MECHANICAL FLOOR PLAN
MP101	LEVEL E MECHANICAL PIPING PLAN
M401	LARGE SCALE MECHANICAL PLANS
M501	MECHANICAL DETAILS
M502	MECHANICAL DETAILS
M503	MECHANICAL DETAILS
M601	MECHANICAL SCHEDULES
M602	MECHANICAL SCHEDULES
M701	MECHANICAL SCHEMATICS
MS101	MECHANICAL SITE PLAN
P101	LEVEL 1 PLUMBING FLOOR PLAN
P102	ROOF PLUMBING PLAN
P401	LARGE SCALE PLUMBING PLANS
P402	LARGE SCALE MECHANICAL PLANS
P501	PLUMBING DETAILS
P601	PLUMBING SCHEDULES

ELECTRICAL

EE001	SHEET INDEX, ABBREV, & NOTES
EE501	ELECTRICAL DETAILS
EE502	SEISMIC DETAILS
EE701	TYPICAL MOUNTING HEIGHT DETAILS
ES101B	SITE ELECTRICAL DEMO PLAN PHASE 1 AREA B
ES102B	SITE ELECTRICAL PLAN PHASE 1 AREA B
ES501	SITE ELECTRICAL DETAILS
EP101	LEVEL 1 POWER PLAN
EP102	ROOF POWER PLAN
EP501	FLOOR BOX DETAILS
EP601	ONE-LINE DIAGRAM
EP602	EQUIPMENT SCHEDULE
EP603	PANEL SCHEDULES
EP604	PANEL SCHEDULES
EL101	LEVEL 1 LIGHTING PLAN
EL501	LIGHTING DETAILS
EL601	LIGHTING SCHEDULES AND DIAGRAMS
ET101	LEVEL 1 TELECOM PLAN
ET501	CABLE TRAY DETAILS
ET502	TELECOM DETAILS
ET601	TELECOM ROUGH-IN/ RISER DIAGRAMS & SCHEDULES
ET602	TV DIST. ONE-LINE DIAGRAM
EY101	LEVEL 1 AUXILIARY PLAN
EY601	SECURITY DETAILS AND SCHEDULES
EJ101	LEVEL 1 AUDIO VISUAL PLAN
EJ601	AUDIO VISUAL DIAGRAMS AND SCHEDULES
FA101	LEVEL 1 FIRE ALARM PLAN
FA601	FIRE ALARM RISER

DFCM APPROVAL STAMP

FFKR ARCHITECTS

Mark I. Payne Building
1300 East Center St. Provo, Utah

PROJECT NUMBER: 11111

DFCM NUMBER: 11065420

NONSTRUCTURAL COMPONENT CHECKLIST

ITEM DESCRIPTION	NOT REQUIRED	ON CONST. DOCUMENTS	DEFERRED SUBMITTAL	COMMENTS
Architectural Components:				
Interior Nonstructural Walls & Partitions		✓		
Cantilever Elements (i.e. parapets, etc.)		✓		
Exterior Nonstructural Wall Elements	✓			
Veneer		✓		
Penthouses	✓			
Ceilings (i.e. suspended grid or hard lid)		✓		
Cabinets (i.e. storage cabinets, equip, etc.)	✓			
Access Floors	✓			
Storage Racks	✓			
Appendages & Ornamentations	✓			
Signs & Billboards			✓	
Other:				
Other:				
MEP Components:				
Fire Sprinklers			✓	
Mechanical Equipment (i.e. HVAC, fans, air handlers, boilers, furnaces, tanks, chillers, water heaters, heat exchangers, evaporators, engines, turbines, pumps, compressors, MCP equipment, etc.)			✓	
Electrical Equipment (i.e. generators, batteries, inverters, transformers, MCC panel boards, switch gear, cabinets, etc.)				
Elevator & Escalator Components			✓	
Communication Equipment, Computers, Instrumentation, and Controls				
Roof mounted Chimneys, Stacks, Cooling & Electrical Towers	✓			
Lighting Fixtures				
Vibration Isolated Components	✓			
Piping & Conduit Systems			✓	
Ductwork (including in line components)			✓	
Conveyors	✓			
Cable Trays				
Other:				
Other:				

NOTES:

1. Deferred submittals for seismic restraint of nonstructural components must be submitted to the DFCM Building Official a minimum of two weeks prior to the planned installation in order to allow for plan review and forwarding to inspectors. In the event that the submittal is deficient additional time may become necessary.
2. If seismic restraints of non-structural components are installed prior to receiving DFCM approval they shall not be covered or concealed until receiving both plan review and inspection approval. Further, installers proceeding at their own risk until plan review and inspection approval occurs.
3. The requirements for seismic restraint of nonstructural components cannot be satisfied by a general reference to Design Manuals. The design professional may utilize these manuals as a basis of their design, but must provide all supporting documentation to ensure that the design conforms to the requirements of ASCE 7-05, Chapter 13.
4. Submittals must include details of the proposed seismic restraint of nonstructural components. These details must show specific information relating to the materials, type, size, and locations of anchorages; materials use for bracing; attachment requirements of bracing to structure and component; and locations of transverse and longitudinal sway bracing and rod stiffeners. Submittals may also require structural calculations, engineering reports, test data, and/or specifications to ensure code compliance.

Revised: 02/15/2010 Page 2 of 2

SPECIAL INSPECTION AND TESTING UNDER THE PROVISIONS OF IBC 1704 AND FOR MISCELLANEOUS AREAS

Indicate required Special inspections for project by checking the appropriate boxes and provide specific instructions as to the inspection requirements and the expectations of the architect, engineer and owner:

FABRICATORS (IBC 1704.2)

☒ Approved Fabricator	Fabricators Name:
☐ Unapproved Fabricator	Fabricators Name:
	In-plant inspections: ☐ Steel Construction ☐ Welding ☐ Details

STEEL (IBC 1704.3)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
High Strength Bolting(1704.3.3)	☒ Continuous	☐ Periodic	Bearing periodic /slip critical continuous
WELDING (1704.3.1)			
Details (1704.3.2)			
Complete & partial penetration groove welds	☒ Continuous	☐ Periodic	1704.3
Multipass fillet welds	☒ Continuous	☐ Periodic	1704.3
Single-pass fillet welds > 5/16"	☒ Continuous	☐ Periodic	1704.3
Single-pass fillet welds < 5/16"	☐ Continuous	☒ Periodic	1704.3
Floor & roof deck welds	☐ Continuous	☒ Periodic	1704.3
REINFORCEMENT STEEL	☒ Continuous		1704.3
Verification of weldability	☐ Continuous	☒ Periodic	1704.3
Shear wall and shear reinforcement	☒ Continuous	☐ Periodic	1704.3
Other reinforcement	☐ Continuous	☒ Periodic	1704.3
Steel frame joint details	☐ Continuous	☒ Periodic	1704.3

CONCRETE CONSTRUCTION (IBC 1704.4)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Materials (1704.4.1)	☐ Continuous	☒ Periodic	IBC 1704.4.1
Steel placement	☐ Continuous	☒ Periodic	ACI 318:3.5, 7.1-7.7 and IBC 1913.4
Steel welding	☐ Continuous	☐ Periodic	Welding Reinforcing Steel not Allowed
Bolts prior & during placement	☐ Continuous	☐ Periodic	Not Applicable
Use of required design mix	☐ Continuous	☒ Periodic	ACI 318: 4, 5.2-5.4 and IBC 1904.2.2, 1913.2, 191
Concrete sampling for strength test, slump, air content, and temperature of concrete	☒ Continuous	☐ Periodic	ASTM C 172, ASTM C 31, ACI 318: 5.6, 5.8 and 1913.10
Concrete & shotcrete placement	☒ Continuous	☐ Periodic	ACI 318: 5.9-5.10 and IBC 1913.6, 1913.7, 1913.8
Curing temperature and techniques	☐ Continuous	☒ Periodic	ACI 318: 5.11-5.13 and IBC 1913.9
Pre-stressed concrete	☐ Continuous	☐ Periodic	Not Applicable
Pre-cast concrete	☐ Continuous	☐ Periodic	Not Applicable
Posttensioned concrete	☐ Continuous	☐ Periodic	Not Applicable
Form work	☐ Continuous	☒ Periodic	ACI 318: 6.1.1

Page 1 of 4

MASONRY CONSTRUCTION (IBC 1704.5)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
As masonry construction begins:			
Site prepared mortar	☐ Continuous	☒ Periodic	042113, 042200
Construction of mortar joints	☐ Continuous	☒ Periodic	042113, 042200
Location of reinforcement, connectors, pre-stressing tendons and anchorages	☐ Continuous	☐ Periodic	042113, 042200
Pre-stressing technique	☐ Continuous	☐ Periodic	
Grade and size of pre-stressing tendons and anchorages	☐ Continuous	☐ Periodic	
Inspection program verify:			
Size and location of structural elements	☐ Continuous	☒ Periodic	
Type, size and location of anchors	☐ Continuous	☒ Periodic	
Size, grade and type of reinforcement	☐ Continuous	☒ Periodic	
Welding of reinforcement	☒ Continuous	☐ Periodic	
Cold and hot weather protection	☐ Continuous	☒ Periodic	
Application and measurement of pre-stressing force	☐ Continuous	☒ Periodic	
Prior to grouting verify			
Clean grout space	☐ Continuous	☒ Periodic	
Placement of reinforcement	☐ Continuous	☒ Periodic	
Grout mix	☐ Continuous	☒ Periodic	
Mortar joints	☐ Continuous	☒ Periodic	
Grout placement	☐ Continuous	☒ Periodic	
Grout and mortar specimens and prisms	☒ Continuous	☐ Periodic	
Construction and submittal compliance verification	☐ Continuous	☒ Periodic	
Empirical masonry – Cat. I-III (1708.1.1)	☐ Continuous	☐ Periodic	
Empirical masonry – Cat. IV (1708.1.1)	☐ Continuous	☐ Periodic	
Engineered masonry – Cat. I-III 1708.1.1	☐ Continuous	☐ Periodic	
Engineered masonry – Cat. IV (1708.1.1)	☐ Continuous	☐ Periodic	
Engineering & pre-stressing steel (1708.3)	☐ Continuous	☐ Periodic	
Structural steel (1708.4)	☐ Continuous	☒ Periodic	
Qualification of mechanical & electrical equipment (1708.5)	☐ Continuous	☐ Periodic	
Seismically isolated structures (1708.6)	☒ Continuous	☐ Periodic	
Testing for seismic resistance is	☒ Continuous	☐ Periodic	

SOILS CONSTRUCTION (IBC 1704.7)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Site preparation	☐ Continuous	☒ Periodic	Specification Section 312100: 3.02
Structural fill material	☒ Continuous	☐ Periodic	Specification Section 312100: 2.02
Structural fill lift thickness	☒ Continuous	☐ Periodic	Specification Section 312100: 3.04
Structural fill soil densities	☒ Continuous	☐ Periodic	Specification Section 312100: 3.04
Backfill soils materials	☒ Continuous	☐ Periodic	Specification Section 312100: 3.06 and 3.07
Backfill soil densities	☒ Continuous	☐ Periodic	Specification Section 312100: 3.06 and 3.07

Page 2 of 4

PIER FOUNDATIONS (IBC 1704.9)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Observe drilling operation and reporting	☐ Continuous	☐ Periodic	
Verify placement & installation data	☐ Continuous	☐ Periodic	

SPRAYED FIRE-RESISTANT MATERIALS (IBC 1704.10)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Structural member surface conditions	☐ Continuous	☒ Periodic	IBC 1704.10
Material application	☐ Continuous	☒ Periodic	IBC 1704.10
Material thickness	☐ Continuous	☒ Periodic	IBC 1704.10
Material density	☐ Continuous	☒ Periodic	IBC 1704.10
Bonding strength	☐ Continuous	☒ Periodic	IBC 1704.10

EPOXY (IBC 1704.13)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Material and installation (specify locations)	☐ Continuous	☐ Periodic	

SMOKE CONTROL (IBC 1704.14)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Material	☐ Continuous	☒ Periodic	IBC 1704.14
Installation	☐ Continuous	☒ Periodic	IBC 1704.14

Special inspection for seismic resistance (IBC 1707)

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Structural Steel (1707.2)	☐ Continuous	☐ Periodic	
Structural Wood (1707.3)	☐ Continuous	☐ Periodic	
Cold-formed steel framing (1707.4)	☐ Continuous	☒ Periodic	
Pier foundations (1707.5)	☐ Continuous	☐ Periodic	
Storage racks & access floors (1707.6)	☐ Continuous	☐ Periodic	
Architectural components (1707.7)	☐ Continuous	☐ Periodic	
Mechanical & electrical items (1707.8)	☐ Continuous	☐ Periodic	
Designated systems verification (1707.9)	☐ Continuous	☐ Periodic	
Seismic isolation systems (1707.10)	☐ Continuous	☐ Periodic	

MISCELLANEOUS AREAS

These inspections are recommended by the Architect/Engineer and approved by DFCM.

Item	Continuous	Periodic	Detailed Instructions and Frequencies
Suspended Ceiling Grid Clips	☐ Continuous	☒ Periodic	
Suspended Ceiling wire spacing	☐ Continuous	☒ Periodic	
(Seismic)			
Soils backfill (specify locations and frequency)	☐ Continuous	☐ Periodic	
Soils for curb and gutter (specify locations and frequency)	☒ Continuous	☐ Periodic	
Soils for parking lots (specify locations and frequency)	☒ Continuous	☐ Periodic	
Soils for utility trench backfill	☒ Continuous	☐ Periodic	
Reinforcement for slab on grade sidewalks and drive approaches (specify locations and frequency)	☐ Continuous	☒ Periodic	
Reinforcement for interior slab on grade (specify locations and frequency)	☐ Continuous	☒ Periodic	
Concrete testing for slab on grade sidewalks and drive approaches (specify locations and frequency)	☒ Continuous	☐ Periodic	
Concrete testing for interior slab on grade (specify locations and frequency)	☐ Continuous	☐ Periodic	
Masonry Veneer (specify locations and frequency)	☐ Continuous	☐ Periodic	
Asphalt inspection (specify locations and frequency)	☒ Continuous	☐ Periodic	
Asphalt testing (specify locations and frequency)	☐ Continuous	☐ Periodic	
Inspection of seismic resistance (specify locations and frequency)	☐ Continuous	☐ Periodic	
Steam and water line welding (specify locations and frequency)	☐ Continuous	☐ Periodic	
Seismic supports for duct work and sealing of joints for duct work	☐ Continuous	☒ Periodic	
Seismic supports for electrical raceways, cable trays and lights	☐ Continuous	☒ Periodic	260548
Seismic supports for plumbing lines including gas, water and steam and condensation	☐ Continuous	☐ Periodic	230548
Seismic bracing for mechanical units both on slab and suspended	☐ Continuous	☐ Periodic	230548
TPO Roofing	☐ Continuous	☒ Periodic	075423
Penetration Firestopping	☐ Continuous	☒ Periodic	078413
Fire Resistive Joint Systems	☐ Continuous	☒ Periodic	078446
Smoke Containment Systems for Elevators	☐ Continuous	☒ Periodic	078700
Operable partitions	☐ Continuous	☒ Periodic	102226

Page 3 of 4

Special Inspectors Shall:

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

Page 4 of 4

CODE ANALYSIS

APPLICABLE CODES

Code	Year	Code	Year
International Building Code	2009	National Electrical Code	2011
International Mechanical Code	2009	Uniform Code for Building Conservation	N/A
International Fuel Gas Code	2009		
International Plumbing Code	2009	ADA Accessibility Guildelines	2010
International Fire Code	2009		
International Energy Conservation Code	2009		

A. Occupancy and Group: B

Change in Use: Yes ___ No ___ Mixed Occupancy: Yes ___ No X

Special Use and Occupancy (e.g. High Rise, Covered Mall): ___

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I/A I/B II/A II/B III/A III/B IV/HT V/A **[V/B]**

D. Fire Resistance Rating: Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: 0 South: 0 East: 0 West: 0

ONLY WALLS W/ < 30 FEET OF SEPARATION DISTANCE REQUIRE RATING

E. Mixed Occupancies: NO Nonseparated Uses: NO

F: Sprinklers:

Required: YES Provided: YES

Type of Sprinkler System (IBC 903.3.1) NFPA 13

G: Number of Stories: 1 Building Height: 17'-4"

H: Actual Area per Floor (square feet): 29,565

I: Tabular Area (square feet): (table 503): Unlimted per section 507.3

J: Area Modifications: Area Ratio = 0.1

a) $A_a = \{A_t + [A_t \times I_f] + [A_t \times I_s]\}$ $I_f = [F/P - .025]$ W/30

b) Sum of the Ratio Calculations for Mixed Occupancies: NOT APPLICABLE

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

c) Total Allowable Area for:

1) One Story: Unlimited
2) Two Story: $A_a(2)$ N/A
3) Three Story: $A_a(3)$ N/A

d) Unlimited Area Building: Yes X No ___ Code Section: Section 507.3

K. Fire Resistance Rating Requirements for Building Elements (hours).

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	0	N/A	Floors - Ceiling Floors	0	
Interior Bearing Walls	0	N/A	Roofs - Ceiling Roofs	0	
Exterior Non-Bearing Walls	0	N/A	Exterior Doors and Windows		
Structural Frame	0	N/A	Shaft Enclosures		
Partitions - Permanent	0	N/A	Fire Walls	N/A	
Fire Barriers			Fire Partitions	1	
			Smoke Partitions	0	

L. Design Occupant Load: 423

Exit Width Required: 85" Exit Width Provided: 172"

M. Minimum Number of Required Plumbing Facilities:

a) Water Closets - Required (m) 5 (f) 6 Provided (m) 6 (f) 6
b) Urinals - Required (m) - (f) - Provided (m) 2 (f) -
c) Lavatories - Required (m) 3 (f) 3 Provided (m) 9 (f) 9
d) Bath Tubs or Showers: ___
e) Drinking Fountains: 4 Service Sinks: 2

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.

2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
a) High Rise Requirements.
b) Atriums.
c) Performance Based Criteria.
d) Means or Egress Analysis.
e) Fire Assembly Locator Sheet.
f) Exterior and Interior Accessibility Route.
g) Fire Stopping, Including Tested Design Number.

Supplemental Code Analysis

DEFERRED SUBMITTALS

Notes:

1) Submittals listed under Deferred Submittals will be submitted to the Building Official for review with a letter from the architect stating that the drawings are in conformance with their design.

2) All work related to the above listed deferred submittals is not to commence until the Building Official has approved of the related submittal.

CHAPTER 4: OCCUPANCY AND GROUP

NEW CONSTRUCTION WITH B OCCUPANCIES AS WELL AS OCCUPANCIES ACCESSORY TO THE B OCCUPANCY.

MIXED OCCUPANCY: **NO**

OCCUPANCY GROUPS: **B**

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

CONSTRUCTION TYPE: **VB**

NFPA COMPLIANT SPRINKLER SYSTEM: **YES**

BUILDING HEIGHT		BASE	ALLOWED	ACTUAL
STORIES	PER TABLE 503	2	+1	1
HEIGHT	PER TABLE 503	40'-0"	+20'-0"	17'-4"
BUILDING AREA		BASE	ALLOWED	ACTUAL
AREA (IN SQUARE FEET)	PER TABLE 503	9,000	UNLIMITED	29,532
UNLIMTED AREA BASED ON SECTION 507.3	PER SECTION 507.3			

SECTION 508 - MIXED USE AND OCCUPANCY

INCIDENTAL USES (FOR 'B' OCCUPANCY WITH SPRINKLER SYSTEM) PER SECTION 508.2	REQUIRED SEPERATION
FURNACE ROOM WHERE ANY PIECE OF EQUIPMENT IS OVER 400,000 BTU PER HOUR INPUT	NONE WITH SPRINKLER*
ROOMS WITH BOILERS WHERE THE LARGEST PIECE OF EQUIPMENT IS OVER 15 PSI AND 10 HORSEPOWER	NONE WITH SPRINKLER*
LAUNDRY ROOMS OVER 100 s.f.	NONE WITH SPRINKLER*
STORAGE ROOMS OVER 100 s.f.	1-HOUR**
WASTE AND LINEN COLLECTION ROOMS OVER 100 SQUARE FEET	NONE WITH SPRINKLER*
*CONSTRUCTION CAPABLE OF RESISTING THE PASSAGE OF SMOKE PER SECTION 508.2.5.2	
**PER NFPA 18.3.2.1	

SECTION 508.3.1 - ACCESSORY OCCUPANCIES

SHALL NOT OCCUPY MORE THAN 10% OF THE AREA OF THE STORY. ACCESSORY ASSEMLY OCCUPANCIES LESS THAN 750 SQUARE FEET ARE NOT CONSIDERED SEPARATE OCCUPANCIES.

ADDITIONAL REQUIREMENTS

508.2.5.1 - RATED CONSTRUCTION OF INCIDENTAL USES SHALL BE A FIRE BARRIER PER SECTION 707 OR A HORIZONTAL ASSEMBLY CONSTRUCTED IN ACCORDANCE WITH SECTION 712 OR BOTH.

CHAPTER 6: TYPES OF CONSTRUCTION

TABLE 601 FIRE RESISTANCE RATING FOR BUILDING ELEMENTS	HOURS
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS: EXTERIOR	0
BEARING WALLS: INTERIOR	0
NONBEARING WALLS AND PARTITIONS: EXTERIOR	0
NONBEARING WALLS AND PARTITIONS: INTERIOR	0
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0

TABLE 602 REQUIREMENTS FOR THE EXTERIOR WALLS BASED ON THE FIRE SEPERATION DISTANCE	HOURS
EXTERIOR BEARING WALL RATING BASED ON > 30'-0" SEPERATION DISTANCE	0

REFERENCE SITE PLAN.

CHAPTER 7: FIRE RATED CONSTRUCTION

TABLE 705.8 AREA OF EXTERIOR OPENINGS BASED ON FIRE SEPERATION DISTANCE AND DEGREE OF OPENING PROTECTION

FIRE SEPERATION DISTANCE	DEGREE OF PROTECTION	ALLOWABLE AREA
30 OR GREATER	UP, S	NOT REQUIRED

ADDITIONAL REFERENCES

UTAH ADMINISTRATIVE CODE R432-4-8

NFPA 101 LSC TABLE 18.3.2.1

CHAPTER 10: MEANS OF EGRESS

TABLE 1004.1.1 - OCCUPANT LOAD

ACTUAL FLOOR AREA		29,541
BUSINESS AREA OCCUPANT LOAD	100 s.f. GROSS PER OCCUPANT	272
MECHANICAL AREA OCCUPANT LOAD	300 s.f. GROSS PER OCCUPANT	9
DESIGN OCCUPANT LOAD		281

SECTION 1005.1 - EGRESS WIDTH

STAIRWAY WIDTH PER OCCUPANT	0.3"
STAIRWAY WIDTH REQUIRED	84"
STAIRWAY WIDTH PROVIDED	N/A
COMPONENT WIDTH PER OCCUPANT	0.2"
COMPONENT WIDTH REQUIRED	56"
COMPONENT WIDTH PROVIDED	144"

SECTION 1014.3 EXCEPTION 1 COMMON PATH OF EGRESS TRAVEL

B OCCUPANCY WITH SPRINKLER SYSTEM	100'-0"

TABLE 1016.1 EXIT ACCESS TRAVEL DISTANCE

B OCCUPANCY WITH SPRINKLER SYSTEM	300'-0"

TABLE 1021.1 EXITS

REQUIRED (OCCUPANT LOAD OF 1-500)	2
PROVIDED	3

TABLE 1018.1 CORRIDOR FIRE RESISTANCE RATING

B OCCUPANCY WITH OCCUPANT LOAD GREATER THAN 30 (WITH SPRINKLER SYSTEM)	0-HOUR

ADDITIONAL REQUIREMENTS

1015.3 - BOILER AND FURNACE ROOMS OVER 500 s.f. AND EQUIPMENT EXCEEDS 400,000 BTU INPUT CAPACITY REQUIRES 2 EXITS.
1003.6 - THE PATH OF EGRESS TRAVEL ALONG A MEANS OF EGRESS SHALL NOT BE INTERRUPTED BY ANY BUILDING ELEMENT OTHER THAN A MEANS OF EGRESS COMPONENT.
1005.1 - MULTIPLE MEANS OF EGRESS SHALL BE SIZED SUCH THAT THE LOSS OF ANY ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY BY MORE THAN 50 PERCENT.
1015.2.1 - EXCEPTION 2 - IN AREAS WHERE 2 EXITS ARE REQUIRED, THE MINIMUM SEPARATION IS 1/3 OF THE MAXIMUM DIAGONAL OF THE AREA OR FLOOR MEASURED IN A STRAIGHT LINE BETWEEN EXITS OR EXIT ACCESS DOORWAYS.
1018.2 - THE MINIMUM CORRIDOR WIDTH IS 44 INCHES.
EXCEPTION 2 - THE MINIMUM CORRIDOR WIDTH IS 36 INCHES WHERE THE OCCUPANT LOAD IS LESS THAN 50.
1018.5 - CORRIDORS SHALL NOT SERVE AS SUPPLY, RETURN, EXHAUST, RELIEF OR VENTILATION AIR DUCTS OR PLENUMS.
1018.4 - EXCEPTION 2 - WHEN MORE THAN ONE EXIT IS REQUIRED, EXIT ACCESS SHALL BE ARRANGED SUCH THAT THERE ARE NO DEAD ENDS IN CORRIDORS MORE THAN 50 FEET.

CHAPTER 11: ACCESSIBILITY

SECTION 1106 PARKING

TOTAL STALLS	92
ACCESSIBLE STALLS REQUIRED	4
ACCESSIBLE STALLS PROVIDED	4
PERCENTAGE OF ACCESSIBLE STALLS	4.3%
VAN STALLS REQUIRED	1
VAN STALLS PROVIDED	1

CHAPTER 15: ROOFING

TABLE 1505 ROOFING CLASSIFICATIONS

MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION (VB)	C

DFCM APPROVAL STAMP

REFERENCE NOTES

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

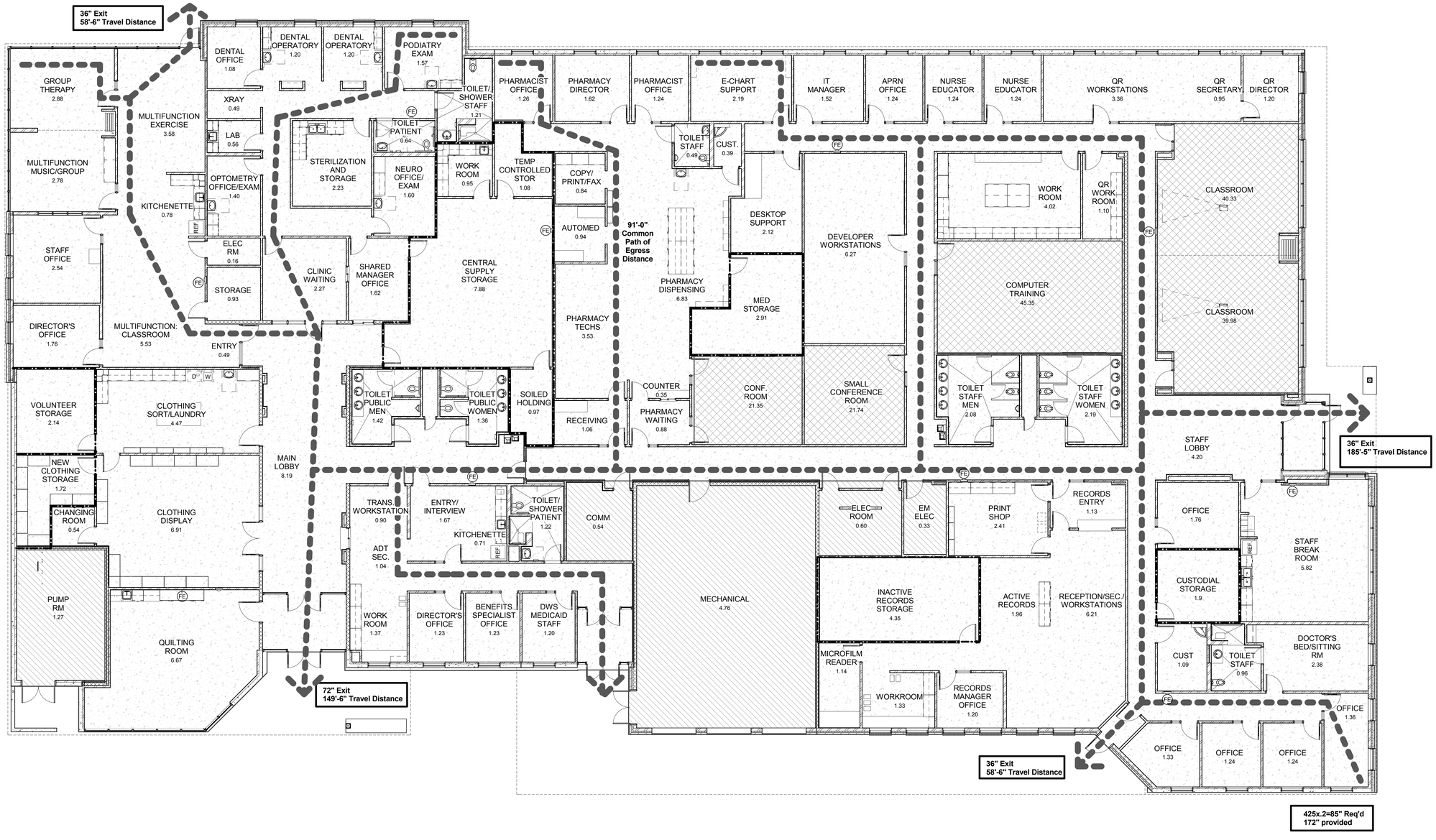
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	12" = 1'-0"

GENERAL INFO/CODE

G100

9/11/2012 9:33:20 AM



B1 LEVEL 1 LIFE SAFETY

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

Life Safty

- ASSEMBLY
- BUSINESS
- MECH

Minimum Plumbing Fixtures

Occupancy	Men's WC's	Women's WC's	Men's Lavatories	Women's Lavatories	Drinking Fountains
A	170/2=85 85/125=1	170/2=85 85/65=2	170/2=85 85/200=1	170/2=85 85/200=1	170/500=1
B	246/2= 123 50@25 = 2 73@50 = 2 1+2+2=5	246/2= 123 50@25 = 2 73@50 = 2 2+2+2=6	246/2=123 123-80=43 2+1=3	246/2=123 123-80=43 2+1=3	246/100=2.46
Required	5	6	3	3	3
Provided	6	6	9	9	4

Floor Area Allowed per Occupant

Name	Area	Occupant Number	No. of Occupants
ASSEMBLY	1196 SF	15	80
ASSEMBLY	688 SF	15	46
ASSEMBLY	647 SF	15	43
BUSINESS AREA	11367 SF	100	114
BUSINESS AREA	13191 SF	100	132
MECHANICAL AREA	2046 SF	300	7
MECHANICAL AREA	431 SF	300	1
	29565 SF		423

SCHEDULES

SCALE: N.T.S.

A1

9/11/2012 9:33:24 AM

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

LIFE SAFETY LEGEND

ONE-HOUR FIRE BARRIER

EXIT PATH

FIRE EXTINGUISHER

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

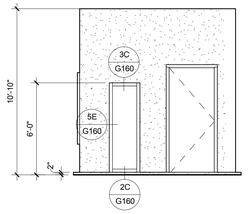
DATE	STATUS

	DATE	REVISION

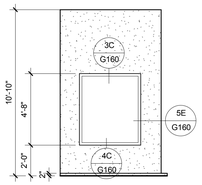
PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

LIFE SAFETY

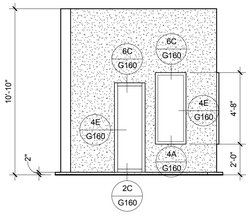
G101



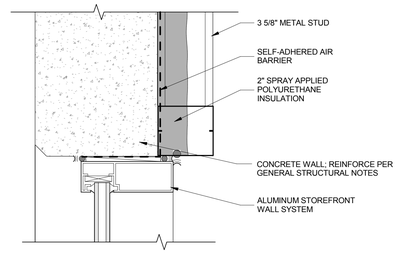
1E MOCK-UP ELEVATION 1
SCALE: 1/4" = 1'-0"



2E MOCK-UP ELEVATION 2
SCALE: 1/4" = 1'-0"

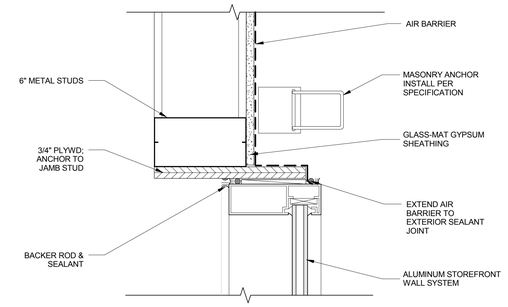


3E MOCK-UP ELEVATION 3
SCALE: 1/4" = 1'-0"



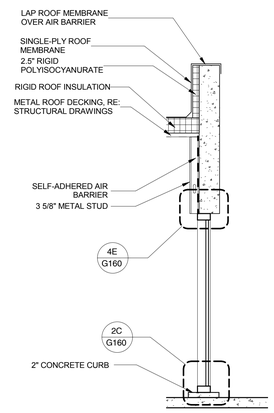
NOTE: THIS DETAIL TO REPLICATE THE CONDITIONS SHOWN IN DETAIL C3/A502

4E MOCK UP STOREFRONT JAMB AT CONC
SCALE: 3" = 1'-0"

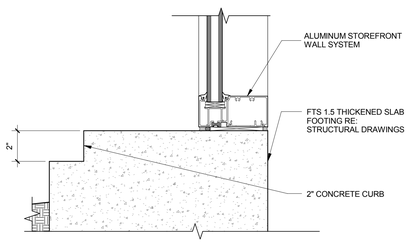


NOTE: THIS DETAIL TO REPLICATE THE CONDITIONS SHOWN IN DETAIL B1/A502

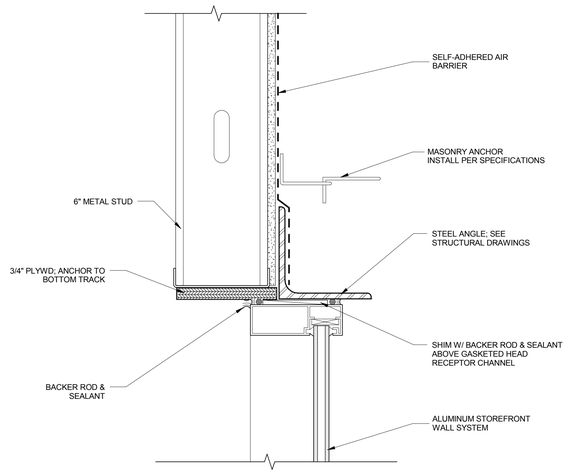
5E MOCK UP STOREFRONT JAMB AT VENEER
SCALE: 3" = 1'-0"



1C MOCK-UP SECTION 4
SCALE: 1/2" = 1'-0"

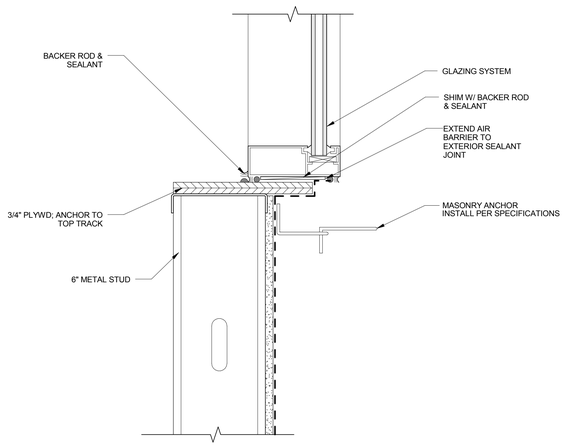


2C MOCK UP STOREFRONT BASE
SCALE: 3" = 1'-0"



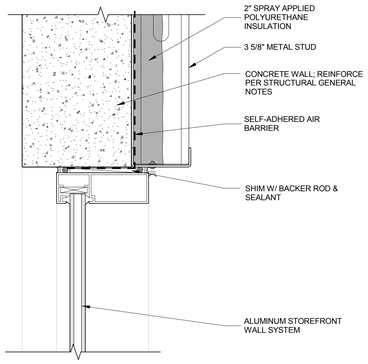
NOTE: THIS DETAIL TO REPLICATE THE CONDITIONS SHOWN IN DETAIL A2/A502

3C MOCK UP STOREFRONT HEAD AT VENEER
SCALE: 3" = 1'-0"



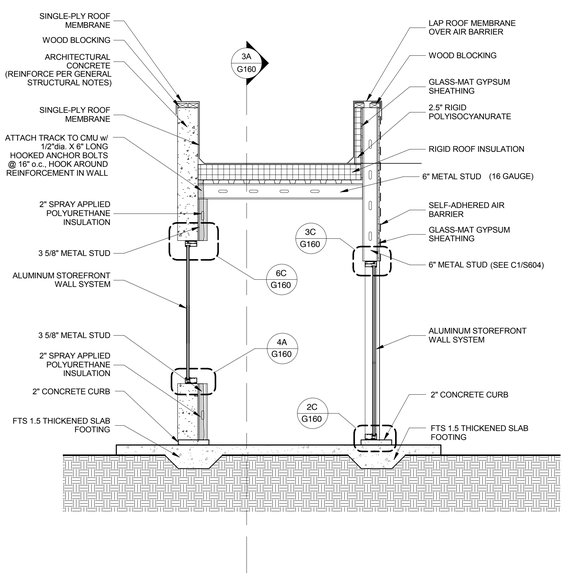
NOTE: THIS DETAIL TO REPLICATE THE CONDITIONS SHOWN IN DETAIL A3/A502

4C MOCK UP STOREFRONT SILL AT VENEER
SCALE: 3" = 1'-0"

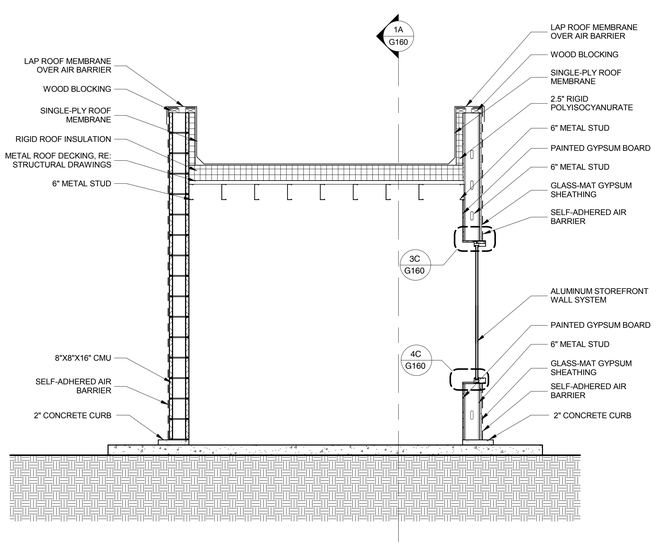


NOTE: THIS DETAIL TO REPLICATE THE CONDITIONS SHOWN IN DETAIL D1/A502

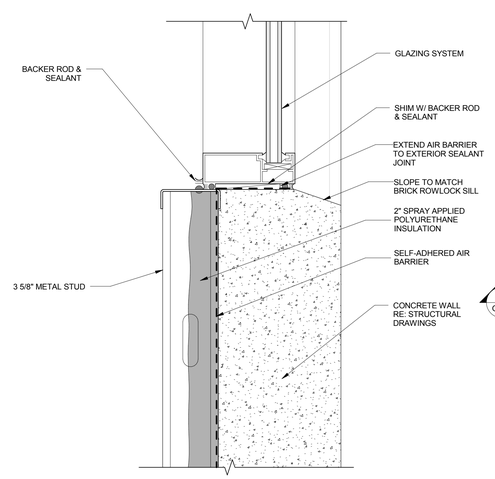
6C MOCK UP STOREFRONT HEAD AT CONC
SCALE: 3" = 1'-0"



1A MOCK-UP SECTION 1
SCALE: 1/2" = 1'-0"

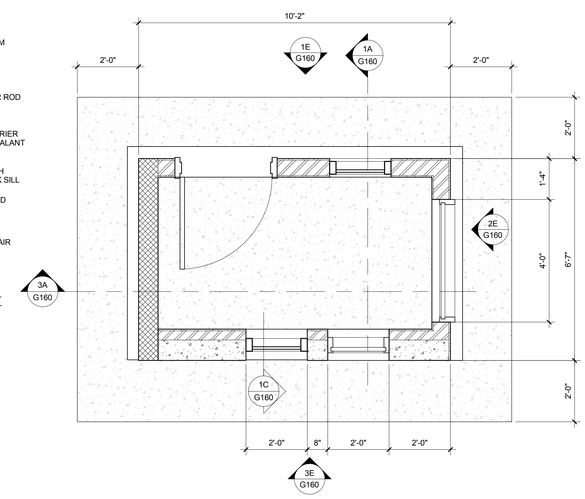


3A MOCK-UP SECTION 2
SCALE: 1/2" = 1'-0"



NOTE: THIS DETAIL TO REPLICATE THE CONDITIONS SHOWN IN DETAIL A4/A502

4A MOCK-UP STOREFRONT SILL AT CONC
SCALE: 3" = 1'-0"



6A MOCK-UP PLAN
SCALE: 1/2" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

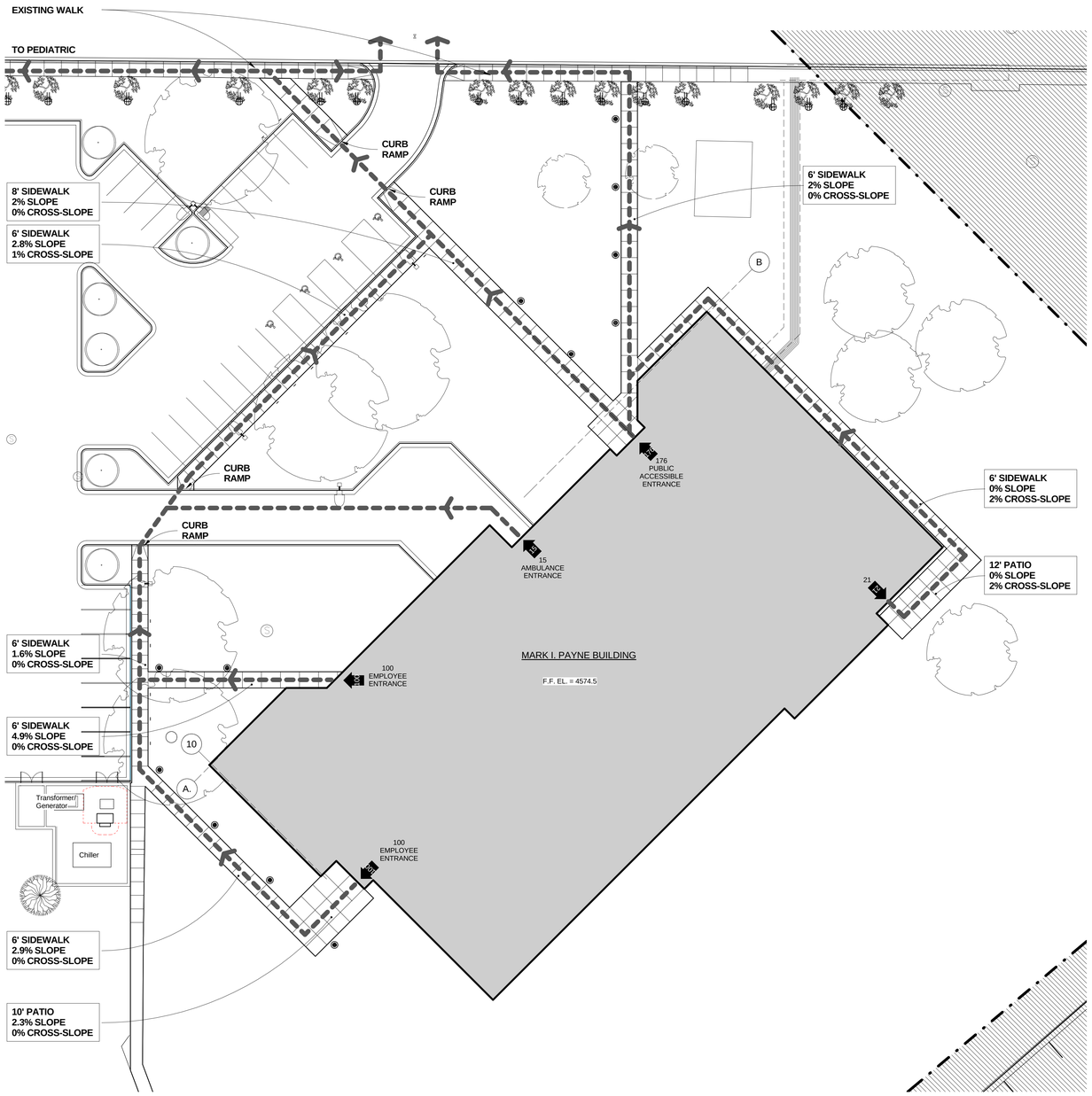
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

MOCK-UP PLANS, ELEVATIONS & DETAILS

G160

9/11/2012 9:33:28 AM



1 PAYNE SITE LIFE SAFETY

SCALE: 1" = 20'-0"

0" 10' 20' 40'

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

LEGEND

ACCESSIBLE EXIT DISCHARGE

ACCESS TO PUBLIC WAY

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

	DATE	REVISION

PROJECT NUMBER 11111

FILE USH-SITE

SITE LIFE SAFETY

GS100

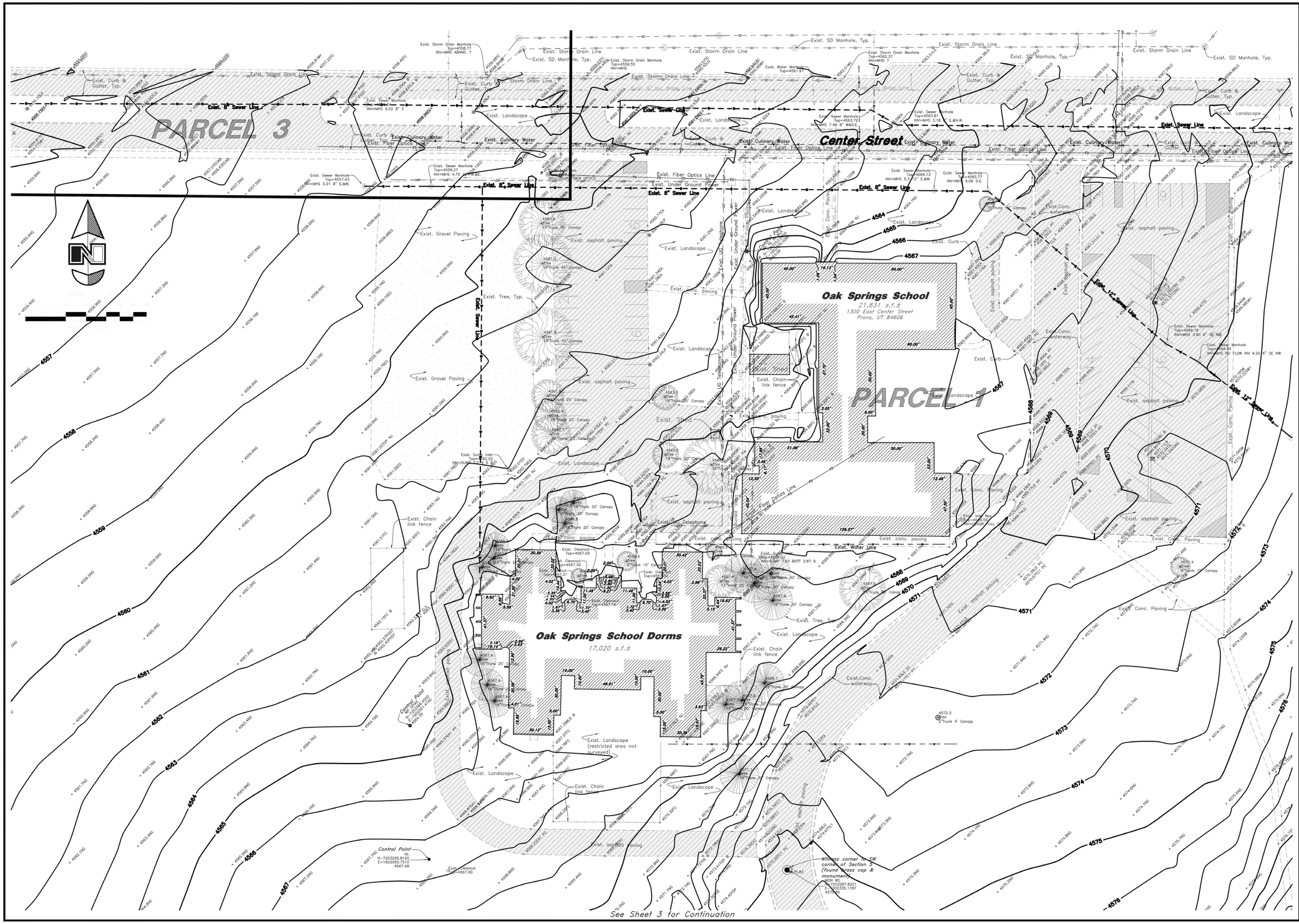
9/10/2012 2:54:34 PM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com



REV	DATE	DESCRIPTION

GREAT BASIN ENGINEERING
5746 SOUTH 1475 EAST OGDEN, UTAH 84403
MAIN (801)394-4515 S.L.C (801)521-0222 FAX (801)392-7544
WWW.GREATBASINENGINEERING.COM

ALTA/ACSM Land Title Survey

Utah State Hospital

A part of the North 1/2 of Section 9
T5N, R1W, SLB&M, U.S. Survey
Provo City, Utah County, Utah

27 Sept, 2011

SHEET NO.

11N714

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

SURVEY

V101

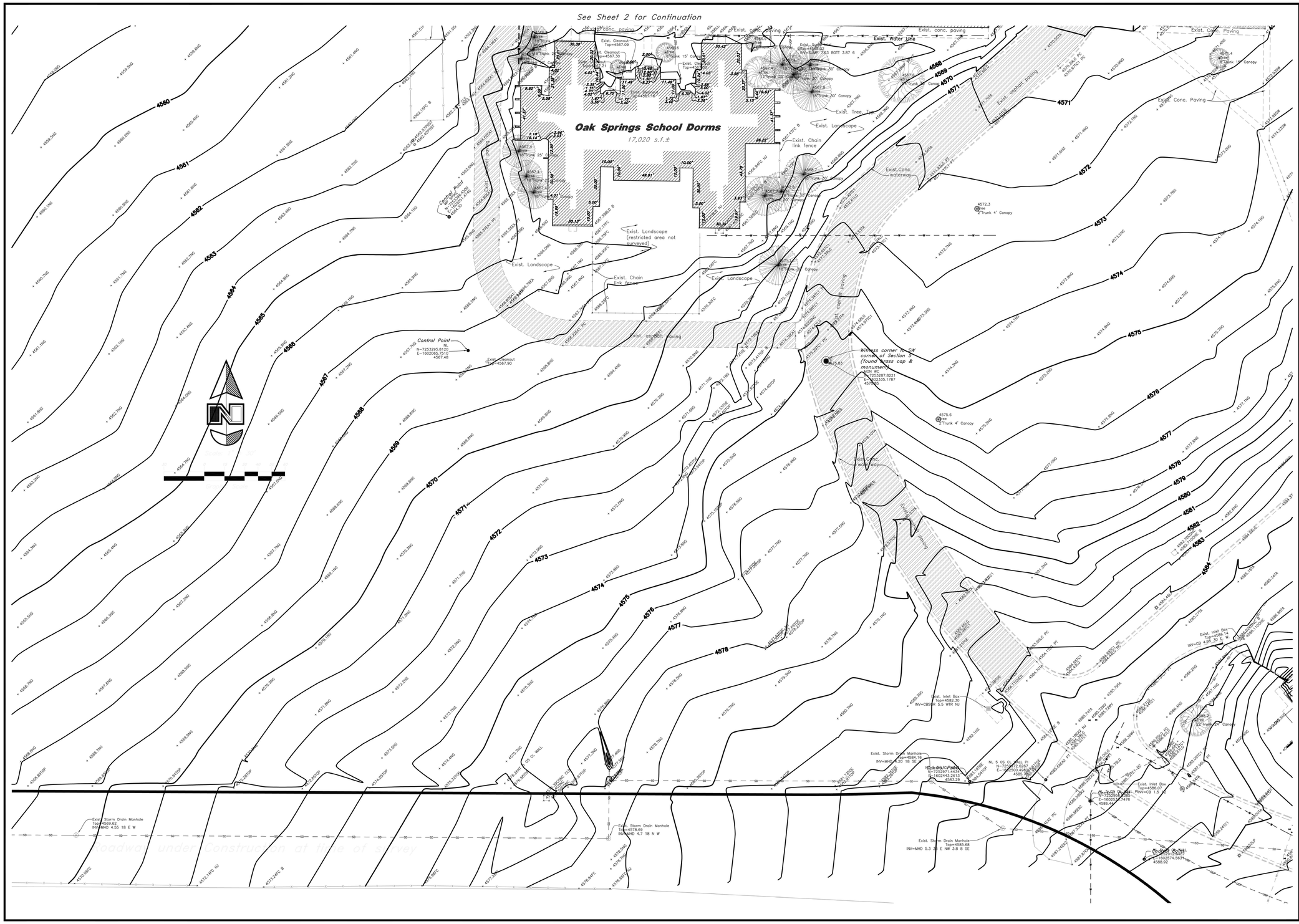
9/10/2012 2:55:59 PM

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

p 801-521-6186
f 801-539-1916
ffkr.com



REV	DATE	DESCRIPTION

GREAT BASIN ENGINEERING
5746 SOUTH 1475 EAST OGDEN, UTAH 84403
MAIN (801)394-4515 S.L.C. (801)521-0222 FAX (801)392-7544
WWW.GREATBASINENGINEERING.COM

ALTA/ACSM Land Title Survey

Utah State Hospital

A part of the North 1/2 of Section 9
T5N, R1W, SL&BM, U.S. Survey
Provo City, Utah county, Utah

27 Sept, 2011

SHEET NO.

11N714

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

DATE	REVISION

PROJECT NUMBER 11111

FILE USH-SITE

SURVEY

V102

9/10/2012 2:56:26 PM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

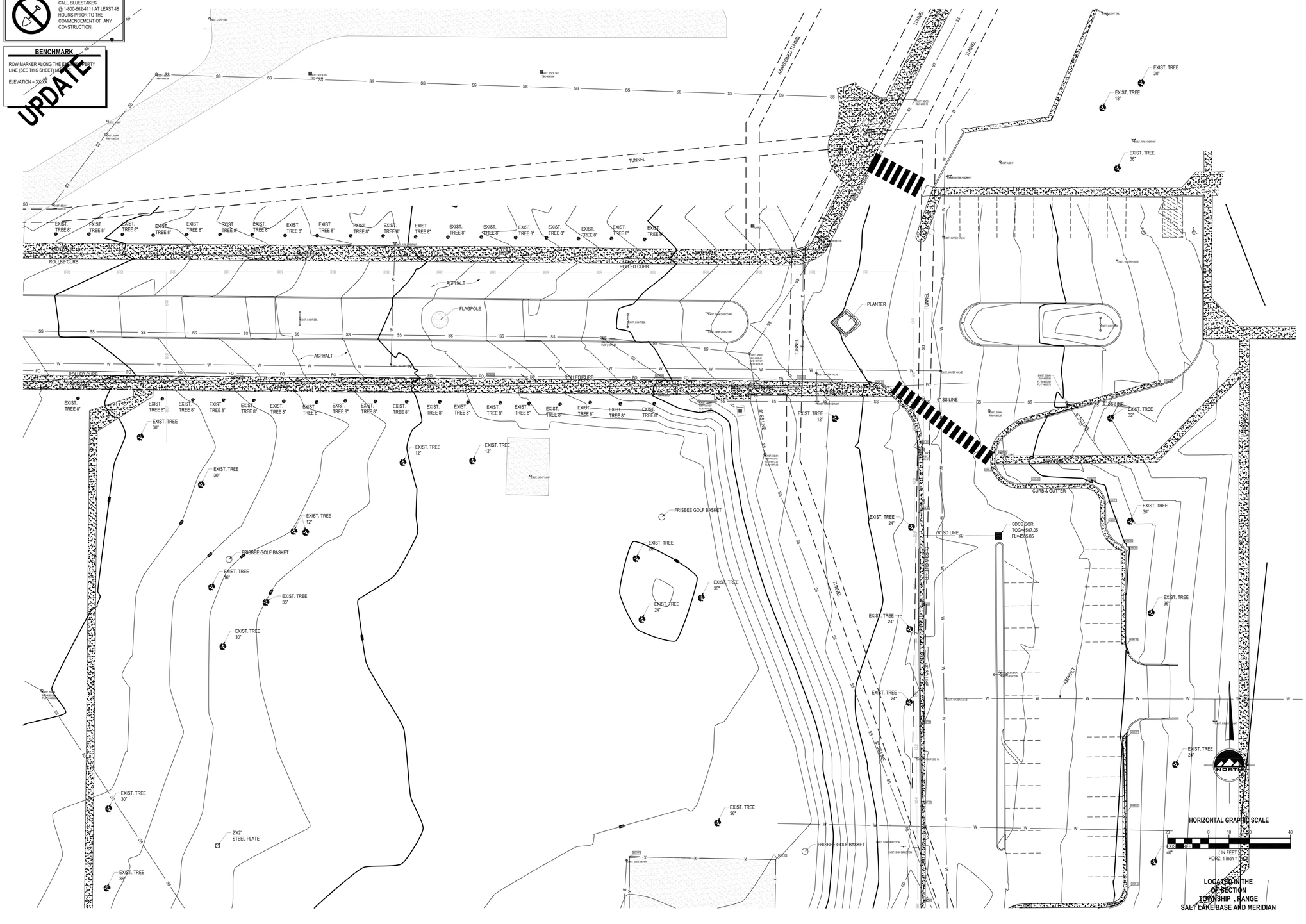
CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

ROW MARKER ALONG THE EAST PROPERTY LINE (SEE THIS SHEET) UPDATE

ELEVATION = XX.XX

UPDATE



ENSIGN

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529
Fax: 801.255.4449

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.590.0187

WWW.ENSIGNUTAH.COM

FOR:
CLIENT
CLIENT'S ADDRESS
CLIENT CITY STATE ZIP

CONTACT:
CLIENT CONTACT
PHONE: 801-000-0000
FAX:

PROJECT

STREET
CITY, UTAH

NO.	DATE	REVISION	BY
1		FOR REVIEW	
2			
3			
4			
5			
6			
7			
8			

DRAWING TITLE

PROJECT NUMBER	PRINT DATE
####	7/2/12
DRAWN BY	CHECKED BY
PROJECT MANAGER	

C-1

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

SURVEY

V103

9/10/2012 2:56:48 PM

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

CALL BLUESTAKES
(1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

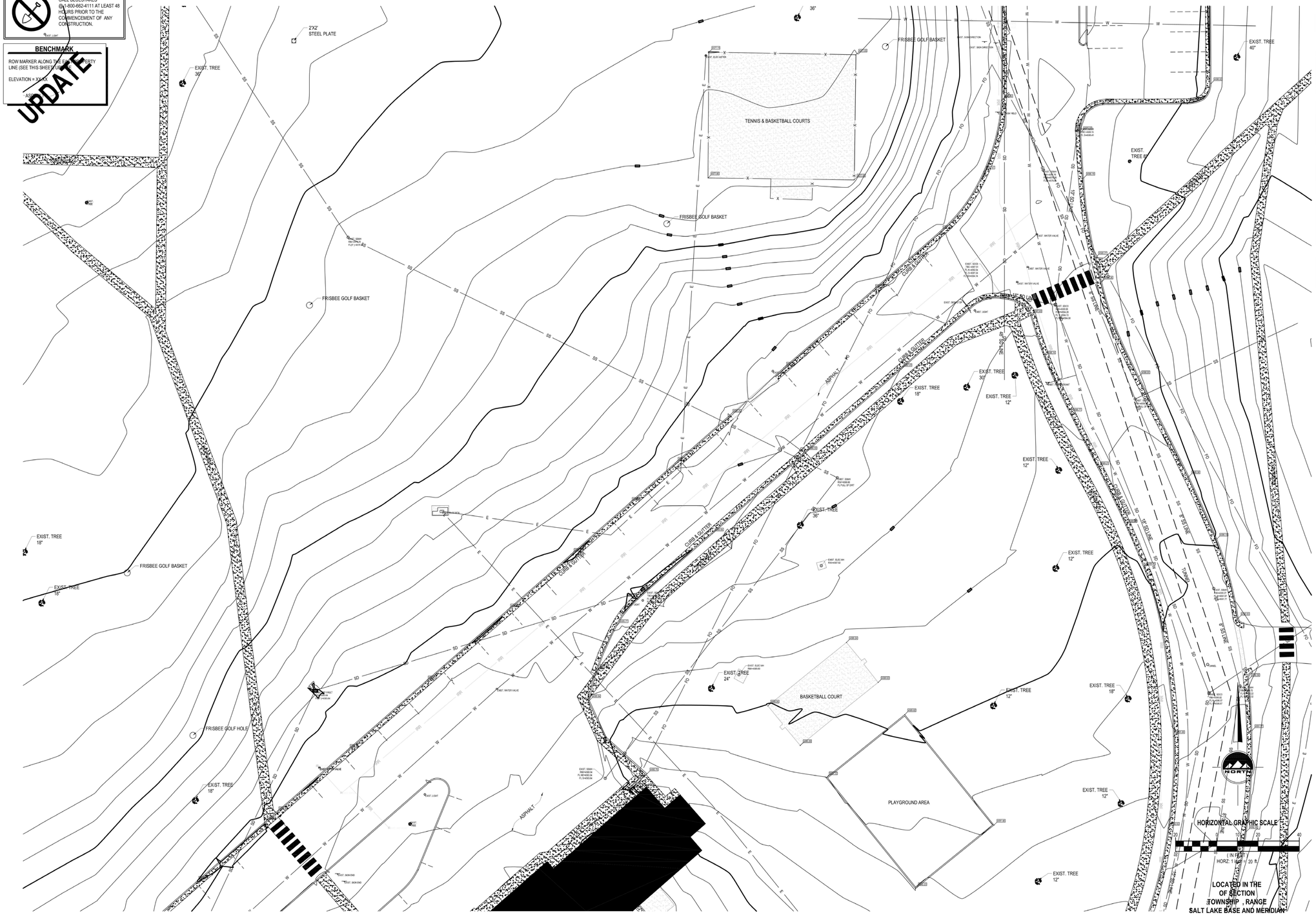
BENCHMARK

ROW MARKER ALONG THE EAST PROPERTY LINE (SEE THIS SHEET FOR LOCATION)

ELEVATION = XXXX

ASSUMED

UPDATE



ENSIGN

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529
Fax: 801.255.4449

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.590.0187

WWW.ENSIGNUTAH.COM

FOR:
CLIENT
CLIENT'S ADDRESS
CLIENT CITY STATE ZIP

CONTACT:
CLIENT CONTACT
PHONE: 801-000-0000
FAX:

PROJECT

STREET
CITY, UTAH

NO.	DATE	REVISION	BY
1		FOR REVEW	
2			
3			
4			
5			
6			
7			
8			

DRAWING TITLE

PROJECT NUMBER ####
PRINT DATE 7/2/12
DRAWN BY
CHECKED BY
PROJECT MANAGER

C-1

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

SURVEY

V104

9/10/2012 2:57:17 PM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

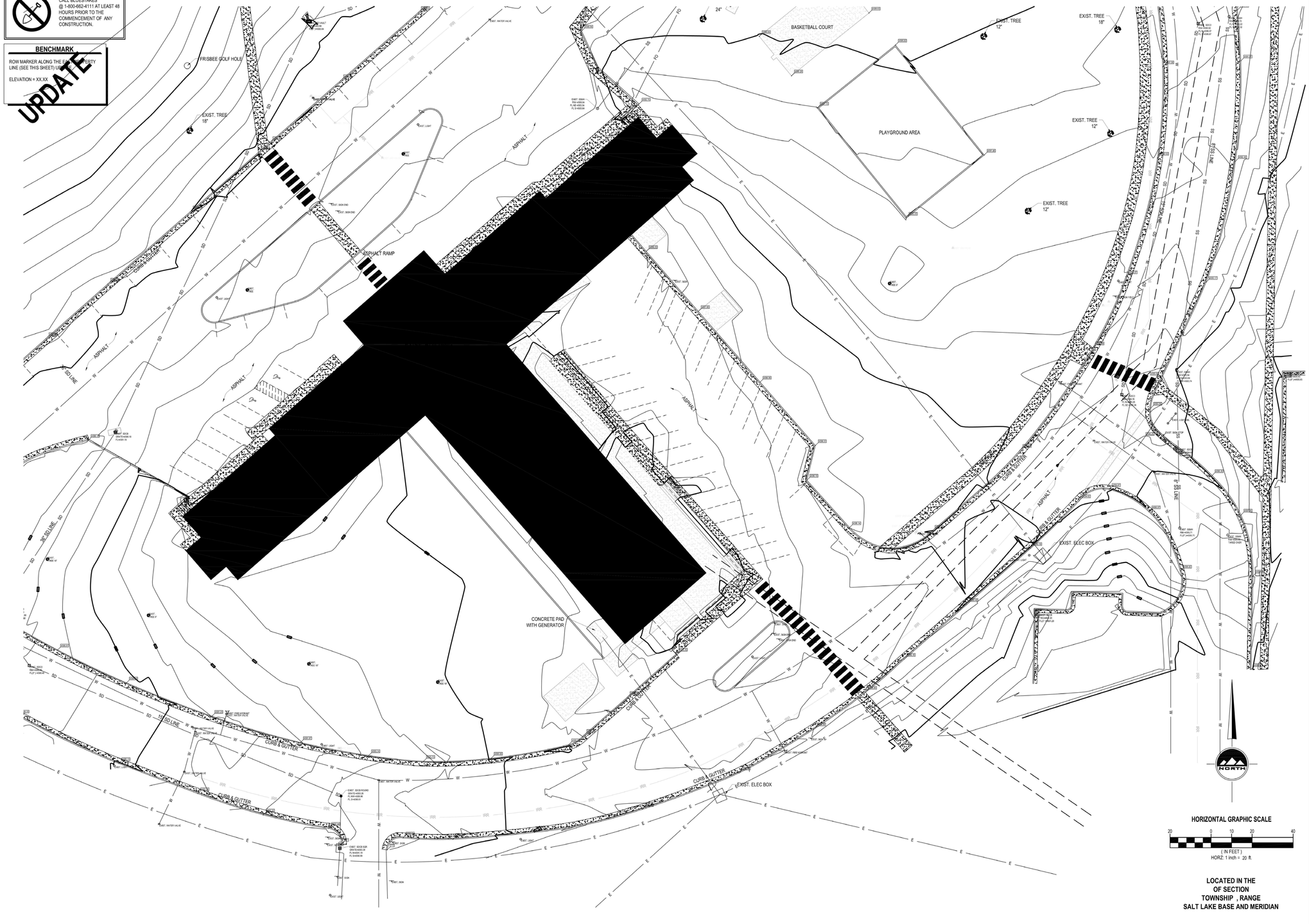
CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

ROW MARKER ALONG THE EAST PROPERTY LINE (SEE THIS SHEET) [illegible]

ELEVATION = XX.XX

UPDATE



LOCATED IN THE
OF SECTION
TOWNSHIP , RANGE
SALT LAKE BASE AND MERIDIAN

ENSIGN

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529
Fax: 801.255.4449

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.590.0187

WWW.ENSIGNUTAH.COM

FOR:
CLIENT
CLIENT'S ADDRESS
CLIENT CITY STATE ZIP

CONTACT:
CLIENT CONTACT
PHONE: 801-000-0000
FAX:

PROJECT

STREET
CITY, UTAH

NO.	DATE	REVISION	BY
1		FOR REVEIW	
2			
3			
4			
5			
6			
7			
8			

DRAWING TITLE

PROJECT NUMBER ####
PRINT DATE 7/2/12
DRAWN BY
CHECKED BY
PROJECT MANAGER

C-1

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

SURVEY

V105

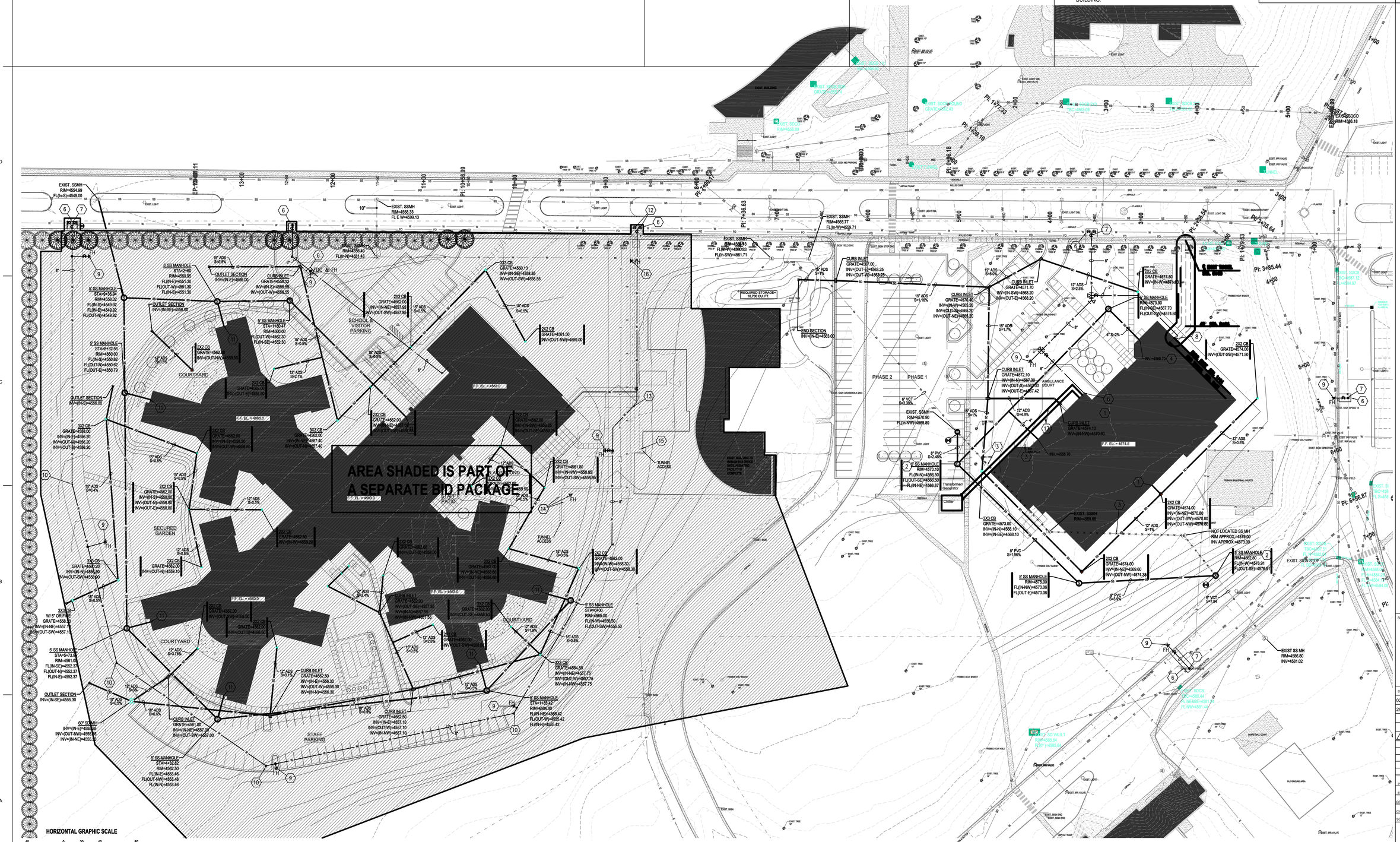
9/10/2012 2:57:36 PM

REFERENCE NOTES

12. RECONFIGURE WATER LINE CONNECTION TO EXISTING TUNNEL WITH GATE VALVE ON EACH SIDE OF VALVE.
13. OFFSET WATER MAIN TO EXISTING TUNNEL AND CONNECT.
14. EXISTING FDC, PIV, AND FH TO BE REMOVED. CAP IN TUNNEL AT EXISTING YOUTH SERVICES TUNNEL.
15. CAP ALL UTILITIES IN TUNNEL NOT REQUIRED FOR YOUTH SERVICES BUILDING.
16. CONNECT TO 8" WATER IN TUNNEL AND EXTEND 6" LINE TO FIRE HYDRANT OUTSIDE TUNNEL.
17. CHILLED WATER SUPPLY AND RETURN TO CHILLER. SEE MECHANICAL SITE PLAN.

1. ROOF DRAIN CONNECTION. SEE PLUMBING PLAN.
2. FIELD LOCATE EXISTING 6" VCT SANITARY SEWER MAIN. CONSTRUCT NEW MANHOLE TO EXISTING MAIN.
3. REMOVE EXISTING UTILITY AND CONCRETE STRUCTURES.
4. SEE PLUMBING PLAN AND COORDINATE INVERT ELEVATION.
5. SEE PLUMBING PLAN FOR FIRE PROTECTION MAIN AND SPECIAL REQUIREMENTS.
6. SAWCUT PAVEMENT AND REPAIR AND REPLACE WITH EQUIVALENT BASE AND ASPHALT.
7. TAP WATER LINE OR PROVIDE CUT-IN TEE DEPENDING ON SIZE OF LATERAL. SEE DETAILS. PROVIDE GATE VALVE AT CONNECTION.
8. WATER SERVICE TO BUILDING. ENTER TUNNEL AND EXTEND TO MECHANICAL ROOM. SEE MECHANICAL FOR CONTINUATION.
9. FIRE HYDRANT, TYPICAL. SEE DETAIL.
10. THRUST BLOCK ALL FITTINGS, TYPICAL. SEE DETAIL.
11. SEE PLUMBING PLAN FOR SIZE AND INVERT, TYPICAL PEDIATRICS BUILDING.

DFCM APPROVAL STAMP



LOCATED IN THE
OF SECTION
TOWNSHIP , RANGE
SALT LAKE BASE AND MERIDIAN

OVERALL SITE UTILITY PLAN

SCALE: 1" = 40'-0

TRUE PLAN

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
1355 South 800 East
Salt Lake City, UT 84111
801.539.3199 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
02.APR.2012	DD 100%
29.JUN.2012	REVIEW SET

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY EJ,TC,MB,RG
CHECKED BY JB,KE,DB,SS
SCALE 1" = 40'

06/26/2012 12:35:00 PM

OVERALL SITE UTILITY PLAN

C100

REFERENCE NOTES

LEGEND

- TEMPORARY SAG INLET PROTECTION PER DETAIL "A"
- SF — TEMPORARY SILT FENCE PER DETAIL "B"
- PROPOSED CONCRETE
- EXISTING CONCRETE
- LOD — LIMITS OF DISTURBANCE
- GRADE BREAK
- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- PROPOSED 5' CONTOUR
- PROPOSED 1' CONTOUR

6. NOT ALL POSSIBLE BMP'S HAVE BEEN SHOWN. CONTRACTOR IS RESPONSIBLE TO APPLY CORRECT MEASURES TO PREVENT POLLUTION OF STORM WATER PER PROJECT SWPPP.
7. PLAN LOCATIONS SHOWN FOR BMP'S ARE APPROXIMATE. ACTUAL LOCATIONS AND CONFIGURATIONS SHALL BE FIELD-DETERMINED BY THE OWNER/OPERATOR.
8. NOT ALL BMP'S SHOWN CAN OR SHOULD BE IMPLEMENTED SIMULTANEOUSLY AND/OR FOR THE DURATION OF CONSTRUCTION. SEE SWPPP FOR BMP IMPLEMENTATION SCHEDULE.
9. EXISTING TOPSOIL IS TO BE HARVESTED WHEN GROUND IS CLEARED. TOPSOIL SHALL THEN BE STOCKPILED ON-SITE FOR USE IN AREAS NOT OTHERWISE TO BE LANDSCAPED, TO ACCELERATE REVEGETATION AND STABILIZATION. AS AN ALTERNATE TO STOCKPILING TOPSOIL ONSITE, OWNER/OPERATOR MAY IMPORT TOPSOIL TO AREAS TO BE STABILIZED FROM OFFSITE.
10. CONTRACTOR TO REMOVE PAVEMENT BEFORE INSTALLING SILT FENCE ONLY IN AREAS WHERE SILT FENCE IS REQUIRED TO CROSS THE EXISTING ASPHALT.

SWPPP NOTES

1. THIS PLAN IS DESIGNED AS A FIRST APPRAISAL OF NECESSARY MEANS TO PROTECT THE WATERS OF THE STATE FROM POTENTIAL POLLUTION. IT IS THE RESPONSIBILITY OF THE OWNER/OPERATOR TO ADD WARRANTED BEST MANAGEMENT PRACTICES (BMP'S) AS NECESSARY, MODIFY THOSE SHOWN AS APPROPRIATE, AND DELETE FROM THE PROJECT THOSE FOUND TO BE UNNECESSARY. FEDERAL AND STATE LAW ALLOWS THESE UPDATES TO BE MADE BY THE OWNER/OPERATOR ONSITE AND RECORDED BY THE OWNER/OPERATOR ON THE COPY OF THE SWPPP KEPT ONSITE.
2. ALL WORK SHALL COMPLY WITH CURRENT APWA PLANS AND SPECIFICATIONS, AND WITH CITY STANDARD PLANS AND SPECIFICATIONS.
3. DISTURBED LAND SHALL BE KEPT TO A MINIMUM - NO SITE CLEARING MORE THAN 14 CALENDAR DAYS AHEAD OF CONSTRUCTION IN ANY GIVEN AREA SHALL BE ALLOWED.
4. RESEED DISTURBED LAND WITH NATIVE GRASS MIXTURE WITHIN 14 CALENDAR DAYS OF ACHIEVEMENT OF FINISH GRADE TO STABILIZE SOILS IF LAND IS NOT TO BE RE-WORKED WITHIN 14 CALENDAR DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES AT THAT LOCATION.
5. DETAILS SHOWN ARE TO BE EMPLOYED TO PROTECT RUNOFF AS APPROPRIATE DURING CONSTRUCTION - NOT ALL DETAILS ARE NECESSARY AT ALL PHASES OF THE PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/OPERATOR TO USE APPROPRIATE BEST MANAGEMENT PRACTICES.

DFCM APPROVAL STAMP

SWPPP PLAN

SCALE: 1" = 40'-0

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
1335 South 500 West Ph: 801.539.3159 T
Salt Lake City, UT 84111 801.539.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
02.APR.2012	DD 100%
29.JUN.2012	REVIEW SET

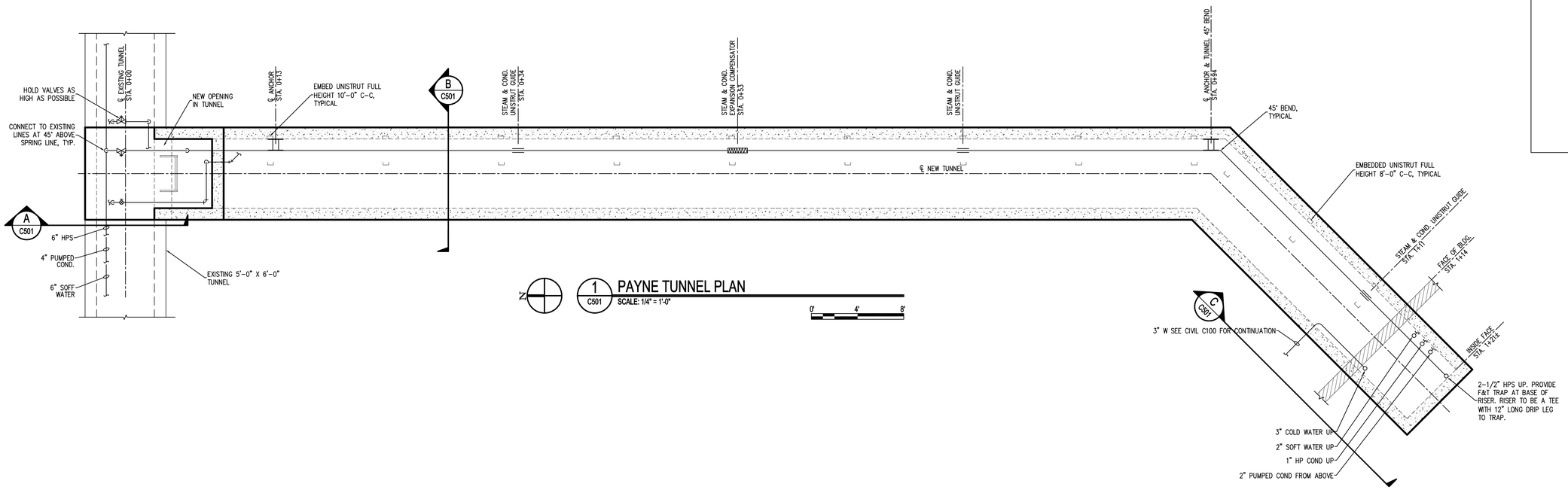
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	EJ,TC,MB,RG
CHECKED BY	JB,KE,DB,SS
SCALE	1" = 40'

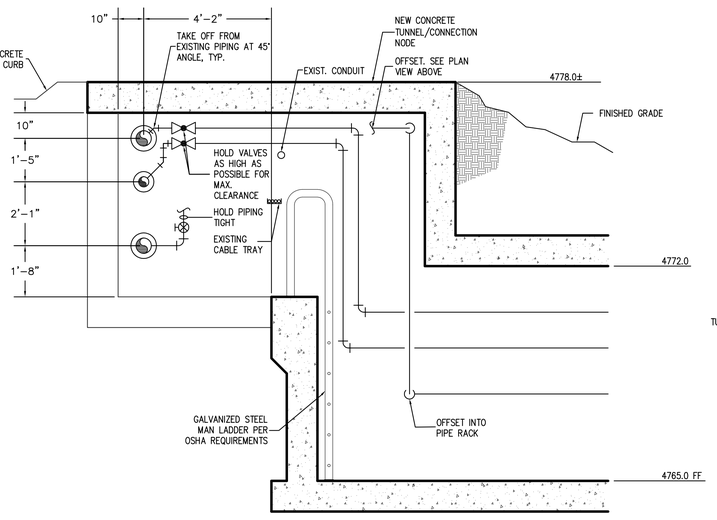
SWPPP PLAN

C200

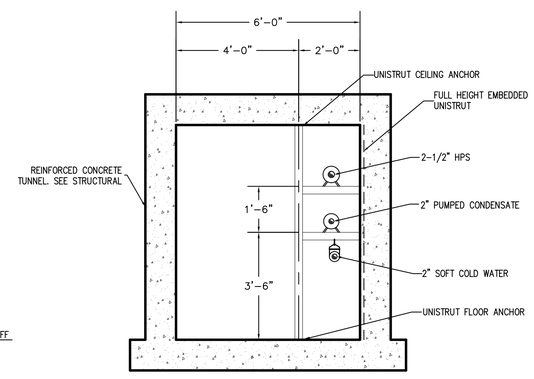
06/26/2012 12:35:00 PM



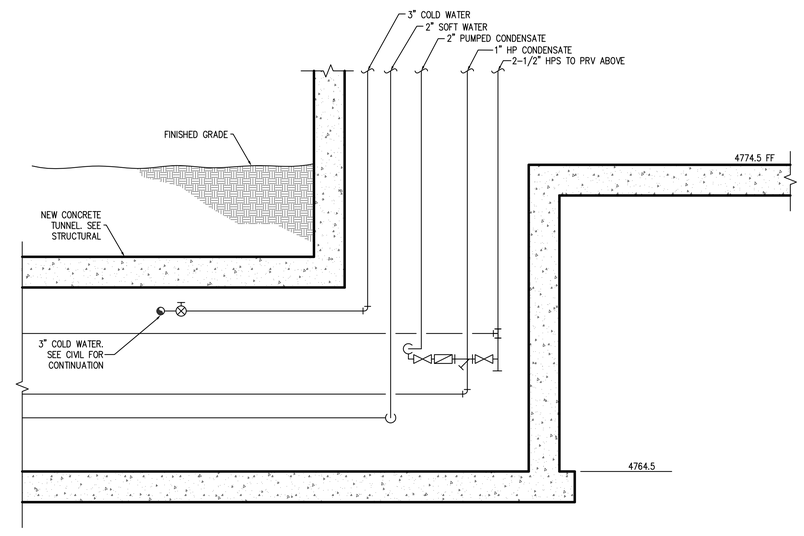
1 C501 PAYNE TUNNEL PLAN
SCALE: 1/4" = 1'-0"



A C501 PAYNE TUNNEL CONNECTION NODE SECTION
SCALE: 1/2" = 1'-0"



B C501 PAYNE TUNNEL SECTION
SCALE: 1/2" = 1'-0"



C C501 PAYNE TUNNEL BUILDING CONNECTION SECTION
SCALE: 1/2" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
SALT LAKE CITY • Logan City • Logan • St. George • Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
02.APR.2012	DD 100%
29.JUN.2012	REVIEW SET

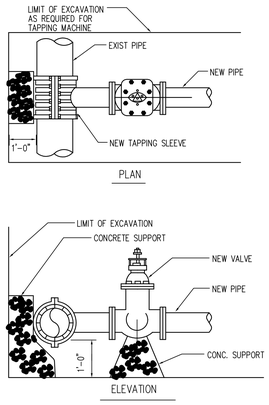
△	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY EJ,TC,MB,RG
CHECKED BY JB,KE,DB,SS
SCALE 1/4" = 1'-0"

DETAILS AND SECTIONS

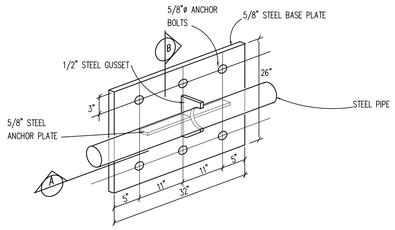
C501

06/26/2012 12:35:00 PM



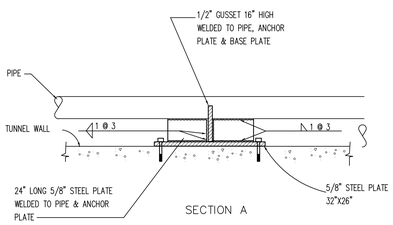
5 / C502 TAPPING SLEEVE & VALVE INSTALLATION DETAIL

NO SCALE



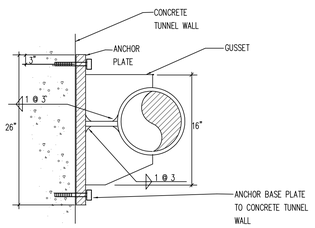
6 / C502 STEEL GUSSET ANCHOR DETAIL

NO SCALE



A / C502 ANCHOR SECTION (TUNNEL)

NO SCALE



B / C502 ANCHOR SECTION (TUNNEL)

NO SCALE

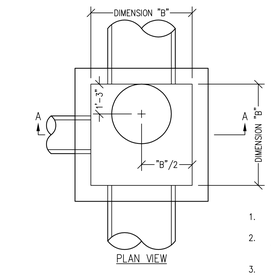
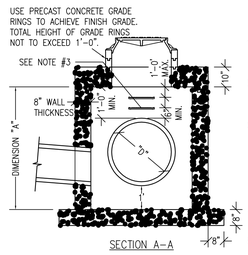


TABLE A	
PIPE SIZE	MINIMUM DIMENSION "B"
15"	3'-6"
18"	3'-9"
21"	4'-0"
24"	4'-0"
27"	4'-0"
30"	4'-3"
33"	4'-6"
36"	4'-9"
42"	5'-3"
48"	6'-3"

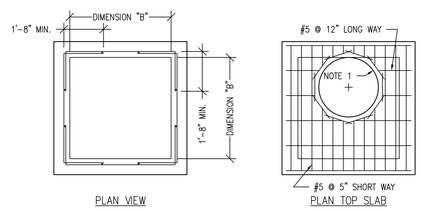


NOTES

1. MINIMUM DIMENSION "B" IS 3'-6".
2. MIN. 1'c OF CONCRETE SHALL BE 3000 PSI AT 28 DAYS.
3. LADDER RUNGS ARE REQUIRED IN BOXES OVER 4'-0" DEEP. BOTTOM RUNGS SHALL BE LOCATED 6" ABOVE PIPE. SEE SHEET ST-SD-210.
4. MATERIALS, CONSTRUCTION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
5. ALL CONCRETE SHALL BE CLASS 4000 PER SECTION 03304 OF A.P.W.A STANDARD SPECIFICATIONS.
6. A UNIT CLEAN OUT BOX SHALL INCLUDE MANHOLE COVER, FRAME, MANHOLE RUNGS IF REQUIRED, ADJUSTMENT OF MANHOLE TO GRADE, GRADE ADJUSTMENT W/ CONCRETE COLLAR, AND BOX COMPLETE. FOR CONCRETE GRADE RING ADJUSTMENT SEE ST-SD-010.
7. SEE SHEET ST-SD-207 FOR BAR INSTALLATION.
8. SEE SHEET ST-SD-210 FOR MANHOLE STEP DETAIL.

3 / C502 STORM DRAIN CLEAN OUT BOX DETAIL

NO SCALE



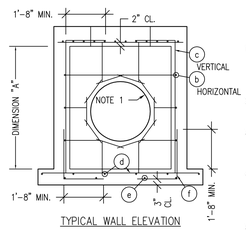


TABLE B

DIMENSION		BAR SIZE AND SPACING				
A	B*	b	c	d	e	f
2'	3' TO 8'	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"
3'	3' TO 8'	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"
4'	3' TO 8'	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"
5'	3' TO 8'	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"	#5 @ 18"

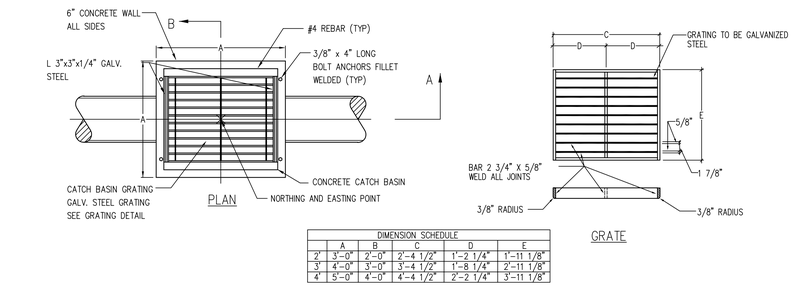
* FOR DIMENSION "B" SEE TABLE A

NOTES

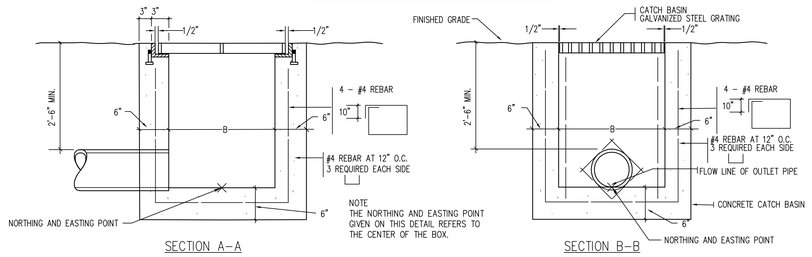
1. BARS USED AROUND OPENINGS MUST BE THE SAME SIZE AS THE LARGEST SIZE BAR IN ADJACENT WALL OR SLAB.
2. MINIMUM EMBEDMENT LENGTH FOR ALL BARS IS 1'-8".
3. ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE f = 60,000 psi (fs = 24,000 psi)
4. FIELD CUT OR BEND REINFORCING STEEL AS NECESSARY TO CLEAR PIPE(S) AND MAINTAIN 2" MINIMUM CLEARANCE.
5. SEE SHEET ST-SD-206 FOR DIMENSIONS.
6. SEE SHEET ST-SD-210 FOR MANHOLE STEP DETAIL.
7. MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
8. ALL BOXES LOCATED UNDER STREET PAVEMENT SHALL BE CONSTRUCTED WITH EPOXY COATED STEEL BARS.

4 / C502 STORM DRAIN CLEAN OUT BOX – BAR INSTALLATION

NO SCALE

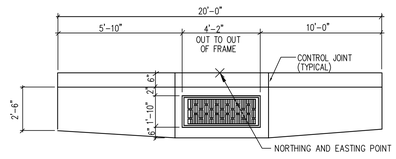


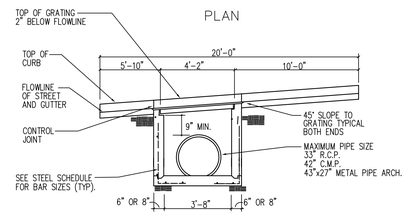
DIMENSION SCHEDULE					
	A	B	C	D	E
2'	3'-0"	2'-0"	2'-4 1/2"	1'-2 1/4"	1'-11 1/8"
3'	4'-0"	3'-0"	3'-4 1/2"	1'-8 1/4"	2'-11 1/8"
4'	5'-0"	4'-0"	4'-4 1/2"	2'-2 1/4"	3'-11 1/8"



1 / C502 2', 3', & 4' CATCH BASIN DETAIL

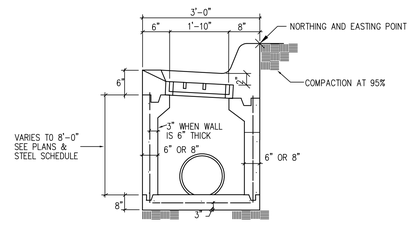
NO SCALE

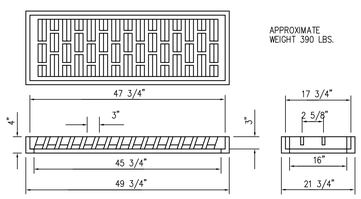




STEEL SCHEDULE			WALL THICKNESS
HEIGHT	VERT. STEEL	HORIZ. STEEL	
0'– 4'	#3 AT 12" O.C.	#3 AT 12" O.C.	6" WALL
4'– 6'	#4 AT 12" O.C.	#4 AT 12" O.C.	6" WALL
6'– 8'	#5 AT 12" O.C.	#4 AT 12" O.C.	8" WALL
8'– 10'	#5 AT 12" O.C.	#4 AT 12" O.C.	8" WALL
10'– 12'	#5 AT 12" O.C.	#4 AT 12" O.C.	8" WALL
12'– 14'	#5 AT 12" O.C.	#4 AT 12" O.C.	8" WALL
14'– 16'	#5 AT 12" O.C.	#4 AT 12" O.C.	8" WALL
16'–0" OR DEEPER, CHECK WITH ENGINEER			

NOTE: INSIDE FACE BARS TO BE STAGGERED WITH OUTSIDE FACE BARS.





2 / C502 CURB AND GUTTER INLET BOX

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.532.1949 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
02.APR.2012	DD 100%
29.JUN.2012	REVIEW SET

DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY EJ,TC,MB,RG
CHECKED BY JB,KE,DB,SS
SCALE NO SCALE

DETAILS

C502

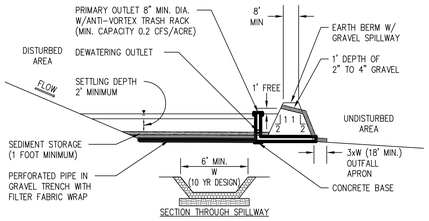
06/26/2012 12:35:00 PM

INLET PROTECTION

SEE INDIVIDUAL BMP INFORMATION SHEETS FOR INSTRUCTIONS FOR CONSTRUCTION OF STRAW BALE BARRIER AND SILT FENCE.

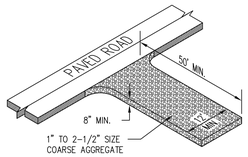
NOTES:
1. RECOMMENDED MAXIMUM CONTRIBUTING DRAINAGE AREA OF ONE ACRE.
2. LIMITED TO INLETS LOCATED IN OPEN UNPAVED AREAS.
3. REQUIRES SHALLOW SLOPES ADJACENT TO INLET.
4. PROVIDE UPGRADIENT SEDIMENT CONTROLS, SUCH AS DIVERSION DIKE DURING CONSTRUCTION OF INLET.
5. WHEN CONSTRUCTION OF INLET IS COMPLETE. ERECT STRAW BALE BARRIER OR SILT FENCE SURROUNDING PERIMETER OF INLET. FOLLOW INSTRUCTIONS AND GUIDELINES ON INDIVIDUAL BMP INFORMATION SHEETS FOR STRAW BALE BARRIER AND SILT FENCE CONSTRUCTION.
6. INSPECT INLET PROTECTION FOLLOWING STORM EVENT AND AT A MINIMUM OF ONCE MONTHLY.
7. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 4 INCHES IN DEPTH.
8. REPAIR OR REALIGN BARRIER/FENCE AS NEEDED.
9. LOOK FOR BYPASSING OR UNDERCUTTING AND RECOMPACT SOIL AROUND BARRIER/FENCE AS REQUIRED.

5 / C504 INLET PROTECTION – SILT FENCE OR STRAW BALE
NO SCALE



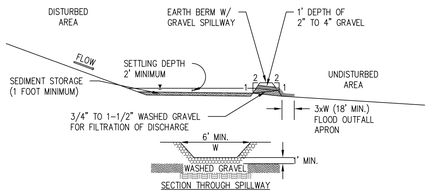
NOTES:
1. SHOULD BE SIZED BASED ON ANTICIPATED RUNOFF, SEDIMENT LOADING AND DRAINAGE AREA SIZE.
2. MAY REQUIRE SILT FENCE AT OUTLET FOR ENTRAPMENT OF VERY FINE SILTS AND CLAYS.
3. MAY REQUIRE SAFETY FENCING TO PREVENT PUBLIC ACCESS.
4. HEIGHT RESTRICTIONS FOR EMBANKMENT REGULATED BY UTAH DIVISION OF DAM SAFETY.
5. DESIGN BASIN FOR SITE SPECIFIC LOCATION, MAINTAIN EFFECTIVE FLOW LENGTH 2 TIMES WIDTH.
6. EXCAVATE BASIN OR CONSTRUCT COMPACTED BERM CONTAINMENT, ENSURE NO DOWN GRADIENT HAZARD IF FAILURE SHOULD OCCUR. (PROVIDE MINIMUM OF 67 CY. PER ACRE OF DRAINAGE AREA).
7. CONSTRUCT DEWATERING AND OUTFALL STRUCTURE AND EMERGENCY SPILLWAY WITH APRON.
8. INSPECT AFTER EACH RAINFALL EVENT AND AT A MINIMUM OF MONTHLY.
9. REPAIR ANY DAMAGE TO BERM, SPILLWAY OR SIDEWALLS.
10. REMOVE ACCUMULATED SEDIMENT AS IT REACHES 2/3 HEIGHT OF AVAILABLE STORAGE.
11. CHECK OUTLET FOR SEDIMENTATION/EROSION OF DOWN GRADIENT AREA AND REMEDIATE AS NECESSARY. INSTALL SILT FENCE IF SEDIMENTATION APPARENT.

3 / C504 SEDIMENT BASIN
NO SCALE



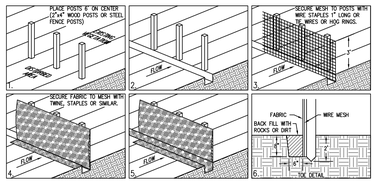
NOTES:
1. CLEAR AND GRUB AREA AND GRADE TO PROVIDE MAXIMUM SLOPE OF 2%.
2. COMPACT SUB GRADE AND PLACE FILTER FABRIC IF DESIRED (RECOMMENDED FOR ENTRANCES TO REMAIN IN USE FOR MORE THAN 3 MONTHS).
3. PLACE COARSE AGGREGATE, 1 TO 2-1/2 INCHES IN SIZE, TO A MINIMUM DEPTH OF 8 INCHES.
4. INSPECT DAILY FOR LOSS OF GRAVEL OR SEDIMENT BUILD UP.
5. INSPECT ADJACENT ROADWAY FOR SEDIMENT DEPOSIT AND CLEAN BY SWEEPING OR SHOVELING.
6. REPAIR ENTRANCE AND REPLACE GRAVEL AS REQUIRED TO MAINTAIN CONTROL IN GOOD WORKING CONDITION.
7. EXPAND STABILIZED AREA AS REQUIRED TO ACCOMMODATE TRAFFIC AND PREVENT EROSION AT DRIVEWAY.

1 / C504 STABILIZED CONSTRUCTION ENTRANCE
NO SCALE



NOTES:
1. SHOULD BE SIZED BASED ON ANTICIPATED RUNOFF, SEDIMENT LOADING AND DRAINAGE AREA SIZE.
2. MAY REQUIRE SILT FENCE AT OUTLET FOR ENTRAPMENT OF VERY FINE SILTS AND CLAYS.
3. DESIGN BASIN FOR SITE SPECIFIC LOCATION.
4. EXCAVATE BASIN OR CONSTRUCT COMPACTED BERM CONTAINMENT
5. CONSTRUCT OUTFALL SPILLWAY WITH APRON.
6. PROVIDE DOWN STREAM SILT FENCE IF NECESSARY.
7. INSPECT AFTER EACH RAINFALL EVENT AND A MINIMUM OF MONTHLY.
8. REPAIR ANY DAMAGE TO BERM, SPILLWAY OR SIDEWALLS.
9. REMOVE ACCUMULATED SEDIMENT AS IT REACHES 2/3 HEIGHT OF AVAILABLE STORAGE.
10. CHECK OUTLET FOR SEDIMENTATION/EROSION OF DOWN GRADIENT AREA AND REMEDIATE AS NECESSARY. INSTALL SILT FENCE IF SEDIMENTATION APPARENT.

4 / C504 SEDIMENT TRAP
NO SCALE



NOTES:
1. PLACE POSTS 6 FOOT ON CENTER ALONG CONTOUR (OR USE PRE ASSEMBLED UNIT) AND DRIVE 2 FEET MINIMUM INTO GROUND. EXCAVATE AN ANCHOR TRENCH IMMEDIATELY UPGRADIENT OF POSTS.
2. SECURE WIRE MESH (14 GAGE MIN. WITH 6 INCH OPENINGS) TO UP SLOPE SIDE OF POSTS. ATTACH WITH HEAVY DUTY WIRE STAPLES 1 INCH LONG, TIE WIRES OR HOG RINGS.
3. CUT FABRIC TO REQUIRED WIDTH, UNROLL ALONG LENGTH OF BARRIER AND DRAPE OVER BARRIER. SECURE FABRIC TO MESH WITH TWINE, STAPLES, OR SIMILAR, WITH TRAILING EDGE EXTENDING INTO ANCHOR TRENCH.
4. BACK FILL TRENCH OVER FILTER FABRIC TO ANCHOR.
5. INSPECT IMMEDIATELY AFTER ANY RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
6. LOOK FOR RUNOFF BYPASSING ENDS OF BARRIERS OR UNDERCUTTING FENCE.
7. REPAIR OR REPLACE DAMAGED AREAS OF THE FENCE AND REMOVE ACCUMULATED SEDIMENT.
8. RE-ANCHOR FENCE AS NECESSARY TO PREVENT SHORT CUTTING.
9. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.

2 / C504 SILT FENCE
NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
• 801-521-6186
• 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
3302 South 900 West, Suite 7 — 801.355.3141 F
Salt Lake City, UT 84111 — 801.539.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
02.APR.2012	DD 100%
29.JUN.2012	REVIEW SET

△	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY EJ,TC,MB,RG
CHECKED BY JB,KE,DB,SS
SCALE NO SCALE

DETAILS

C503

06/26/2012 12:35:00 PM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture &
Architectural Site Design

1058 East 2100 South
Salt Lake City, Utah 84106
office 801.487.4923
fax 801.466.3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

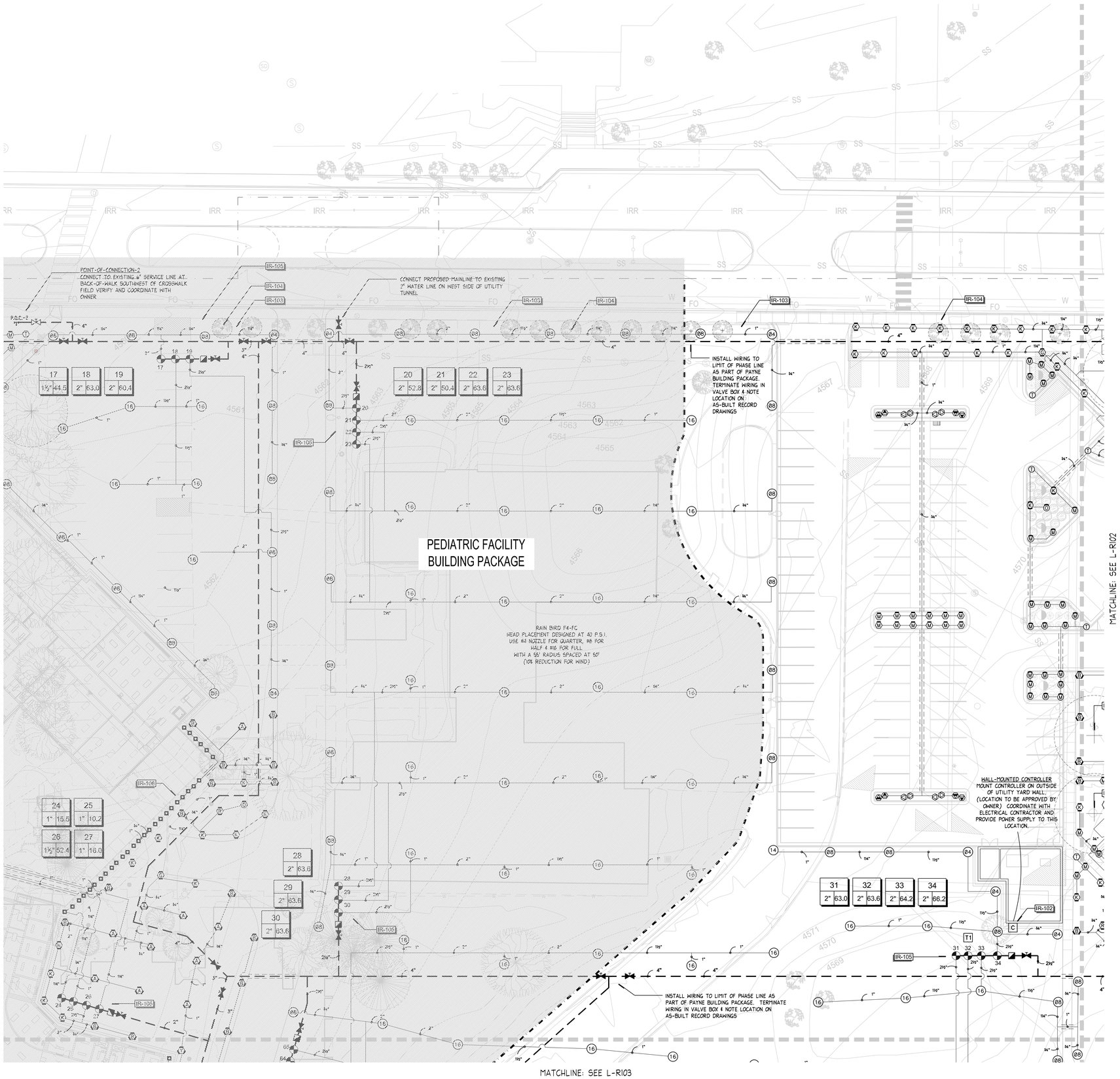
	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY: EP
CHECKED BY: SG
SCALE: 1" = 40'-0"

IRRIGATION PLAN - OVERALL

L-R100

File : E:\11068_Utah State Hospital\Cadd\Irrigation.dwg Sep 07, 2012-11:18am



IRRIGATION SCHEDULE — A

SEE DTL-A SHT L-R501 FOR IRRIGATION SCHEDULE

IRRIGATION NOTES — B

1. IT IS THE INTENT OF THESE IRRIGATION PLANS TO PROVIDE THE CONTRACTOR WITH CONSTRUCTION INFORMATION THAT WILL ENABLE HIM TO PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PARTS AND MATERIALS REQUIRED.
2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE. IN THE EVENT THE PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY. CONTRACTOR TO MAINTAIN OPERATING PRESSURE FOR EACH ZONE TO THE LAST HEAD.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, WALKS, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK, HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS AND UNDER PAVING.
4. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADING DIFFERENCES MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
5. THIS DESIGN IS DIAGRAMMATIC, ALL IRRIGATION EQUIPMENT, PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.
6. PROTECT EXISTING TREE'S ROOT STRUCTURE FROM DAMAGE DURING IRRIGATION TRENCHING OPERATIONS. CONTACT THE LANDSCAPE ARCHITECT IF ROOTS ARE ENCOUNTERED DURING TRENCHING TO DISCUSS ALTERNATE ROUTING FOR IRRIGATION PIPING.
7. IRRIGATION SYSTEM IS TO BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
8. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE. INSTALL ALL SPRINKLER HEADS WITH NOZZLES OF THE APPROPRIATE DEGREE AND RADIUS FOR THE AREA TO BE COVERED. ADJUST ALL NOZZLES TO PREVENT SPRAYING ONTO WALKS, BUILDINGS, ETC.
9. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURES SPECS.
10. ALL PIPE INSTALLED IN PAVING AND WALLS SHALL BE SLEEVED, SEE DETAILS.
11. ALL VALVE BOXES AND LID COVERS SHALL MATCH COLOR OF SURROUNDING MULCH OR GROUNDCOVER. TAN FOR BARK OR ROCK MULCH AND GREEN FOR TURF.

EXISTING IRRIGATION SYSTEM - OVERALL: (COORDINATE ALL WORK WITH THE OWNER)

1. THE CONTRACTOR SHALL MAINTAIN THE EXISTING IRRIGATION SYSTEM IN GOOD WORKING CONDITION TO ENSURE THAT EXISTING PLANT MATERIAL RECEIVES THE PROPER AMOUNT OF WATER DURING ALL PHASES OF CONSTRUCTION.
2. THE CONTRACTOR SHALL MAKE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS REQUIRED WHERE EXISTING IRRIGATION ZONES WILL BE DISRUPTED DUE TO PROPOSED CONSTRUCTION. MODIFICATIONS MAY INCLUDE BUT IS NOT LIMITED TO: RE-ROUTING EXISTING IRRIGATION MAINLINES AND LATERAL LINES, RELOCATING EXISTING CONTROLLERS AND IRRIGATION VALVES AND CONTROL WIRING, AND RELOCATING EXISTING IRRIGATION HEADS.
3. THE CONTRACTOR MAY ALSO BE REQUIRED TO HAND-WATER EXISTING PLANT MATERIAL AS REQUIRED IF THE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS PREVIOUSLY LISTED ARE NOT MADE.
4. ANY EXISTING HEAD, VALVE, VALVE MARKER, VALVE BOX, OR OTHER EXISTING EQUIPMENT LOCATED WHERE THERE WILL BE A GRADE OR SURFACE MATERIAL CHANGE, SHALL BE ADJUSTED UP OR DOWN TO ITS PROPER POSITION IN RELATION TO THE NEW FINISHED GRADE, AT NO ADDITIONAL COST TO THE OWNER, UNLESS THE PLANS SHOW IT TO BE RELOCATED.

REFERENCE SCHEDULE NOTES — C

SYMBOL	IR IRRIGATION NOTES DESCRIPTION
IR-101	IRRIGATION EQUIPMENT SHOWN OUTSIDE PLANTING AREAS FOR GRAPHIC CLARITY ONLY - LOCATE INSIDE PLANTING AREAS AND AS APPROVED BY THE LANDSCAPE ARCHITECT
IR-102	INSTALL SLEEVE THROUGH WALLS, TYPICAL.
IR-103	ADJUST AND/OR REPAIR EXISTING IRRIGATION SYSTEM TO ENSURE THAT HEAD-TO-HEAD COVERAGE IS MAINTAINED. CONNECT EXISTING VALVES TO REMAIN TO 2-WIRE PATH AND PROPOSED CONTROLLER.
IR-104	HAND-DIG TRENCHES UNDER EXISTING TREES DESIGNATED TO REMAIN, TYPICAL
IR-105	ALIGN VALVE BOXES WITHIN PLANTING AREAS & ALIGN WITH BUILDING, WALL, OR EDGE OF PAVEMENT
IR-106	COORDINATE LOCATION OF IRRIGATION HEADS WITH PLANT MATERIAL TO ENSURE THAT PROPER COVERAGE IS ACHIEVED

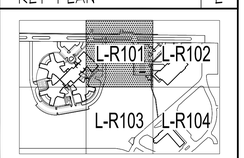
CRITICAL ANALYSIS — D

FLOW AVAILABLE	
Point of Connection Size:	4"
Flow Available:	298.00 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	98.00 psi
Pressure Available:	98.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	67.50 gpm
Flow Available at POC:	298.00 gpm
Residual Flow Available:	230.50 gpm
Critical Station:	46
Design Pressure:	40.00 psi
Pipe Loss Critical Head:	5.07 psi
Loss Fitting Factor:	0.51 psi
Loss through Valve:	4.64 psi
Pressure Req. at Critical Station:	50.21 psi
Loss for Fittings:	2.98 psi
Loss for Main Line:	29.88 psi
Critical Station Pressure at POC:	83.08 psi
Pressure Available:	98.00 psi
Residual Pressure Available:	14.92 psi

SCALE — F

0 10 20 40
SCALE: 1" = 20'-0"
NORTH

KEY PLAN — E



DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801.487.4923
fax 801.466.3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

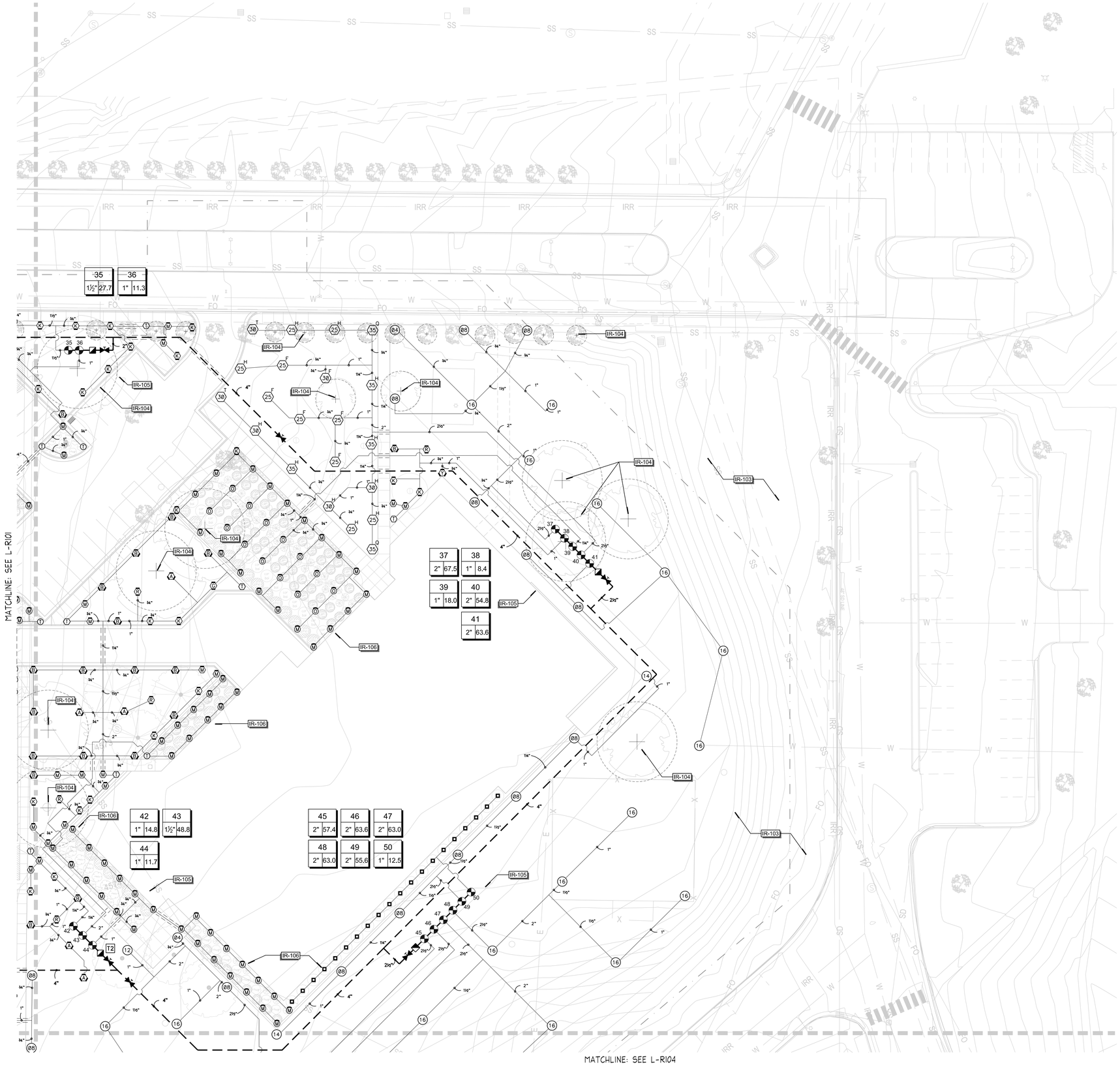
	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

IRRIGATION PLAN - PAYNE

L-R101

File : E:\11068_Utah State Hospital\Cadd\Irrigation.dwg Sep 07, 2012-10:29am



IRRIGATION SCHEDULE | A

SEE DTL-A SHT L-R501 FOR IRRIGATION SCHEDULE

IRRIGATION NOTES | B

1. IT IS THE INTENT OF THESE IRRIGATION PLANS TO PROVIDE THE CONTRACTOR WITH CONSTRUCTION INFORMATION THAT WILL ENABLE HIM TO PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PARTS AND MATERIALS REQUIRED.
2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE. IN THE EVENT THE PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY. CONTRACTOR TO MAINTAIN OPERATING PRESSURE FOR EACH ZONE TO THE LAST HEAD.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, WALKS, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK, HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS AND UNDER PAVING.
4. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADING DIFFERENCES MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
5. THIS DESIGN IS DIAGRAMMATIC, ALL IRRIGATION EQUIPMENT, PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.
6. PROTECT EXISTING TREE'S ROOT STRUCTURE FROM DAMAGE DURING IRRIGATION TRENCHING OPERATIONS. CONTACT THE LANDSCAPE ARCHITECT IF ROOTS ARE ENCOUNTERED DURING TRENCHING TO DISCUSS ALTERNATE ROUTING FOR IRRIGATION PIPING.
7. IRRIGATION SYSTEM IS TO BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
8. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE. INSTALL ALL SPRINKLER HEADS WITH NOZZLES OF THE APPROPRIATE DEGREE AND RADIUS FOR THE AREA TO BE COVERED. ADJUST ALL NOZZLES TO PREVENT SPRAYING ONTO WALKS, BUILDINGS, ETC.
9. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURES SPECS.
10. ALL PIPE INSTALLED IN PAVING AND WALLS SHALL BE SLEEVED, SEE DETAILS.
11. ALL VALVE BOXES AND LID COVERS SHALL MATCH COLOR OF SURROUNDING MULCH OR GROUNDCOVER. TAN FOR BARK OR ROCK MULCH AND GREEN FOR TURF.

EXISTING IRRIGATION SYSTEM - OVERALL: (COORDINATE ALL WORK WITH THE OWNER)

1. THE CONTRACTOR SHALL MAINTAIN THE EXISTING IRRIGATION SYSTEM IN GOOD WORKING CONDITION TO ENSURE THAT EXISTING PLANT MATERIAL RECEIVES THE PROPER AMOUNT OF WATER DURING ALL PHASES OF CONSTRUCTION.
2. THE CONTRACTOR SHALL MAKE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS REQUIRED WHERE EXISTING IRRIGATION ZONES WILL BE DISRUPTED DUE TO PROPOSED CONSTRUCTION. MODIFICATIONS MAY INCLUDE BUT IS NOT LIMITED TO: RE-ROUTING EXISTING IRRIGATION MAINLINES AND LATERAL LINES, RELOCATING EXISTING CONTROLLERS AND IRRIGATION VALVES AND CONTROL WIRING, AND RELOCATING EXISTING IRRIGATION HEADS.
3. THE CONTRACTOR MAY ALSO BE REQUIRED TO HAND-WATER EXISTING PLANT MATERIAL AS REQUIRED IF THE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS PREVIOUSLY LISTED ARE NOT MADE.
4. ANY EXISTING HEAD, VALVE, VALVE MARKER, VALVE BOX, OR OTHER EXISTING EQUIPMENT LOCATED WHERE THERE WILL BE A GRADE OR SURFACE MATERIAL CHANGE, SHALL BE ADJUSTED UP OR DOWN TO ITS PROPER POSITION IN RELATION TO THE NEW FINISHED GRADE, AT NO ADDITIONAL COST TO THE OWNER, UNLESS THE PLANS SHOW IT TO BE RELOCATED.

REFERENCE SCHEDULE NOTES | C

SYMBOL	IR IRRIGATION NOTES DESCRIPTION
IR-101	IRRIGATION EQUIPMENT SHOWN OUTSIDE PLANTING AREAS FOR GRAPHIC CLARITY ONLY - LOCATE INSIDE PLANTING AREAS AND AS APPROVED BY THE LANDSCAPE ARCHITECT
IR-102	INSTALL SLEEVE THROUGH WALLS, TYPICAL.
IR-103	ADJUST AND/OR REPAIR EXISTING IRRIGATION SYSTEM TO ENSURE THAT HEAD-TO-HEAD COVERAGE IS MAINTAINED. CONNECT EXISTING VALVES TO REMAIN TO 2-WIRE PATH AND PROPOSED CONTROLLER.
IR-104	HAND-DIG TRENCHES UNDER EXISTING TREES DESIGNATED TO REMAIN, TYPICAL
IR-105	ALIGN VALVE BOXES WITHIN PLANTING AREAS & ALIGN WITH BUILDING, WALL, OR EDGE OF PAVEMENT
IR-106	COORDINATE LOCATION OF IRRIGATION HEADS WITH PLANT MATERIAL TO ENSURE THAT PROPER COVERAGE IS ACHIEVED

CRITICAL ANALYSIS | D

FLOW AVAILABLE	
Point of Connection Size:	4"
Flow Available:	298.00 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	98.00 psi
Pressure Available:	98.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	67.50 gpm
Flow Available at POC:	298.00 gpm
Residual Flow Available:	230.50 gpm
Critical Station:	46
Design Pressure:	40.00 psi
Pipe Loss Critical Head:	5.07 psi
Loss Fitting Factor:	0.51 psi
Loss through Valve:	4.64 psi
Pressure Req. at Critical Station:	50.21 psi
Loss for Fittings:	2.44 psi
Loss for Main Line:	29.86 psi
Critical Station Pressure at POC:	83.08 psi
Pressure Available:	98.00 psi
Residual Pressure Available:	14.92 psi

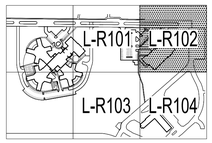
SCALE | F

0 10 20 40

SCALE: 1" = 20'-0"

NORTH

KEY PLAN | E



DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801.487.4923
fax 801.466.3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

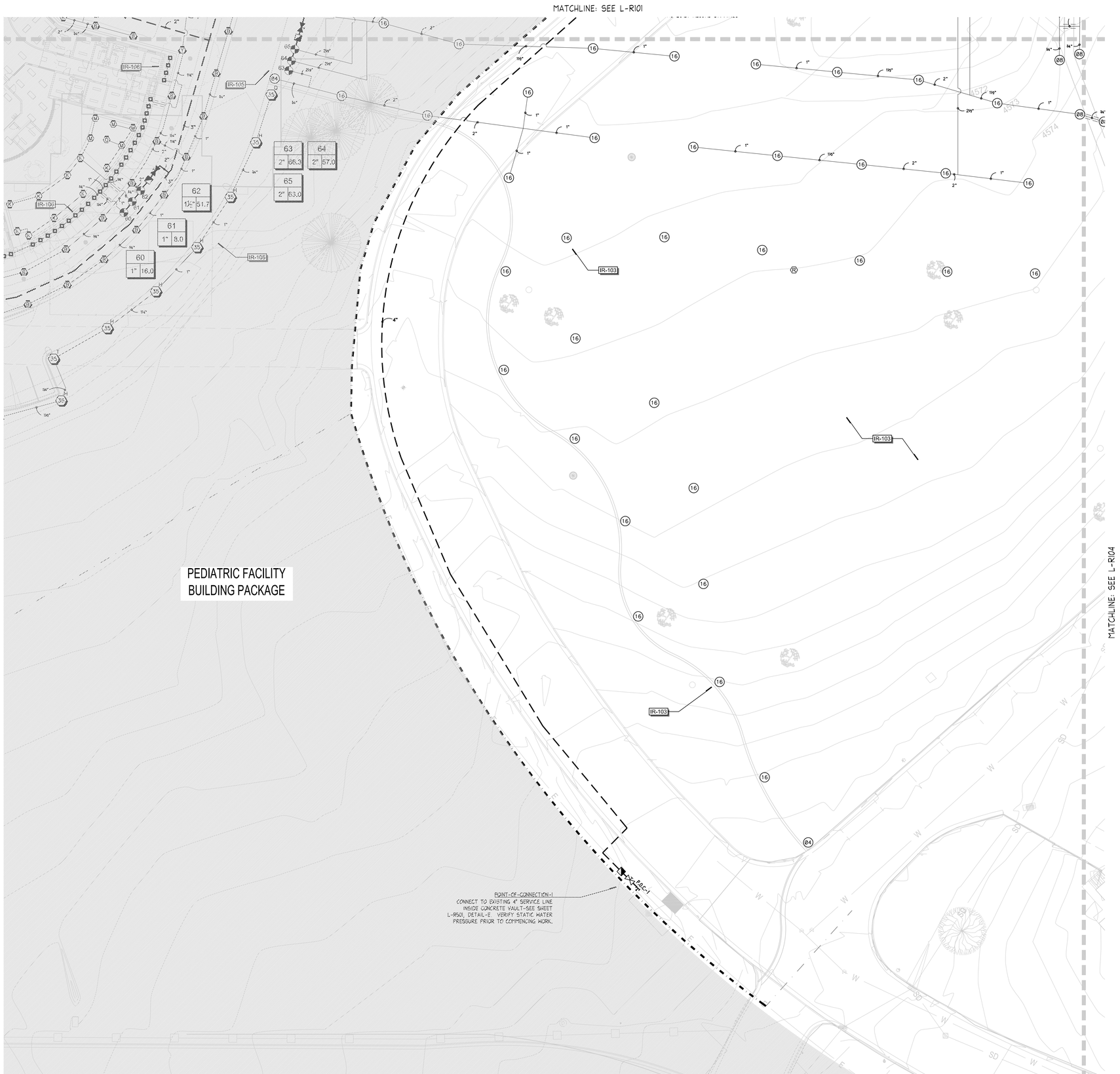
DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

IRRIGATION PLAN - PAYNE

L-R102

File : E:\11068_Utah State Hospital\Cadd\irrigation.dwg Sep 07, 2012-10:30am



DFCM APPROVAL STAMP

IRRIGATION SCHEDULE | A

SEE DTL-A SHT L-R501 FOR IRRIGATION SCHEDULE

IRRIGATION NOTES | B

1. IT IS THE INTENT OF THESE IRRIGATION PLANS TO PROVIDE THE CONTRACTOR WITH CONSTRUCTION INFORMATION THAT WILL ENABLE HIM TO PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PARTS AND MATERIALS REQUIRED.
2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE. IN THE EVENT THE PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY. CONTRACTOR TO MAINTAIN OPERATING PRESSURE FOR EACH ZONE TO THE LAST HEAD.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, WALKS, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK, HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS AND UNDER PAVING.
4. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADING DIFFERENCES MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
5. THIS DESIGN IS DIAGRAMMATIC, ALL IRRIGATION EQUIPMENT, PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.
6. PROTECT EXISTING TREE'S ROOT STRUCTURE FROM DAMAGE DURING IRRIGATION TRENCHING OPERATIONS. CONTACT THE LANDSCAPE ARCHITECT IF ROOTS ARE ENCOUNTERED DURING TRENCHING TO DISCUSS ALTERNATE ROUTING FOR IRRIGATION PIPING.
7. IRRIGATION SYSTEM IS TO BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
8. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE. INSTALL ALL SPRINKLER HEADS WITH NOZZLES OF THE APPROPRIATE DEGREE AND RADIUS FOR THE AREA TO BE COVERED. ADJUST ALL NOZZLES TO PREVENT SPRAYING ONTO WALKS, BUILDINGS, ETC.
9. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURES SPECS.
10. ALL PIPE INSTALLED IN PAVING AND WALLS SHALL BE SLEEVED, SEE DETAILS.
11. ALL VALVE BOXES AND LID COVERS SHALL MATCH COLOR OF SURROUNDING MULCH OR GROUNDCOVER. TAN FOR BARK OR ROCK MULCH AND GREEN FOR TURF.

EXISTING IRRIGATION SYSTEM - OVERALL: (COORDINATE ALL WORK WITH THE OWNER)

1. THE CONTRACTOR SHALL MAINTAIN THE EXISTING IRRIGATION SYSTEM IN GOOD WORKING CONDITION TO ENSURE THAT EXISTING PLANT MATERIAL RECEIVES THE PROPER AMOUNT OF WATER DURING ALL PHASES OF CONSTRUCTION.
2. THE CONTRACTOR SHALL MAKE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS REQUIRED WHERE EXISTING IRRIGATION ZONES WILL BE DISRUPTED DUE TO PROPOSED CONSTRUCTION. MODIFICATIONS MAY INCLUDE BUT IS NOT LIMITED TO: RE-ROUTING EXISTING IRRIGATION MAINLINES AND LATERAL LINES, RELOCATING EXISTING CONTROLLERS AND IRRIGATION VALVES AND CONTROL WIRING, AND RELOCATING EXISTING IRRIGATION HEADS.
3. THE CONTRACTOR MAY ALSO BE REQUIRED TO HAND-WATER EXISTING PLANT MATERIAL AS REQUIRED IF THE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS PREVIOUSLY LISTED ARE NOT MADE.
4. ANY EXISTING HEAD, VALVE, VALVE MARKER, VALVE BOX, OR OTHER EXISTING EQUIPMENT LOCATED WHERE THERE WILL BE A GRADE OR SURFACE MATERIAL CHANGE, SHALL BE ADJUSTED UP OR DOWN TO ITS PROPER POSITION IN RELATION TO THE NEW FINISHED GRADE, AT NO ADDITIONAL COST TO THE OWNER, UNLESS THE PLANS SHOW IT TO BE RELOCATED.

REFERENCE SCHEDULE NOTES | C

IR IRRIGATION NOTES

SYMBOL	DESCRIPTION
IR-101	IRRIGATION EQUIPMENT SHOWN OUTSIDE PLANTING AREAS FOR GRAPHIC CLARITY ONLY - LOCATE INSIDE PLANTING AREAS AND AS APPROVED BY THE LANDSCAPE ARCHITECT
IR-102	INSTALL SLEEVE THROUGH WALLS, TYPICAL.
IR-103	ADJUST AND/OR REPAIR EXISTING IRRIGATION SYSTEM TO ENSURE THAT HEAD-TO-HEAD COVERAGE IS MAINTAINED. CONNECT EXISTING VALVES TO REMAIN TO 2-WIRE PATH AND PROPOSED CONTROLLER.
IR-104	HAND-DIG TRENCHES UNDER EXISTING TREES DESIGNATED TO REMAIN, TYPICAL
IR-105	ALIGN VALVE BOXES WITHIN PLANTING AREAS & ALIGN WITH BUILDING, WALL, OR EDGE OF PAVEMENT
IR-106	COORDINATE LOCATION OF IRRIGATION HEADS WITH PLANT MATERIAL TO ENSURE THAT PROPER COVERAGE IS ACHIEVED

CRITICAL ANALYSIS | D

FLOW AVAILABLE	
Point of Connection Size:	4"
Flow Available:	298.00 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	98.00 psi
Pressure Available:	98.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	67.50 gpm
Flow Available at POC:	298.00 gpm
Residual Flow Available:	230.50 gpm
Critical Station:	46
Design Pressure:	40.00 psi
Pipe Loss Critical Head:	5.07 psi
Loss Fitting Factor:	0.51 psi
Loss through Valve:	4.64 psi
Pressure Req. at Critical Station:	50.21 psi
Loss for Fittings:	2.99 psi
Loss for Main Line:	29.88 psi
Critical Station Pressure at POC:	83.08 psi
Pressure Available:	98.00 psi
Residual Pressure Available:	14.92 psi

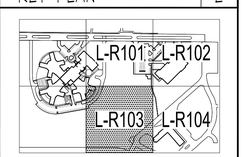
SCALE | F

0 10 20 40

SCALE: 1" = 20'-0"

NORTH

KEY PLAN | E



FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801.487.4923
fax 801.466.3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

IRRIGATION PLAN - PAYNE

L-R103

File : E:\11068_Utah State Hospital\Cadd\Irrigation.dwg Sep 07, 2012-10:31am

DFCM APPROVAL STAMP

IRRIGATION SCHEDULE | A

SEE DTL-A SHT L-R501 FOR IRRIGATION SCHEDULE

IRRIGATION NOTES | B

1. IT IS THE INTENT OF THESE IRRIGATION PLANS TO PROVIDE THE CONTRACTOR WITH CONSTRUCTION INFORMATION THAT WILL ENABLE HIM TO PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PARTS AND MATERIALS REQUIRED.
2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE. IN THE EVENT THE PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY. CONTRACTOR TO MAINTAIN OPERATING PRESSURE FOR EACH ZONE TO THE LAST HEAD.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, WALKS, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS AND UNDER PAVING.
4. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADING DIFFERENCES MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
5. THIS DESIGN IS DIAGRAMMATIC, ALL IRRIGATION EQUIPMENT, PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.
6. PROTECT EXISTING TREE'S ROOT STRUCTURE FROM DAMAGE DURING IRRIGATION TRENCHING OPERATIONS. CONTACT THE LANDSCAPE ARCHITECT IF ROOTS ARE ENCOUNTERED DURING TRENCHING TO DISCUSS ALTERNATE ROUTING FOR IRRIGATION PIPING.
7. IRRIGATION SYSTEM IS TO BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
8. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE. INSTALL ALL SPRINKLER HEADS WITH NOZZLES OF THE APPROPRIATE DEGREE AND RADIUS FOR THE AREA TO BE COVERED. ADJUST ALL NOZZLES TO PREVENT SPRAYING ONTO WALKS, BUILDINGS, ETC.
9. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURES SPECS.
10. ALL PIPE INSTALLED IN PAVING AND WALLS SHALL BE SLEEVED, SEE DETAILS.
11. ALL VALVE BOXES AND LID COVERS SHALL MATCH COLOR OF SURROUNDING MULCH OR GROUNDCOVER. TAN FOR BARK OR ROCK MULCH AND GREEN FOR TURF.

EXISTING IRRIGATION SYSTEM - OVERALL: (COORDINATE ALL WORK WITH THE OWNER)

1. THE CONTRACTOR SHALL MAINTAIN THE EXISTING IRRIGATION SYSTEM IN GOOD WORKING CONDITION TO ENSURE THAT EXISTING PLANT MATERIAL RECEIVES THE PROPER AMOUNT OF WATER DURING ALL PHASES OF CONSTRUCTION.
2. THE CONTRACTOR SHALL MAKE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS REQUIRED WHERE EXISTING IRRIGATION ZONES WILL BE DISRUPTED DUE TO PROPOSED CONSTRUCTION. MODIFICATIONS MAY INCLUDE BUT IS NOT LIMITED TO: RE-ROUTING EXISTING IRRIGATION MAINLINES AND LATERAL LINES, RELOCATING EXISTING CONTROLLERS AND IRRIGATION VALVES AND CONTROL WIRING, AND RELOCATING EXISTING IRRIGATION HEADS.
3. THE CONTRACTOR MAY ALSO BE REQUIRED TO HAND-WATER EXISTING PLANT MATERIAL AS REQUIRED IF THE MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM AS PREVIOUSLY LISTED ARE NOT MADE.
4. ANY EXISTING HEAD, VALVE, VALVE MARKER, VALVE BOX, OR OTHER EXISTING EQUIPMENT LOCATED WHERE THERE WILL BE A GRADE OR SURFACE MATERIAL CHANGE, SHALL BE ADJUSTED UP OR DOWN TO ITS PROPER POSITION IN RELATION TO THE NEW FINISHED GRADE, AT NO ADDITIONAL COST TO THE OWNER, UNLESS THE PLANS SHOW IT TO BE RELOCATED.

REFERENCE SCHEDULE NOTES | C

IR IRRIGATION NOTES

SYMBOL	DESCRIPTION
IR-101	IRRIGATION EQUIPMENT SHOWN OUTSIDE PLANTING AREAS FOR GRAPHIC CLARITY ONLY - LOCATE INSIDE PLANTING AREAS AND AS APPROVED BY THE LANDSCAPE ARCHITECT
IR-102	INSTALL SLEEVE THROUGH WALLS, TYPICAL.
IR-103	ADJUST AND/OR REPAIR EXISTING IRRIGATION SYSTEM TO ENSURE THAT HEAD-TO-HEAD COVERAGE IS MAINTAINED. CONNECT EXISTING VALVES TO REMAIN TO 2-WIRE PATH AND PROPOSED CONTROLLER.
IR-104	HAND-DIG TRENCHES UNDER EXISTING TREES DESIGNATED TO REMAIN, TYPICAL
IR-105	ALIGN VALVE BOXES WITHIN PLANTING AREAS & ALIGN WITH BUILDING, WALL, OR EDGE OF PAVEMENT
IR-106	COORDINATE LOCATION OF IRRIGATION HEADS WITH PLANT MATERIAL TO ENSURE THAT PROPER COVERAGE IS ACHIEVED

CRITICAL ANALYSIS | D

FLOW AVAILABLE	
Point of Connection Size:	4"
Flow Available:	298.00 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	98.00 psi
Pressure Available:	98.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	67.50 gpm
Flow Available at POC:	298.00 gpm
Residual Flow Available:	230.50 gpm
Critical Station:	46
Design Pressure:	40.00 psi
Pipe Loss Critical Head:	5.07 psi
Loss Fitting Factor:	0.51 psi
Loss through Valve:	4.64 psi
Pressure Req. at Critical Station:	50.21 psi
Loss for Fittings:	2.98 psi
Loss for Main Line:	29.88 psi
Critical Station Pressure at POC:	83.08 psi
Pressure Available:	98.00 psi
Residual Pressure Available:	14.92 psi

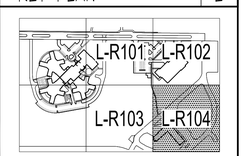
SCALE | F

0 10 20 40

SCALE: 1" = 20'-0"

NORTH

KEY PLAN | E



FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design

1058 East 2100 South
Salt Lake City, Utah 84106
office 801 . 487 . 4923
fax 801 . 466 . 3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

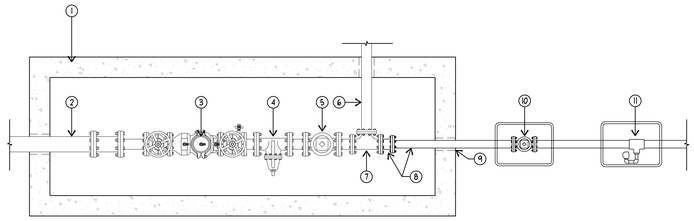
PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

IRRIGATION PLAN - PAYNE

L-R104

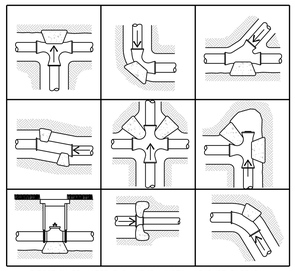
File : E:\11068_Utah State Hospital\Cadd\Irrigation.dwg Sep 07, 2012-10:32am

1. EXISTING CONCRETE VAULT
2. EXISTING 6" MAINLINE
3. EXISTING BACKFLOW PREVENTOR
4. EXISTING GATE VALVE
5. EXISTING PRESSURE REDUCING VALVE
6. EXISTING 4" MAINLINE (TO ORCHARD)
7. EXISTING 4" FLANGED TEE (CAPPED NORTH END)
8. MAINLINE PIPING (SIZE PER PLAN) CONNECT NEW MAINLINE TO NORTH END OF EXISTING FLANGED TEE.
9. CORE DRILL AND INSTALL SITLEEVE THROUGH EXISTING VAULT - GROUT VOID BETWEEN SLEEVE AND CONCRETE
10. GATE VALVE - IRRIGATION LEGEND
11. QUICK COUPLER - SEE IRRIG. LEGEND



E POINT OF CONNECTION - A

SCALE: 1/2"=1'-0" — PLAN



← DIRECTION OF WATER FLOW (TYP.) INSTALL THRUST BLOCKS ON ALL 3" AND LARGER ON FITTINGS AND VALVES

THRUST BLOCK SIZING PROCEDURES

1. MULTIPLY THE WORKING PRESSURE BY THE APPROPRIATE VALUE SHOWN IN THE FOLLOWING TABLE TO OBTAIN TOTAL THRUST IN N(LB):

PIPELINE THRUST FACTORS (BASED ON THRUST PER KPA (PSI) PRESSURE)

PIPE SIZE IN.	MM	DEAD END OR TEE	90° ELBOW	45° ELBOW	22 1/2° ELBOW
3	88	9.80	13.90	7.51	3.82
4	114	16.20	23.00	12.40	6.31
5	141	24.70	35.00	18.90	9.63
6	168	34.80	49.20	26.70	13.60

2. DETERMINE THE BEARING STRENGTH OF THE SOIL FROM THE TABLE BELOW:

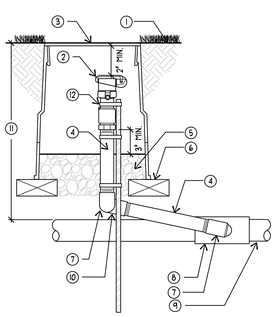
BEARING STRENGTH OF SOILS

SOILS AND SAFE BEARING LOADS:	IB/SQ.FT.	KPA
SOUND SHALE	10,000	500
CEMENTED GRAVEL AND SAND DIFFICULT TO PICK	4,000	200
COARSE AND FINE COMPACT SAND	3,000	100
MEDIUM CLAY CAN BE SPADED	2,000	150
SOFT CLAY	1,000	50
MUCK	0	0

3. DIVIDE THE TOTAL THRUST OBTAINED IN STEP 1 BY THE BEARING STRENGTH OF THE SOIL TO GET THE AREA NEEDED, M/SQ.FT.

F THRUST BLOCK DETAIL

SCALE: NTS — SECTIONS

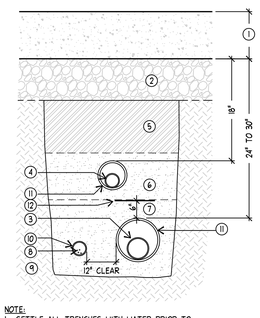


1. SET FLUSH TO FINISH GRADE/TOP OF MULCH
2. QUICK-COUPLING VALVE (SEE IRRIGATION SCEDULE)
3. 10" ROUND VALVE BOX. (LOCATION MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION).
4. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
5. 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED AGGREGATE
6. BRICK FOUNDATION
7. PVC SCH 80 STREET ELL
8. PVC SCH 80 TEE OR ELL (SAME SIZE AS MAINLINE PIPING)
9. MAINLINE PIPING (SIZE AS PER PLAN)
10. PVC SCH 80 ELL
11. FOR TRENCH DEPTHS (SEE TRENCHING AND SLEEVING DETAIL)
12. PREFABRICATED - QUICK COUPLER STABLIZER - SPEARS, LEEMCO OR APPROVED EQUAL & #4 REBAR - 24" MIN. LENGTH

NOTE:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

G QUICK COUPLER VALVE ASSEMBLY

SCALE: NTS — SECTION

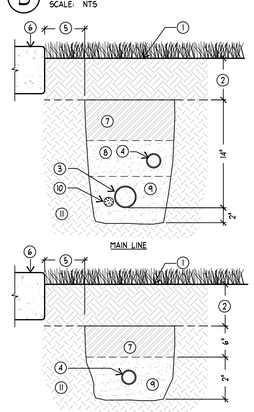


1. HARDSCAPE PAVING
2. COMPACTED AGGREGATE SUB-BASE
3. MAINLINE PIPING
4. LATERAL PIPING
5. CLEAN BACKFILL FREE OF ROCKS 1" DIA. AND LARGER.- SEE SPECS.
6. BEDDING SAND- IN CASES WHERE LATERAL PIPING IS INSTALLED IN MAINLINE TRENCH, USE SAND TO BACKFILL TRENCH
7. BEDDING SAND- USE SAND TO A DEPTH OF 2" BELOW AND TO THE EITHER SIDE OF SLEEVING
8. ELECTRICAL WIRES
9. COMPACTED SUBGRADE
10. ELECTRICAL CONDUIT- SEE SPECS.
11. SLEEVING: -SLEEVES SHALL BE 2" LARGER THAN THE PIPE OR WIRES WITHIN -1" TO 2 1/2" =PVC SCH 80 -4" AND LARGER = PVC CLASS 200
12. USE DETECTABLE WARNING TAPE W/ MAINLINE - PLACE 6" ABOVE - SEE SPECS.

NOTE:
1. SETTLE ALL TRENCHES WITH WATER PRIOR TO INSTALLATION OF TOPSOIL.
2. WHEN MULTIPLE PIPES OCCUR IN ONE TRENCH, ADD REQUIRED SLEEVE SIZES TOGETHER FOR 1 SLEEVE SIZE.
3. EXTEND ALL SLEEVING 18" MIN. BEYOND EDGE OF PAVING.
4. MARK THE LOCATION OF EACH SLEEVE BY INSTALLING A MAGNETIZED MASONRY NAIL, FLUSH WITH THE HARDSCAPE, INDICATING THE LOCATION OF EACH END OF THE SLEEVE.

B SLEEVING

SCALE: NTS — SECTION

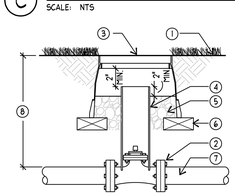


1. FINISH GRADE/TOP OF MULCH
2. TOPSOIL LAYER (6" IN TURF AND 12" IN SHRUB BED)
3. MAINLINE PIPING - MIN. DEPTH 18" TO TOP OF PIPE (SIZE AS PER PLAN)
4. LATERAL PIPING (SIZE AS PER PLAN)
5. LOCATE ALL TRENCHES 12" AWAY FROM ALL BUILDINGS, SIDEWALKS OR ANY HARD SURFACES. 3' FROM ROADS.
6. TOP OF HARDSCAPE
7. USE EXCAVATED TRENCH MATERIAL NOT TO EXCEED 1" DIA. ROCKS
8. BEDDING SAND- IN CASES WHERE LATERAL PIPING IS INSTALLED IN MAINLINE TRENCH, USE SAND TO BACKFILL TRENCH 50 THAT THE LATERAL LINE IS 12" BELOW FINISH GRADE.
9. BEDDING SAND- USE SAND TO A DEPTH OF 2" BELOW AND TO THE EITHER SIDE OF PIPING TO BED ALL PVC PIPING AND ELECTRICAL WIRES
10. IRRIGATION CONTROL WIRES - BUNDLE AND TAPE WITH DUCT TAPE EVERY 15 FEET O.C. NO OTHER UTILITIES MAY BE BURIED IN THE SAME TRENCH AS IRRIGATION.
11. COMPACTED SUBGRADE

NOTE:
1. SETTLE ALL TRENCHES WITH WATER PRIOR TO INSTALLATION OF TOPSOIL.
2. MIN. 6" DISTANCE BETWEEN EACH PIPE.

C TRENCHING

SCALE: NTS — SECTION



1. SET FLUSH TO FINISH GRADE/TOP OF MULCH
2. GATE VALVE (SEE IRRIGATION SCHEDULE)
3. 10" ROUND VALVE BOX (LOCATION MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION).
4. 6" SCH 40 PVC SLEEVE (LENGTH AS REQUIRED). NOTCH OVER VALVE FOR STABILITY.
5. 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED AGGREGATE
6. BRICK FOUNDATION
7. MAINLINE PIPING (SIZE AS PER PLAN)
8. FOR TRENCH DEPTHS (SEE TRENCHING AND SLEEVING DETAIL)

D GATE VALVE ASSEMBLY

SCALE: NTS — SECTION

A IRRIGATION SCHEDULE

SCALE: NTS — SCHEDULE

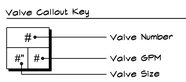
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	ARC	PSI	GPM	RADIUS
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	180	30	0.52	8'
	Rain Bird 1806-SAM-PRS 8 Series MPR Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	90	30	0.26	8'
	Rain Bird 1806-SAM-PRS 10 Series VAN Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating.	Adj	30		10'
	Rain Bird 1812-SAM-PRS 5 Series MPR Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	180	30	0.20	5'
	Rain Bird 1812-SAM-PRS 5 Series MPR Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	90	30	0.10	5'
	Rain Bird 1812-SAM-PRS 8 Series MPR Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	360	30	1.05	8'
	Rain Bird 1812-SAM-PRS 8 Series MPR Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	180	30	0.52	8'
	Rain Bird 1812-SAM-PRS 8 Series MPR Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	90	30	0.26	8'
	Rain Bird 1812-SAM-PRS 10 Series MPR Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	180	30	0.79	10'
	Rain Bird 1812-SAM-PRS 10 Series MPR Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	90	30	0.39	10'
	Rain Bird 1812-SAM-PRS 8 Series VAN Shrub Spray 12.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2" NPT Female Threaded Inlet. With Seal-A-Matic Check Valve, and Pressure Regulating Device.	Adj	30		8'
L	Hunter MPI000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with check valve, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	Adj	40		13'
M	Hunter MPI000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with check valve, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	Adj	40		13'
O	Hunter MPI000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with check valve, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	360	40	0.75	13'
G	Hunter MP2000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	Adj	40		19'
K	Hunter MP2000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	Adj	40		19'
R	Hunter MP2000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	360	40	1.47	19'
A	Hunter MP3000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	360	40	3.64	30'
B	Hunter MP3000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	Adj	40		30'
Y	Hunter MP3000 w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc, on RainBird 1804-SAM-PRS 4" pop-up body.	Adj	40		30'
T	Hunter MP Corner w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. T=Turquoise adj arc 45-105, on RainBird 1804-SAM-PRS 4" pop-up body.	Adj	40		13'
LCS	Hunter MP Strip w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on RainBird 1804-SAM-PRS 4" pop-up body.	LCS	40	0.22	5'x15'
RCS	Hunter MP Strip w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on RainBird 1804-SAM-PRS 4" pop-up body.	RCS	40	0.22	5'x15'
SST	Hunter MP Strip w/ RainBird 1806-SAM-PRS Turf Spray 6" pop-up with factory installed check valve, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on RainBird 1804-SAM-PRS 4" pop-up body.	SST	40	0.44	5'x30'
M	Hunter MPI000 w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with check valve, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on RainBird 1806-SAM-PRS 6" pop-up body.	Adj	40		13'
O	Hunter MPI000 w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with check valve, MP Rotator nozzle. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc, on RainBird 1806-SAM-PRS 6" pop-up body.	360	40	0.75	13'
G	Hunter MP2000 w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with factory installed check valve, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on RainBird 1806-SAM-PRS 6" pop-up body.	Adj	40		19'
K	Hunter MP2000 w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with factory installed check valve, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc, on RainBird 1806-SAM-PRS 6" pop-up body.	Adj	40		19'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	ARC	PSI	GPM	RADIUS
T	Hunter MP Corner w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with factory installed check valve, MP Rotator nozzle. T=Turquoise adj arc 45-105, on RainBird 1806-SAM-PRS 6" pop-up body.	Adj	40		15'
LCS	Hunter MP Strip w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with factory installed check valve, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on RainBird 1806-SAM-PRS 6" pop-up body.	LCS	40	0.22	5'x15'
RCS	Hunter MP Strip w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with factory installed check valve, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on RainBird 1806-SAM-PRS 6" pop-up body.	RCS	40	0.22	5'x15'
SST	Hunter MP Strip w/ RainBird 1812-SAM-PRS Shrub Spray 12" pop-up with factory installed check valve, MP Rotator nozzle. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip, on RainBird 1806-SAM-PRS 6" pop-up body.	SST	40	0.44	5'x30'
	Rain Bird 1400 Flood Bubbler Flood Bubbler on swing pipe, with RainBirdPA-80 adapter and Hunter HOV check valve	360	20	0.50	1'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
ARC 25	Rain Bird 5006-PL-MPR-SAM-R Turf Rotor, 6.0" Pop-Up, Plastic Riser, with Flow Shut-Off Device. Matched Precipitation Rotor (MPR Nozzle), Arc and Radius as per Symbol. 25 ft=red, 30 ft=green, 35ft=beige. With Seal-A-Matic Check Valve, and In-Stem Pressure Regulator.	35		24'
ARC 30	Rain Bird 5006-PL-MPR-SAM-R Turf Rotor, 6.0" Pop-Up, Plastic Riser, with Flow Shut-Off Device. Matched Precipitation Rotor (MPR Nozzle), Arc and Radius as per Symbol. 25 ft=red, 30 ft=green, 35ft=beige. With Seal-A-Matic Check Valve, and In-Stem Pressure Regulator.	35		30'
ARC 35	Rain Bird 5006-PL-MPR-SAM-R Turf Rotor, 6.0" Pop-Up, Plastic Riser, with Flow Shut-Off Device. Matched Precipitation Rotor (MPR Nozzle), Arc and Radius as per Symbol. 25 ft=red, 30 ft=green, 35ft=beige. With Seal-A-Matic Check Valve, and In-Stem Pressure Regulator.	35		34'
04	Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	40	3.30	41'
06	Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	40	4.90	45'
08	Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	40	6.60	49'
12	Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	40	9.70	53'
14	Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	40	11.3	55'
16	Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	40	12.6	55'
ARC 35	Rain Bird 5006-PL-SAM-R-MPR Shrub rotor, 6.0" Pop-Up, Plastic Riser, with Flow Shut-Off Device. Matched Precipitation Rotor (MPR Nozzle), Arc and Radius as per Symbol. 25 ft=red, 30 ft=green, 35ft=beige. With Seal-A-Matic Check Valve, and In-Stem Pressure Regulator.	35		34'

SYMBOL	MANUFACTURER/DESCRIPTION
	Rain Bird PEB-PRS-D 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Pressure Regulator Module.
	Rain Bird 44-LRC 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 2-Piece Body.
	NIBCO T-FP-600 Isolation valve. Sized equal to pipe size. Isolation valves shall be used at all vavle manifolds and isolation points.
	Matco-Norca Model 200 RTD Resilient Wedge Gate Valve. Sized equal to pipe size. Use 3" square nut wrench.
C	Rain Bird ESP-LXD-LXMM-I25-ETC-LX I25 StationTwo-Wire Decoder Commercial Controller. Wall-mount metal case. Include Rain Bird ETC-LX ET manager cartridge, and Rain Bird LIMRKIT remote control kit. Provide grounding and surge protection per manufacturer's recomendations.
R	Rain Bird 4" Round Rain Gauge Tipping bucket rain gauge measures rainfall in increments of 0.01". Mount exterior as indicated using the included 50 ft.cable.
P.O.C. #1	Point of Connection 4" Secondary Irrigation Line - static water pressure per Bert Beddoes (June 5, 2012)
P.O.C. #2	Point of Connection 4" Secondary Irrigation Line - static water pressure per Bert Beddoes (June 5, 2012)
	Irrigation Lateral Line: PVC Schedule 40
	Irrigation Mainline: PVC Schedule 40
	Pipe Sleeve: PVC Class 200 SDR 21 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.

Valve Callout Key



DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801.487.4923
fax 801.466.3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

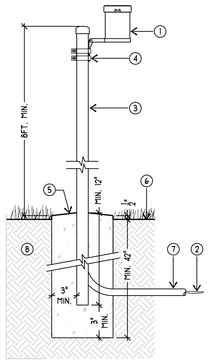
	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

IRRIGATION DETAILS - PAYNE

L-R501

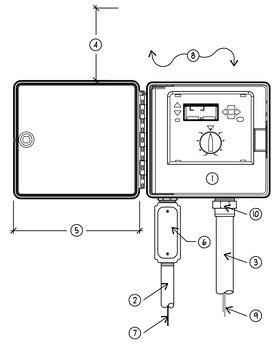
File : E:\11068_Utah State Hospital\Cadd\Irrigation.dwg Sep 07, 2012-10:33am



1. RAIN GAUGE - SEE IRRIGATION LEGEND. MOUNT GAUGE A MIN. OF 8ft. ABOVE FINISH GRADE, & IN LOCATION APPROVED BY THE LANDSCAPE ARCHITECT THAT OPTOMIZES RAIN WATER COLLECTION
2. CONTRACTOR SHALL SUPPLY WIRE AS RECOMMENDED BY THE MANUFACTURER AND CONNECT TO CONTROLLER.
3. 1 1/2" GALV. POST. SET IN CONCRETE AND PLUMBED
4. CONDUIT "U" CLAMP
5. CONCRETE FOOTING SLOPED AROUND POST
6. TOP OF FINISH GRADE
7. 1" CONDUIT TO CONTROLLER
8. COMPACTED SUB-GRADE

NOTE:
1. INSTALL PER MANUFACTURE'S SPECIFICATIONS.

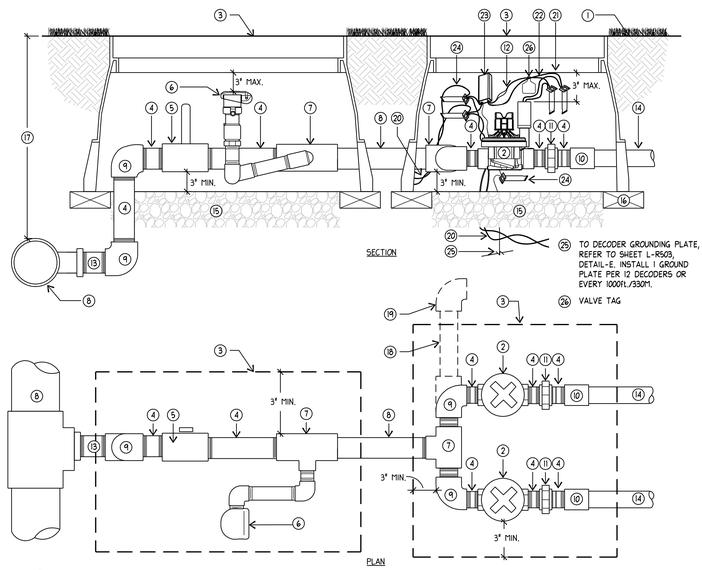
(1) RAIN GAUGE
SCALE: NTS — ELEVATION



1. WALL MOUNTED IRRIGATION CONTROLLER (SEE IRRIGATION SCHEDULE)
2. 1-INCH GALV. SCH. 40 CONDUIT AND FITTINGS TO POWER SUPPLY
3. 1-1/4", 1-1/2" OR 2" GALV. SCH. 40 CONDUIT AND FITTINGS FOR VALVE WIRES
4. MAINTAIN HINGE PIN CLEARANCE FOR DOOR REMOVAL
5. MAINTAIN CLEARANCE FOR DOOR
6. JUNCTION BOX
7. 120V POWER SUPPLY BY OTHERS
8. MOUNT TO BUILDING WALL BEYOND OR APPROVED STRUCTURE (LOCATION MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION)
9. 2-WIRE PATH TO DECODERS. USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
10. LOCK NUT

NOTE:
1. INSTALL PER MANUFACTURE'S SPECIFICATIONS.
2. ALL CONDUIT ABOVE GROUND SHALL GALV. SCH. 40 PIPE.
3. PROVIDE GROUNDING AND SURGE PROTECTION AS RECOMMENDED BY CONTROLLER MANUFACTURER

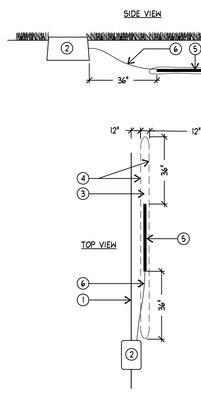
(F) IRRIGATION CONTROLLER-WALL MOUNTED
SCALE: NTS — ELEVATION



1. SET FLUSH TO FINISH GRADE/TOP OF MULCH
2. ELECTRIC REMOTE-CONTROL VALVE (SEE IRRIGATION SCHEDULE)
3. VALVE BOX (SEE SPECS.) LOCATION MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION).
4. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
5. ISOLATION BALL VALVE WITH HANDLE TURNED UPWARDS (SEE IRRIGATION SCHEDULE) ASSOCIATE WITH VALVE MANIFOLDS AS INDICATED ON THE PLANS
6. QUICK COUPLER VALVE (SEE IRRIGATION LEGEND AND DETAIL - SIMILIAR) ASSOCIATE WITH VALVE MANIFOLDS AS INDICATED ON THE PLANS
7. PVC SCH 80 TEE T X T X S (SAME SIZE AS MAINLINE PIPING)
8. MAINLINE PIPING (SIZE AS PER PLAN)
9. PVC SCH. 80 T X T ELBOW
10. PVC SCH. 80 T X S COUPLING
11. PVC SCH. 80 UNION
12. CONTROL WIRES- 30-INCH LINEAR LENGTH OF WIRE, COILED
13. PVC SCH 80 NIPPLE WITH BUSHING (LENGTH AS REQUIRED)
14. LATERAL PIPING (SIZE AS PER PLAN)
15. 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED AGGREGATE
16. BRICK FOUNDATION, TYP.
17. FOR TRENCH DEPTHS (SEE TRENCHING AND SLEEVING DETAIL)
18. PVC SCH 80 PIPE (LENGTH AS REQUIRED)
19. EXTEND FOR NUMBER OF VALVES REQUIRED
20. 2-WIRE PATH
21. DBY (2)
22. TWO BLACK WIRES TO VALVE SOLENOID
23. DECODER
24. DBR-6 (3)
25. TO DECODER GROUNDING PLATE, REFER TO SHEET L-R503, DETAIL-E. INSTALL 1 GROUND PLATE PER 12 DECODERS OR EVERY 1000ft./330M.
26. VALVE TAG

NOTES:
1. LOCATE ALL VALVE BOXES IN PLANTER BEDS UNLESS OTHERWISE INDICATED.
2. ALL FITTINGS AND NIPPLES IN MANIFOLD SHALL BE SCH. 80 THREADED PVC USING TEFLON TAPE.
3. VALVE MANIFOLD TO BE INSTALLED GOING AWAY FROM MAIN SUPPLY LINE. MINIMUM OF 1 FOOT BEFORE CHANGE IN DIRECTION.
4. CUT ALL VALVE BOXES AS REQUIRED SO BOXES DO NOT SIT ON PIPING.

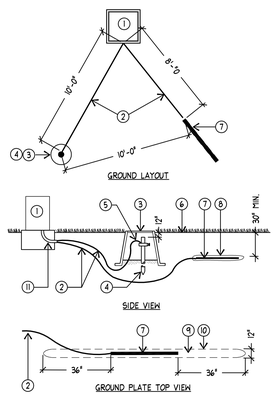
(C) ELECTRIC REMOTE-CONTROL VALVE ASSEMBLY
SCALE: NTS — SECTION/PLAN



1. TWISTED 2-WIRE PATH
2. VALVE BOX
3. DO NOT INSTALL ANY OTHER WIRES OR CABLE WITHIN THE SPHERE OF INFLUENCE
4. ELECTRODE SPHERE OF INFLUENCE BOUNDARIES
5. COPPER GROUND PLATE (4" X 36" X .0625") ATTACHED TO #6 AWG BARE COPPER WIRE W/ CADWELD CONNECTION OR APPROVED EQUAL
6. #6 AWG SOLID BARE COPPER WIRE, LENGTH AS REQUIRED
7. EARTH CONTACT MATERIAL

NOTE:
1. GROUND DECODERS AS RECOMMENDED BY DECODER MANUFACTURER (I.E. MAX. DISTANCE BETWEEN GROUND PLATES OR NUMBER OF DECODERS PER GROUND PLATE)

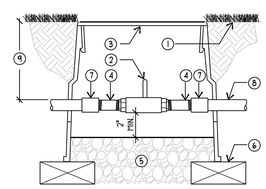
(J) DECODER GROUNDING - GROUND PLATE
SCALE: NTS — SECTION



1. IRRIGATION CONTROLLER
2. SOLID BARE COPPER WIRE (#6 AWG) FROM GROUNDING ROD OR GROUNDING PLATE TO CONTROLLER ASSEMBLY. MAKE WIRE AS SHORT AND STRAIGHT AS POSSIBLE
3. COVER GROUNDING ROD WITH #10 ROUND VALVE BOX AS SHOWN
4. 5/8-INCH X 10 FT COPPER CLAD GROUNDING ROD.
5. CADWELD CONNECTION
6. FINISH GRADE
7. COPPER GROUND PLATE (4" X 96" X .0625") ATTACHED TO #6 AWG BARE COPPER WIRE W/ CADWELD CONNECTION OR APPROVED EQUAL
8. EARTH CONTACT MATERIAL
9. DO NOT INSTALL ANY OTHER WIRES OR CABLE WITHIN THE SPHERE OF INFLUENCE
10. ELECTRODE SPHERE OF INFLUENCE BOUNDARIES
11. PLASTIC SWEEP ELL (1 1/2" OR LARGER)

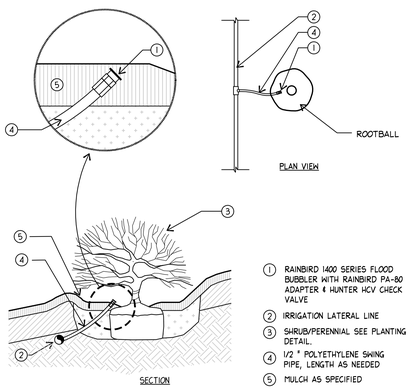
NOTE:
1. INSTALL PER MANUFACTURE'S SPECIFICATIONS.
2. TEST GROUNDING 1 MONTH AFTER INSTALLATION. GROUNDING MUST ACHIEVE RESISTANCE OF TEN (10) OHMS OR LESS.

(G) CONTROLLER GROUNDING LAYOUT
SCALE: NTS — PLAN/SECTION



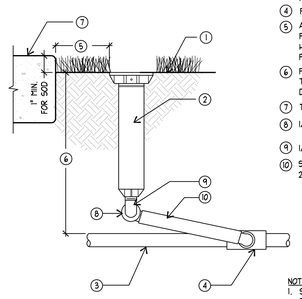
1. SET FLUSH TO FINISH GRADE / TOP OF MULCH
2. ISOLATION BALL VALVE W/ HANDLE TURNED UPWARD (SEE IRRIGATION SCHEDULE)
3. VALVE BOX (LOCATION MUST BE APPROVED BY OWNER'S REP. PRIOR TO INSTALL).
4. PVC SCH 80 NIPPLE
5. 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED AGGREGATE
6. BRICK FOUNDATION
7. PVC SCH 80 SLIP X THREAD COUPLING (SAME SIZE AS MAINLINE PIPING)
8. MAINLINE PIPING
9. FOR TRENCH DEPTHS (SEE TRENCHING AND SLEEVING DETAIL)

(A) ISOLATION BALL VALVE ASSEMBLY
SCALE: NTS — SECTION



1. RAINBIRD 1400 SERIES FLOOD BUBBLER WITH RAINBIRD PA-80 ADAPTER & HUNTER HCV CHECK VALVE
2. IRRIGATION LATERAL LINE
3. SHRUB/PERENNIAL SEE PLANTING DETAIL.
4. 1/2 " POLYETHYLENE SWING PIPE, LENGTH AS NEEDED
5. MULCH AS SPECIFIED

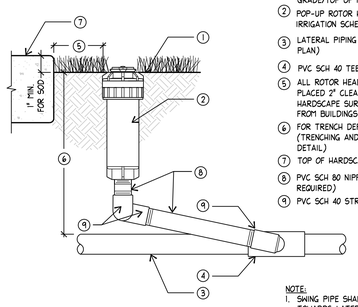
(K) BUBBLER AT SHRUBS
SCALE: NTS — SECTION/PLAN



1. SET HEAD FLUSH WITH FINISH GRADE/TOP OF MULCH
2. POP-UP SPRAY HEAD (SEE IRRIGATION SCHEDULE)
3. LATERAL PIPING (SIZE AS PER PLAN)
4. PVC SCH 40 TEE OR ELL
5. ALL SPRAY HEADS TO BE PLACED 1" CLEAR OF ALL HARDSCAPE SURFACES AND 2'-0" FROM BUILDINGS
6. FOR TRENCH DEPTHS (SEE TRENCHING AND SLEEVING DETAIL)
7. TOP OF HARDSCAPE
8. 1/2" BARB 90°
9. 1/2" MARLEX 90° ELL
10. SWING ASSEMBLY: FLEX TUBE 24" MAX. LENGTH

NOTE:
1. SWING PIPE SHALL SLOPE TOWARDS LATERAL PIPE FOR COMPLETE DRAINAGE.

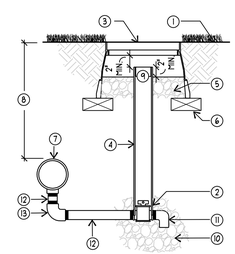
(H) POP-UP SPRAY HEAD
SCALE: NTS — SECTION



1. SET HEAD FLUSH WITH FINISH GRADE/TOP OF MULCH
2. POP-UP ROTOR HEAD (SEE IRRIGATION SCHEDULE)
3. LATERAL PIPING (SIZE AS PER PLAN)
4. PVC SCH 40 TEE OR ELL
5. ALL ROTOR HEADS TO BE PLACED 2" CLEAR OF ALL HARDSCAPE SURFACES AND 2'-0" FROM BUILDINGS
6. FOR TRENCH DEPTHS (TRENCHING AND SLEEVING DETAIL)
7. TOP OF HARDSCAPE
8. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
9. PVC SCH 40 STREET ELL

NOTE:
1. SWING PIPE SHALL SLOPE TOWARDS LATERAL PIPE FOR COMPLETE DRAINAGE.

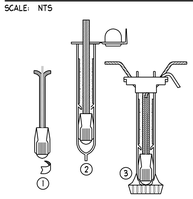
(D) POP-UP ROTOR HEAD
SCALE: NTS — SECTION



1. SET FLUSH TO FINISH GRADE/TOP OF MULCH
2. 3/4" MAINLINE DRAIN VALVE (SEE IRRIGATION SCHEDULE)
3. VALVE BOX (LOCATION MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION).
4. 4" SCH 40 PVC SLEEVE (LENGTH AS REQUIRED). NOTCH OVER VALVE FOR STABILITY.
5. 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED AGGREGATE
6. BRICK FOUNDATION
7. MAINLINE PIPING (SIZE AS PER PLAN)
8. FOR TRENCH DEPTHS (SEE TRENCHING AND SLEEVING DETAIL)
9. WEATHERMATIC 90AL LOCKING VALVE CAP WITH A RLK-1 KEY OR EQUAL
10. GRAVEL SUMP- 18" DIA. X 12" DEEP
11. SCH. 80 PVC STREET ELL TURNED DOWNWARDS
12. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
13. PVC SCH 80 ELL

NOTES:
1. ALL LINES SHALL SLOPE TO MANUAL DRAIN. IF FIELD CONDITIONS NECESSITATE ADDITIONAL DRAINS, THESE DRAINS SHALL BE INSTALLED FOR COMPLETE DRAINAGE OF THE ENTIRE SYSTEM.

(B) MAINLINE DRAIN ASSEMBLY
SCALE: NTS — SECTION



1. STRIP WIRES AND APPLY SCOTCHLOK Y ELECTRICAL SPRING CONNECTOR IN A CLOCKWISE DIRECTION.
2. INSERT SPLICE TO BOTTOM OF GEL FILLED TUBE. VISUALLY CHECK TO MAKE SURE SCOTCHLOK CONNECTOR HAS BEEN PUSHED PAST THE LOCKING FINGERS AND IS SEATED ON THE BOTTOM OF THE TUBE.
3. POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.

(E) 3M DBR-Y DIRECT BURY SPLICE KIT
SCALE: NTS — SECTION

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801 . 487 . 4923
fax 801 . 466 . 3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

IRRIGATION DETAILS - PAYNE

L-R502

File : E:\11068_Utah State Hospital\Cadd\Irrigation.dwg Sep 07, 2012-10:33am

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design

1058 East 2100 South
Salt Lake City, Utah 84106
office 801 . 487 . 4923
fax 801 . 466 . 3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER

FILE

DRAWN BY EP

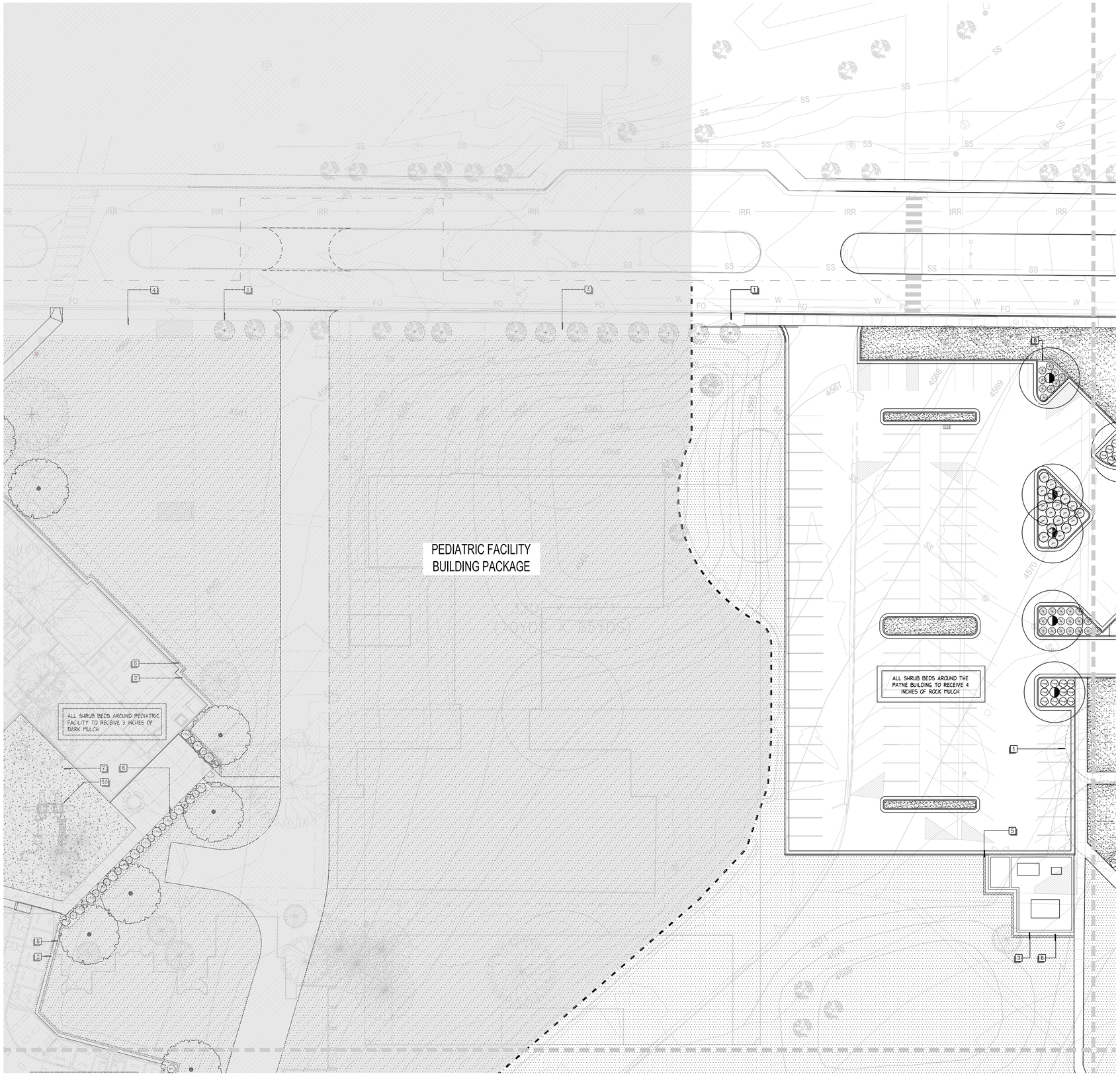
CHECKED BY SG

SCALE 1" = 40'-0"

LANDSCAPE PLAN - OVERALL

L-L100

File : E:\11068_Utah State Hospital\Cadd\Planting.dwg Sep 07, 2012-10:40am



DFCM APPROVAL STAMP

PLANT SCHEDULE | A

SEE DTL-A SHT L-L501 FOR PLANT SCHEDULE

PLANTING NOTES | B

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COSTS INCURRED DUE TO DAMAGE OF SAID UTILITIES.
2. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE AND ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH THE LANDSCAPE CONSTRUCTION FOR THIS PROJECT.
4. SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS, EXECUTIONS AND MAINTENANCE.
5. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE UPON DELIVERY TO THE SITE, AND PRIOR TO INSTALLATION.
6. IF DISCREPANCIES ARISE BETWEEN ACTUAL PLANTING AREA SIZES IN THE FIELD AND THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN WILL RESULT IN CONTRACTOR'S LIABILITY FOR MATERIALS RELOCATION.
7. FINAL LOCATIONS OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL OF THE OWNER'S REPRESENTATIVE.
8. TREES SHALL NOT BE PLANTED LESS THAN 5'-0" FROM CURBS OR HARD SURFACE AREAS UNLESS A ROOT BARRIER IS INSTALLED.
9. CONTRACTOR SHALL PROVIDE AN AGRICULTURAL TOPSOIL ANALYSIS AND AMEND SOIL AS RECOMMENDED - REFER TO SPECIFICATIONS..
10. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
11. PRUNE TREES IN ACCORDANCE WITH SPECIFICATIONS.
12. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE OWNER'S REPRESENTATIVE.
13. ALL EVERGREEN TREES 6'-0" AND TALLER SHALL BE GUYED- SEE SHT. L-L501 DTL. B.
14. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE LAST 6 INCHES OF GRADE IN SEED MIX AREAS, 7 INCHES OF GRADE IN TURF SOD AREAS (6 INCHES OF TOPSOIL AND 1 INCH FOR SOD), AND 15 to 16 INCHES IN SHRUB BED AREAS (3 INCHES OF BARK MULCH OR 4 INCHES OF ROCK MULCH AND 12" OF AMENDED TOPSOIL). IF NECESSARY DIG SUBGRADE IN SHRUB BEDS, TURF, AND GRASS SEED MIX AREAS DOWN AS SPECIFIED BEFORE PLACING AMENDED TOPSOIL. THE PLANTING ISLANDS IN THE PARKING LOTS SHALL HAVE ALL ROAD BASE REMOVED PRIOR TO PLACEMENT OF TOPSOIL. REFER TO GRADING PLAN FOR FINISH GRADE AND DRAINAGE.

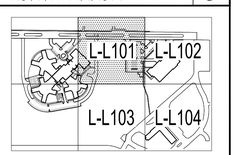
REFERENCE SCHEDULE NOTES | C

SYMBOL	DESCRIPTION
1	EXISTING TREE - PROTECT IN PLACE, TYP.
2	BARK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
3	SITE WALL - SEE ARCH. DRAWINGS
4	PROTECT IN PLACE EXISTING TURF. REPAIR ANY TURF THAT IS DAMAGED IN THE AREA DUE TO CONSTRUCTION, TYP.
5	MOW CURB, TYP. - SEE SHT. L-L501 DTL. H
6	FENCING - SEE ARCHS. PLANS
7	ENGINEERED WOOD FIBER PLAYGROUND SURFACING - SEE SHT. L-L501 DTL.-M
8	ROCK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
9	PRE-CAST CONCRETE STEPPING STONES (36" X 36") - SEE SHT. L-L501 DTL.-K
10	PLAY EQUIPMENT (N.I.C.) PROVIDED BY OWNER

SCALE | E

NORTH SCALE: 1" = 20'-0"

NORTH ARROW | D



FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801 . 487 . 4923
fax 801 . 466 . 3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

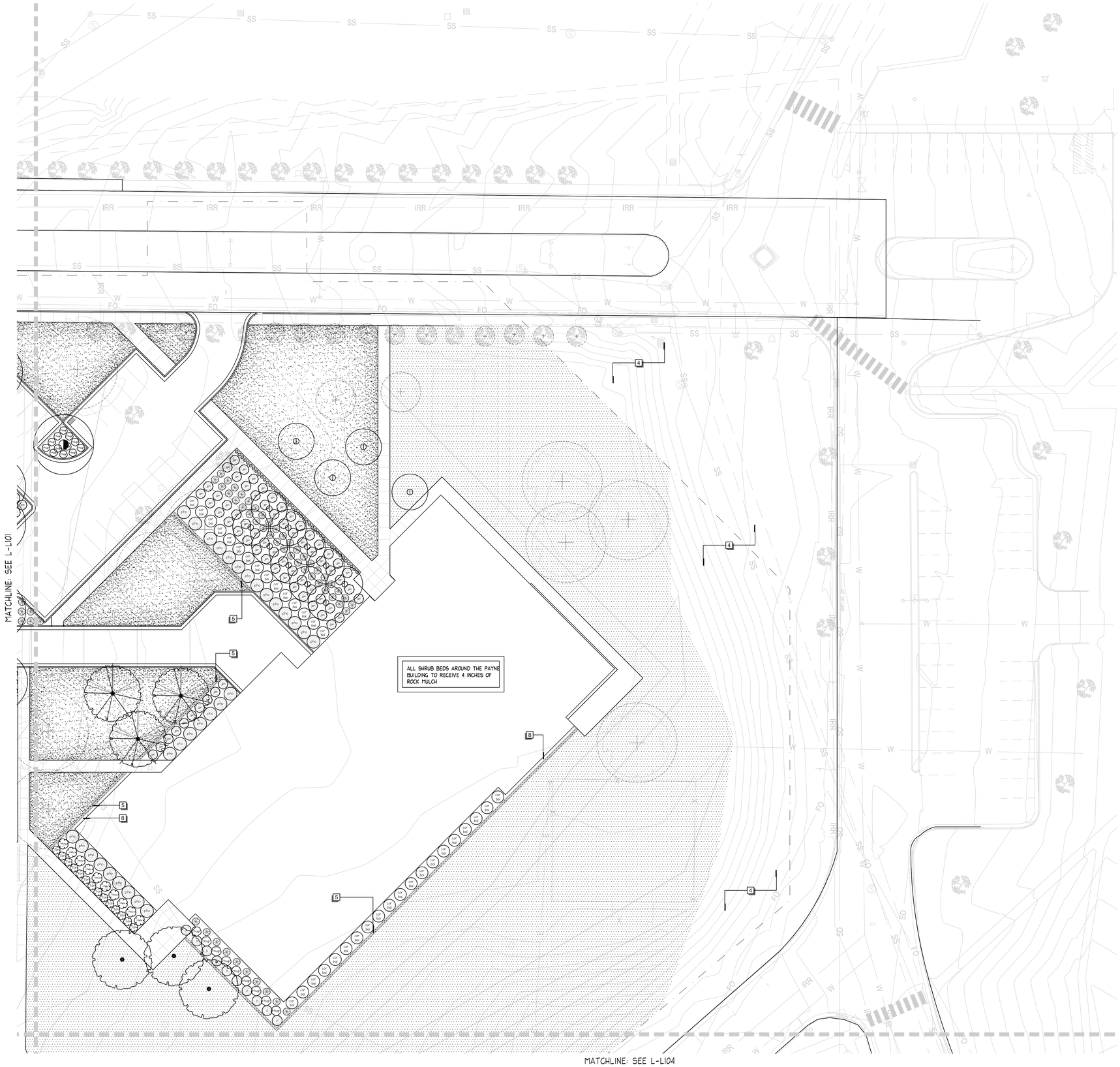
	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

LANDSCAPE PLAN - PAYNE

L-L101

File : E:\11068_Utah State Hospital\Cadd\Planting.dwg Sep 07, 2012-10:41am



DFCM APPROVAL STAMP

PLANT SCHEDULE | A

SEE DTL-A SHT L-L501 FOR PLANT SCHEDULE

PLANTING NOTES | B

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COSTS INCURRED DUE TO DAMAGE OF SAID UTILITIES.
2. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE AND ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH THE LANDSCAPE CONSTRUCTION FOR THIS PROJECT.
4. SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS, EXECUTIONS AND MAINTENANCE.
5. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE UPON DELIVERY TO THE SITE, AND PRIOR TO INSTALLATION.
6. IF DISCREPANCIES ARISE BETWEEN ACTUAL PLANTING AREA SIZES IN THE FIELD AND THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN WILL RESULT IN CONTRACTOR'S LIABILITY FOR MATERIALS RELOCATION.
7. FINAL LOCATIONS OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL OF THE OWNER'S REPRESENTATIVE.
8. TREES SHALL NOT BE PLANTED LESS THAN 5'-0" FROM CURBS OR HARD SURFACE AREAS UNLESS A ROOT BARRIER IS INSTALLED.
9. CONTRACTOR SHALL PROVIDE AN AGRICULTURAL TOPSOIL ANALYSIS AND AMEND SOIL AS RECOMMENDED - REFER TO SPECIFICATIONS..
10. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
11. PRUNE TREES IN ACCORDANCE WITH SPECIFICATIONS.
12. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE OWNER'S REPRESENTATIVE.
13. ALL EVERGREEN TREES 6'-0" AND TALLER SHALL BE GUYED- SEE SHT. L-L501 DTL. B.
14. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE LAST 6 INCHES OF GRADE IN SEED MIX AREAS, 7 INCHES OF GRADE IN TURF SOD AREAS (6 INCHES OF TOPSOIL AND 1 INCH FOR SOD), AND 15 to 16 INCHES IN SHRUB BED AREAS (3 INCHES OF BARK MULCH OR 4 INCHES OF ROCK MULCH AND 12" OF AMENDED TOPSOIL). IF NECESSARY DIG SUBGRADE IN SHRUB BEDS, TURF, AND GRASS SEED MIX AREAS DOWN AS SPECIFIED BEFORE PLACING AMENDED TOPSOIL. THE PLANTING ISLANDS IN THE PARKING LOTS SHALL HAVE ALL ROAD BASE REMOVED PRIOR TO PLACEMENT OF TOPSOIL. REFER TO GRADING PLAN FOR FINISH GRADE AND DRAINAGE.

REFERENCE SCHEDULE NOTES | C

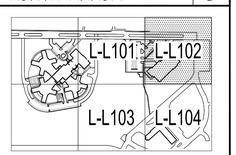
SYMBOL	DESCRIPTION
1	EXISTING TREE - PROTECT IN PLACE, TYP.
2	BARK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
3	SITE WALL - SEE ARCH. DRAWINGS
4	PROTECT IN PLACE EXISTING TURF. REPAIR ANY TURF THAT IS DAMAGED IN THE AREA DUE TO CONSTRUCTION, TYP.
5	MOW CURB, TYP. - SEE SHT. L-L501 DTL. H
6	FENCING - SEE ARCHS. PLANS
7	ENGINEERED WOOD FIBER PLAYGROUND SURFACING - SEE SHT. L-L501 DTL.-M
8	ROCK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
9	PRE-CAST CONCRETE STEPPING STONES (36" X 36") - SEE SHT. L-L501 DTL.-K
10	PLAY EQUIPMENT (N.I.C.) PROVIDED BY OWNER

SCALE | E

NORTH SCALE: 1" = 20'-0"

0 10 20 40

NORTH ARROW | D



FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801 . 487 . 4923
fax 801 . 466 . 3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

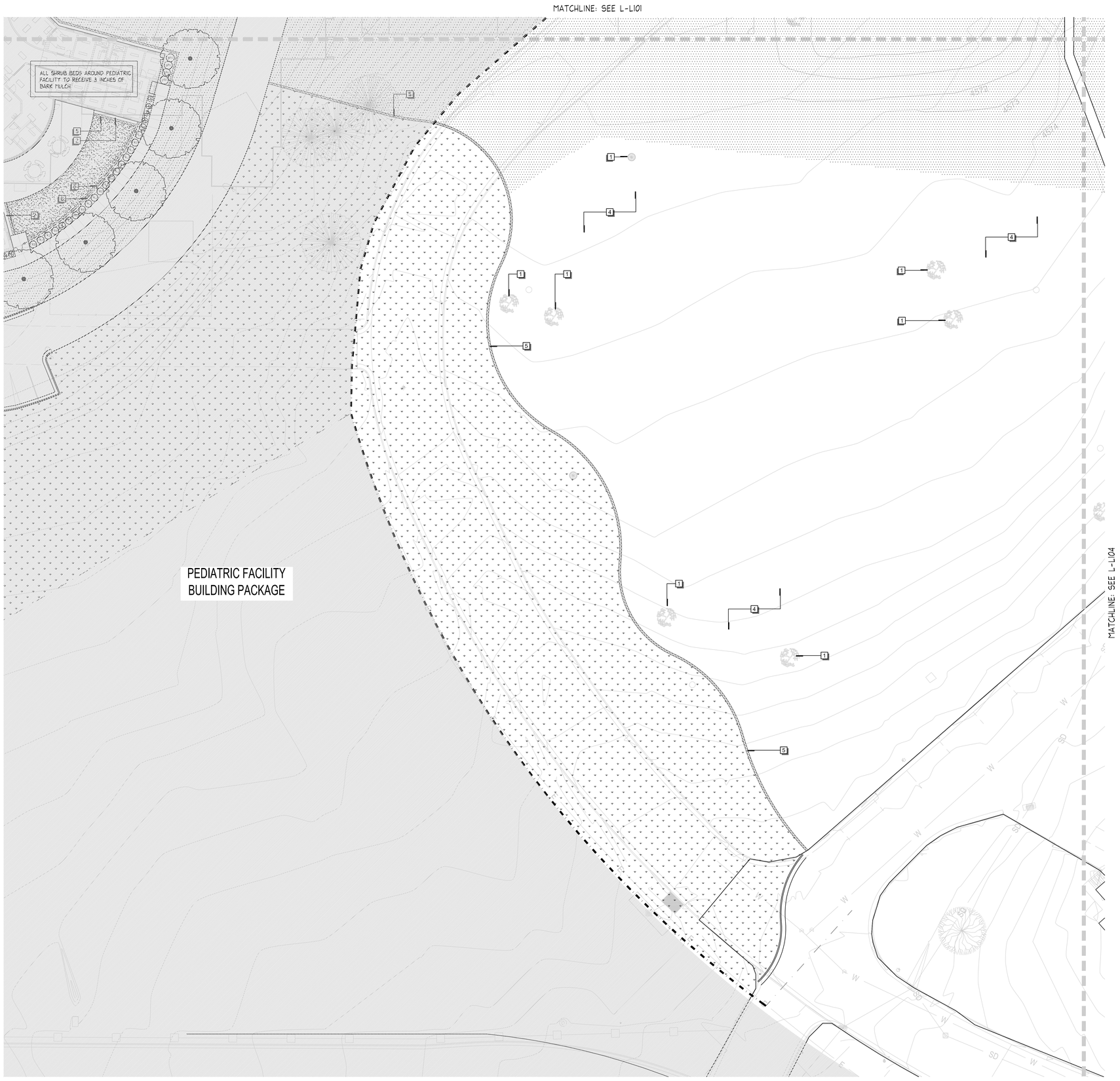
	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

LANDSCAPE PLAN - PAYNE

L-L102

File : E:\11068_Utah State Hospital\Cadd\Planting.dwg Sep 07, 2012-10:42am



DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801 . 487 . 4923
fax 801 . 466 . 3046
www.arcsitiodesign.com

PLANT SCHEDULE (A)

SEE DTL-A SHT L-L501 FOR PLANT SCHEDULE

PLANTING NOTES (B)

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COSTS INCURRED DUE TO DAMAGE OF SAID UTILITIES.
2. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE AND ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH THE LANDSCAPE CONSTRUCTION FOR THIS PROJECT.
4. SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS, EXECUTIONS AND MAINTENANCE.
5. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE UPON DELIVERY TO THE SITE, AND PRIOR TO INSTALLATION.
6. IF DISCREPANCIES ARISE BETWEEN ACTUAL PLANTING AREA SIZES IN THE FIELD AND THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN WILL RESULT IN CONTRACTOR'S LIABILITY FOR MATERIALS RELOCATION.
7. FINAL LOCATIONS OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL OF THE OWNER'S REPRESENTATIVE.
8. TREES SHALL NOT BE PLANTED LESS THAN 5'-0" FROM CURBS OR HARD SURFACE AREAS UNLESS A ROOT BARRIER IS INSTALLED.
9. CONTRACTOR SHALL PROVIDE AN AGRICULTURAL TOPSOIL ANALYSIS AND AMEND SOIL AS RECOMMENDED - REFER TO SPECIFICATIONS..
10. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
11. PRUNE TREES IN ACCORDANCE WITH SPECIFICATIONS.
12. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE OWNER'S REPRESENTATIVE.
13. ALL EVERGREEN TREES 6'-0" AND TALLER SHALL BE GUYED- SEE SHT. L-L501 DTL. B.
14. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE LAST 6 INCHES OF GRADE IN SEED MIX AREAS, 7 INCHES OF GRADE IN TURF SOD AREAS (6 INCHES OF TOPSOIL AND 1 INCH FOR SOD), AND 15 to 16 INCHES IN SHRUB BED AREAS (3 INCHES OF BARK MULCH OR 4 INCHES OF ROCK MULCH AND 12" OF AMENDED TOPSOIL). IF NECESSARY DIG SUBGRADE IN SHRUB BEDS, TURF, AND GRASS SEED MIX AREAS DOWN AS SPECIFIED BEFORE PLACING AMENDED TOPSOIL. THE PLANTING ISLANDS IN THE PARKING LOTS SHALL HAVE ALL ROAD BASE REMOVED PRIOR TO PLACEMENT OF TOPSOIL. REFER TO GRADING PLAN FOR FINISH GRADE AND DRAINAGE.

REFERENCE SCHEDULE NOTES (C)

SYMBOL	DESCRIPTION
1	EXISTING TREE - PROTECT IN PLACE, TYP.
2	BARK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
3	SITE WALL - SEE ARCH. DRAWINGS
4	PROTECT IN PLACE EXISTING TURF. REPAIR ANY TURF THAT IS DAMAGED IN THE AREA DUE TO CONSTRUCTION, TYP.
5	MOW CURB, TYP. - SEE SHT. L-L501 DTL. H
6	FENCING - SEE ARCHS. PLANS
7	ENGINEERED WOOD FIBER PLAYGROUND SURFACING - SEE SHT. L-L501 DTL.-M
8	ROCK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
9	PRE-CAST CONCRETE STEPPING STONES (36" X 36") - SEE SHT. L-L501 DTL.-K
10	PLAY EQUIPMENT (N.I.C.) PROVIDED BY OWNER

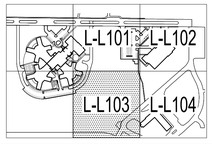
SCALE (E)

NORTH

0 10 20 40

SCALE: 1" = 20'-0"

NORTH ARROW (D)



MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

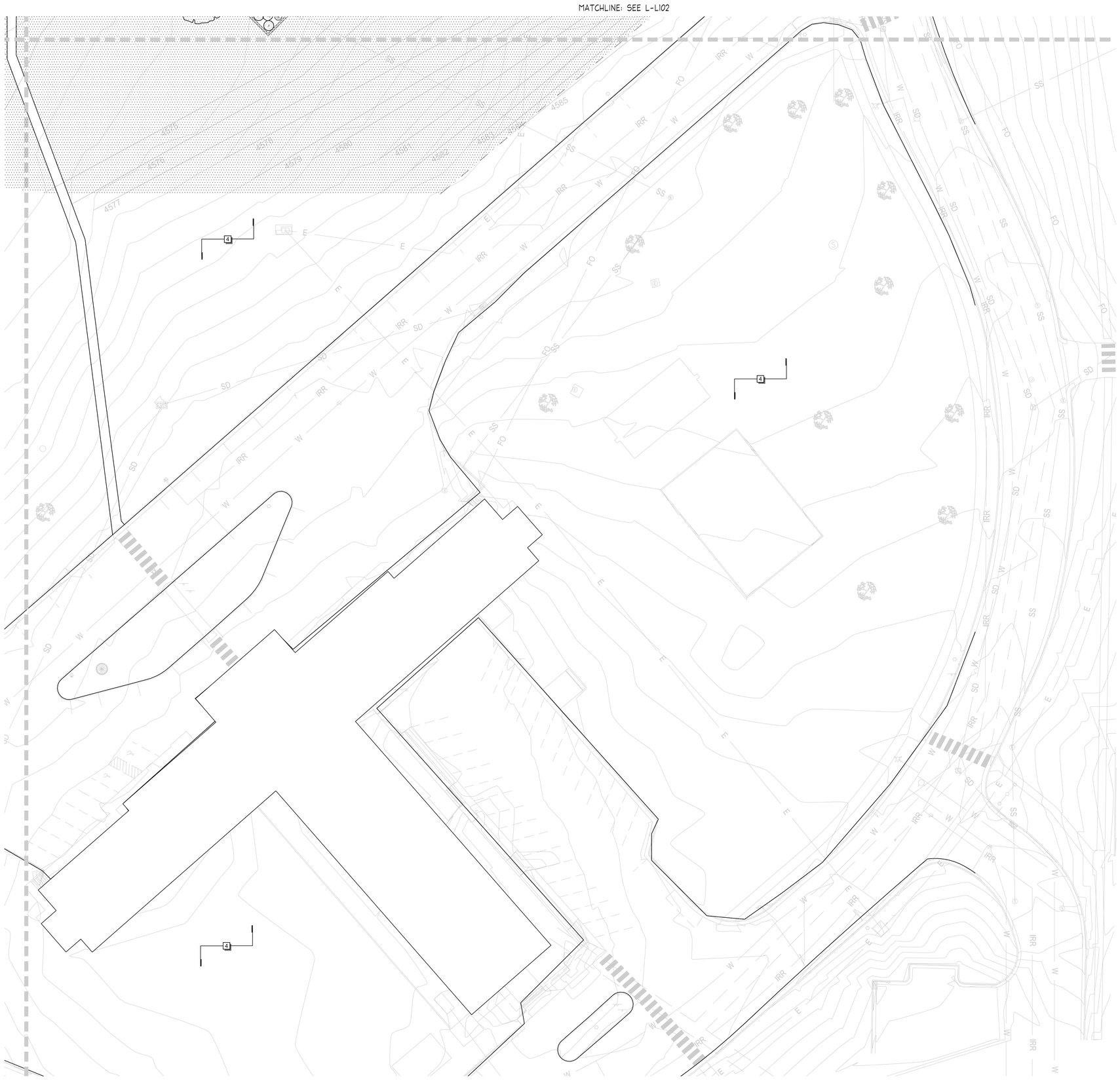
	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

LANDSCAPE PLAN - PAYNE

L-L103

File : E:\11068_Utah State Hospital\Cadd\Planting.dwg Sep 07, 2012-10:43am



DFCM APPROVAL STAMP

PLANT SCHEDULE | A

SEE DTL-A SHT L-L501 FOR PLANT SCHEDULE

PLANTING NOTES | B

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COSTS INCURRED DUE TO DAMAGE OF SAID UTILITIES.
2. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE AND ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH THE LANDSCAPE CONSTRUCTION FOR THIS PROJECT.
4. SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS, EXECUTIONS AND MAINTENANCE.
5. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE UPON DELIVERY TO THE SITE, AND PRIOR TO INSTALLATION.
6. IF DISCREPANCIES ARISE BETWEEN ACTUAL PLANTING AREA SIZES IN THE FIELD AND THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN WILL RESULT IN CONTRACTOR'S LIABILITY FOR MATERIALS RELOCATION.
7. FINAL LOCATIONS OF ALL PLANT MATERIALS SHALL BE SUBJECT TO APPROVAL OF THE OWNER'S REPRESENTATIVE.
8. TREES SHALL NOT BE PLANTED LESS THAN 5'-0" FROM CURBS OR HARD SURFACE AREAS UNLESS A ROOT BARRIER IS INSTALLED.
9. CONTRACTOR SHALL PROVIDE AN AGRICULTURAL TOPSOIL ANALYSIS AND AMEND SOIL AS RECOMMENDED - REFER TO SPECIFICATIONS..
10. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
11. PRUNE TREES IN ACCORDANCE WITH SPECIFICATIONS.
12. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE OWNER'S REPRESENTATIVE.
13. ALL EVERGREEN TREES 6'-0" AND TALLER SHALL BE GUYED- SEE SHT. L-L501 DTL. B.
14. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE LAST 6 INCHES OF GRADE IN SEED MIX AREAS, 7 INCHES OF GRADE IN TURF SOD AREAS (6 INCHES OF TOPSOIL AND 1 INCH FOR SOD), AND 15 to 16 INCHES IN SHRUB BED AREAS (3 INCHES OF BARK MULCH OR 4 INCHES OF ROCK MULCH AND 12" OF AMENDED TOPSOIL). IF NECESSARY DIG SUBGRADE IN SHRUB BEDS, TURF, AND GRASS SEED MIX AREAS DOWN AS SPECIFIED BEFORE PLACING AMENDED TOPSOIL. THE PLANTING ISLANDS IN THE PARKING LOTS SHALL HAVE ALL ROAD BASE REMOVED PRIOR TO PLACEMENT OF TOPSOIL. REFER TO GRADING PLAN FOR FINISH GRADE AND DRAINAGE.

REFERENCE SCHEDULE NOTES | C

SYMBOL	DESCRIPTION
1	EXISTING TREE - PROTECT IN PLACE, TYP.
2	BARK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
3	SITE WALL - SEE ARCH. DRAWINGS
4	PROTECT IN PLACE EXISTING TURF, REPAIR ANY TURF THAT IS DAMAGED IN THE AREA DUE TO CONSTRUCTION, TYP.
5	MOW CURB, TYP. - SEE SHT. L-L501 DTL. H
6	FENCING - SEE ARCHS. PLANS
7	ENGINEERED WOOD FIBER PLAYGROUND SURFACING - SEE SHT. L-L501 DTL.-M
8	ROCK MULCH (18"-WIDE STRIP) BETWEEN BUILDING AND MOW CURB
9	PRE-CAST CONCRETE STEPPING STONES (36" X 36") - SEE SHT. L-L501 DTL.-K
10	PLAY EQUIPMENT (N.I.C.) PROVIDED BY OWNER

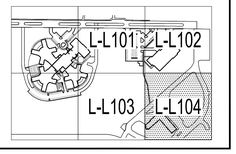
SCALE | E

NORTH

0 10 20 40

SCALE: 1" = 20'-0"

NORTH ARROW | D



FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801 . 487 . 4923
fax 801 . 466 . 3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

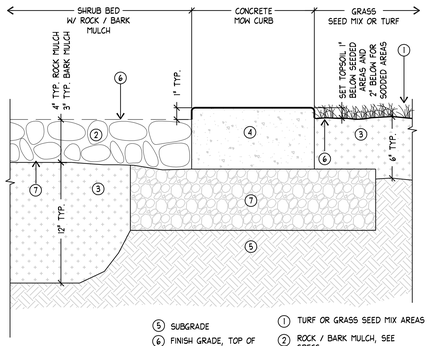
	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

LANDSCAPE PLAN - PAYNE

L-L104

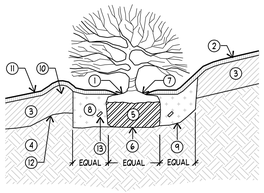
File : E:\11068_Utah State Hospital\Cadd\Planting.dwg Sep 07, 2012-10:43am



⑤ SUBGRADE
⑥ FINISH GRADE, TOP OF MULCH TO BE LEVEL
⑦ ROAD BASE - REFER TO ARCHS. PLANS

① TURF OR GRASS SEED MIX AREAS
② ROCK / BARK MULCH, SEE SPECS.
③ AMENDED TOPSOIL - SEE SPECS.
④ CONCRETE MOW CURB - REFER TO SHT. L-L501 DTL. H

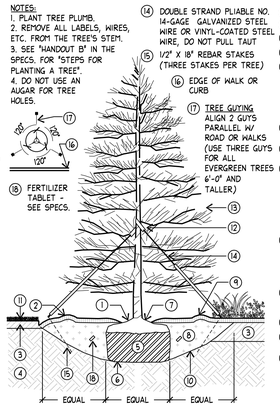
J MULCH IN SHRUB BEDS
SCALE: NTS — SECTION



NOTES:
1. PLANT SHRUB PLUMB.
2. PRUNE DEAD, DISEASED, DAMAGED, OR RUBBING BRANCHES AT PLANTING TIME. DO NOT PRUNE LEADER.
3. REMOVE ALL LABELS, WIRES, ETC. FROM SHRUB.
4. DO NOT USE AN AUGAR FOR TREE HOLES.
5. DEEP WATER WITH HOSE ALL PLANTS.
6. WATER PLANT IN POT PRIOR TO REMOVING PLANT FROM POT. DO NOT PLANT DRY PLANTS. ALL POTTED PLNATS MUST HAVE A MOIST ROOT SYSTEM.

① MULCH 1" TO 2" BACK FROM TRUNK
② MULCH LAYER - SEE SPECS.
③ AMENDED TOPSOIL- SEE SPECS.
④ UNDISTURBED SUBGRADE
⑤ IF THE SHRUB IS BALLED AND BURLAPPED (OR CONTAINED IN A WIRE BASKET), CUT AND REMOVE THE ROPE, STRING, WIRE, AND/OR WIRE BASKET FROM AROUND THE TRUNK AND TOP 1/3 OF THE ROOT BALL
⑥ SET ROOTBALL ON FIRMLY PACKED TOPSOIL TO PREVENT SETTLING
⑦ TRUNK FLAIR- SET 1" TO 2" ABOVE FINISH GRADE
⑧ MAKE THE HOLE WIDE, AS MUCH AS THREE TIMES THE DIAMETER OF THE ROOT BALL, BUT ONLY AS DEEP AS THE ROOT BALL. BACKFILL TOPSOIL BORROW - SEE SPECS. BACKFILL IN 12 INCH LIFTS.
⑨ ROUGHEN SIDES PRIOR TO BACKFILLING. SETTLE W/ WATER IN 12" LIFTS
⑩ CONSTRUCT WATERING DISH AT EACH PLANT USING TOPSOIL
⑪ FINISH GRADE
⑫ EXISTING GRADE
⑬ FERTILIZER TABLET - SEE SPECS.

E SHRUB
SCALE: NTS — SECTION

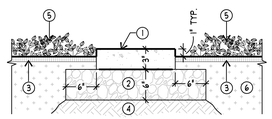


NOTES:
1. PLANT TREE PLUMB.
2. REMOVE ALL LABELS, WIRES, ETC. FROM THE TREE'S STEM.
3. SEE "HANDOUT B" IN THE SPECS. FOR "STEPS FOR PLANTING A TREE".
4. DO NOT USE AN AUGAR FOR TREE HOLES.

⑭ DOUBLE STRAND PLIABLE NO. 14-GAGE GALVANIZED STEEL WIRE OR VINYL-COATED STEEL WIRE, DO NOT PULL TAUT
⑮ 1/2" X 18" REBAR STAKES (THREE STAKES PER TREE)
⑯ EDGE OF WALK OR CURB
⑰ TREE GUYING ALIGN 2 GUYS PARALLEL W/ ROAD OR WALKS (USE THREE GUYS FOR ALL EVERGREEN TREES 6'-0" AND TALLER)
⑱ FERTILIZER TABLET - SEE SPECS.

① MULCH 1" TO 2" BACK FROM TRUNK
② 3" MULCH LAYER - SEE SPECS.
③ AMENDED TOPSOIL- SEE SPECS.
④ UNDISTURBED SUBGRADE
⑤ IF THE TREE IS BALLED AND BURLAPPED (OR CONTAINED IN A WIRE BASKET), CUT AND REMOVE THE ROPE, STRING, WIRE, AND/OR WIRE BASKET FROM AROUND THE TRUNK 4 TOP 1/3 OF THE ROOT BALL
⑥ SET ROOTBALL ON FIRMLY PACKED TOPSOIL TO PREVENT SETTLING
⑦ TRUNK FLAIR- SET 1" TO 2" ABOVE FINISH GRADE
⑧ MAKE THE HOLE WIDE, AS MUCH AS THREE TIMES THE DIAMETER OF THE ROOT BALL, BUT ONLY AS DEEP AS THE ROOT BALL. BACKFILL TOPSOIL BORROW - SEE SPECS. BACKFILL IN 12 INCH LIFTS.
⑨ PREPARE A WATERING CIRCLE OF 2' DIAMETER AROUND THE TRUNK. FOR CONIFERS, EXTEND THE WATERING WELL TO THE DRIP LINE OF THE TREE CANOPY.
⑩ ROUGHEN SIDES PRIOR TO BACKFILLING. SETTLE W/ WATER IN 12" LIFTS
⑪ DO NOT PLANT LAWN IN TREE PIT
⑫ 3" OR WIDER NYLON WEBBING W/ METAL GROMMETS
⑬ PRUNE DEAD, DISEASED, DAMAGED, OR RUBBING BRANCHES AT PLANTING TIME. DO NOT PRUNE LEADER. IMPROPER PRUNING SHALL BE CAUSE FOR REJECTION OF THE PLANT MATERIAL.

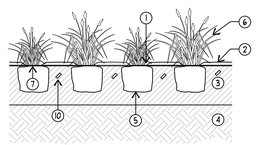
B EVERGREEN TREE WITH GUYING
SCALE: NTS — SECTION



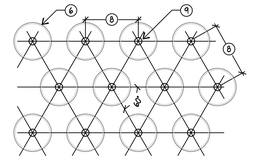
SECTION

① PRECAST CONCRETE STEPPING STONE 36" X 36" X 3"-THICK. MATCH COLOR OF STEPPING STONE TO BUILDING EXTERIOR - SUBMIT SAMPLES FOR APPROVAL
② COMPACTED ROAD BASE
③ MULCH, SEE SPECS.
④ COMPACTED SUBGRADE
⑤ PLANT MATERIAL, SEE PLANTING PLAN
⑥ AMENDED TOPSOIL

K PRECAST CONCRETE STEPPING STONE
SCALE: NTS — SECTION



SECTION



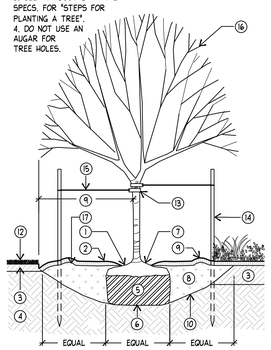
PLAN

① KEEP MULCH BACK FROM BASE OF PLANT
② MULCH LAYER - SEE SPECS.
③ AMENDED TOPSOIL - SEE SPECS.
④ UNDISTURBED SUBGRADE
⑤ IF PLANTS ARE POT-BOUND AT PLANTING TIME, LOOSEN THE ROOTS AROUND THE BOTTOM AND SIDES OF THE ROOT BALL
⑥ PLANT
⑦ BE SURE THE CROWN OF THE PLANT (THE POINT WHERE ROOTS AND TOP JOIN) IS EVEN WITH THE SOIL SURFACE
⑧ PLANT SPACING VARIES - REFER TO PLANT SCHEDULE OR PLAN
⑨ CENTER OF PLANT
⑩ FERTILIZER TABLET - SEE SPECS.

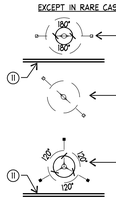
NOTES:
1. PRUNE DEAD, DISEASED, DAMAGED, OR RUBBING BRANCHES AT PLANTING TIME.
2. REMOVE ALL LABELS, WIRES, ETC. FROM PLANT.
3. WATER PLANTS THOROUGHLY FOLLOWING PLANTING TO SETTLE THE SOIL AROUND THE ROOTS.

F PERENNIAL / GROUNDCOVER
SCALE: NTS — SECTION/PLAN

NOTES:
1. PLANT TREE PLUMB.
2. REMOVE ALL LABELS, WIRES, ETC. FROM THE TREE'S STEM.
3. SEE "HANDOUT B" IN THE SPECS. FOR "STEPS FOR PLANTING A TREE".
4. DO NOT USE AN AUGAR FOR TREE HOLES.



EXCEPT IN RARE CASES TREES SHOULD NOT BE STAKED



TREE STAKING ALONG ROADS OR WALK (ALL TREES LESS THAN 2" CALIPER)

TREE STAKING IN OPEN SPACES (ALL TREES LESS THAN 2" CALIPER). ALIGN STAKES PERPENDICULAR W/ DIRECTION OF PREVAILING WINDS. ALL STAKES TO BE CONSISTENT.

TREE STAKING ALIGN 2 STAKES PARALLEL W/ ROAD OR WALK (USE THREE STAKES FOR ALL DECIDUOUS TREES GREATER THAN 2" CAL.)

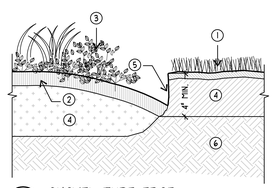
① MULCH 1" TO 2" BACK FROM TRUNK
② 3" MULCH LAYER - SEE SPECS.
③ AMENDED TOPSOIL- SEE SPECS.
④ UNDISTURBED SUBGRADE
⑤ IF THE TREE IS BALLED AND BURLAPPED (OR CONTAINED IN A WIRE BASKET), CUT AND REMOVE THE ROPE, STRING, WIRE, AND/OR WIRE BASKET FROM AROUND THE TRUNK AND TOP 1/3 OF THE ROOT BALL
⑥ SET ROOTBALL ON FIRMLY PACKED TOPSOIL TO PREVENT SETTLING
⑦ TRUNK FLAIR- SET 1" TO 2" ABOVE FINISH GRADE
⑧ MAKE THE HOLE WIDE, AS MUCH AS THREE TIMES THE DIAMETER OF THE ROOT BALL, BUT ONLY AS DEEP AS THE ROOT BALL. BACKFILL TOPSOIL BORROW - SEE SPECS. BACKFILL IN 12 INCH LIFTS.
⑨ PREPARE A WATERING CIRCLE OF 2' DIAMETER AROUND THE TRUNK. FOR CONIFERS, EXTEND THE WATERING WELL TO THE DRIP LINE OF THE TREE CANOPY.
⑩ ROUGHEN SIDES PRIOR TO BACKFILLING. SETTLE W/ WATER IN 12" LIFTS
⑪ EDGE OF WALK OR CURB
⑫ DO NOT PLANT LAWN IN TREE PIT
⑬ 3" OR WIDER NYLON WEBBING W/ METAL GROMMETS
⑭ 6'-0" X 2" DIA. ROUND WOOD STAKES, TWO PER TREE (THE STAKES SHALL BE PLUMB AND SET AT THE SAME HIEGHT)
⑮ DOUBLE STRAND PLIABLE NO. 14-GAGE GALVANIZED STEEL WIRE OR VINYL-COATED STEEL WIRE, DO NOT PULL TAUT
⑯ PRUNE DEAD, DISEASED, DAMAGED, OR RUBBING BRANCHES AT PLANTING TIME. DO NOT PRUNE LEADER. IMPROPER PRUNING SHALL BE CAUSE FOR REJECTION OF THE PLANT MATERIAL.
⑰ WEED BARRIER FABRIC - SEE SPECS.

C DECIDUOUS TREE WITH STAKING
SCALE: NTS — SECTION

SYMBOL	BOTANICAL NAME	COMMON NAME	PLS LBS/AC (BROADSCAST)
	Achnatherum hymenoides	Indian Ricegrass	3.0
	Elymus lancealatus ssp.	Thickspike Wheatgrass	4.0
	Elymus trachycaulus ssp.	Slender Wheatgrass	4.0
	Pascopyrum smithii	Western Wheatgrass	4.0
	Poa ampla	Big Bluegrass	1.0
	Pseudoroegneria spicata ssp.	Bluebunch wheatgrass	4.0
		TOTAL	20.0

1. SEED SHALL BE PLANTED AT THE RATES LISTED ABOVE, CONFIRM RATES WITH SEED SUPPLIER. SEED MIX COMPOSITION (PERCENTAGE OF EACH SPECIES) SHALL BE AS RECOMMENDED BY THE SUPPLIER. SEED MIX SHALL BE SPREAD BY BROADCASTING ONE HALF THE SEED MIX ON THE SURFACE OF THE GROUND AND MIXING THE OTHER HALF OF THE SEED MIX IN THE WOOD FIBER HYDRO MULCH. APPLY HYDRO MULCH OVER THE SEED BED SURFACE AT 1800 LBS. PER ACRE. FOR SLOPE AREAS, PROVIDE A MULCH TACKIFIER MIXED INTO THE HYDRO MULCH.
2. ALL SOIL WASHING AND EROSION PROBLEMS SHALL BE REPAIRED AND RE-SEEDED AS REQUIRED.

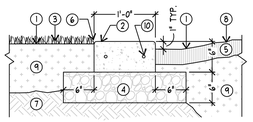
L SEED MIX



① GRASS OR TURF
② MULCH AS SPECIFIED
③ SHRUB BED/TREE WELL
④ TOPSOIL LAYER
⑤ SHOVEL EDGE - USE AROUND TREE WELLS IN TURF
⑥ SUBGRADE

NOTES
1. TO BE USED WITH TREES LOCATED IN AREAS RECEIVING SOD, I.E.

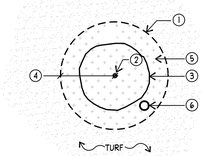
G SHOVEL TURF EDGE
SCALE: NTS — SECTION



NOTE:
1. WHEN MOW CURB IS ADJACENT TO BUILDING OR WALL, USE EXPANSION JOINT AND SLOPE 2% AWAY FROM BUILDING.
2. EXPANSION JOINTS AT 20' O.C. AND A TOOLED JOINT AT 10' O.C.

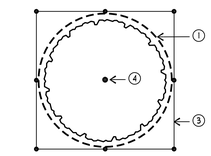
① FINISH GRADE
② CONCRETE MOW CURB. FINISH W/ MED. BROOM PERPENDICULAR TO HEADER RUN.
③ TURF
④ COMPACTED ROAD BASE
⑤ MULCH, SEE SPECS.
⑥ 1/4" RADIUS, TYPICAL
⑦ COMPACTED SUBGRADE
⑧ SHRUB BED
⑨ AMENDED TOPSOIL
⑩ REBAR (2) #4 CONTINUOUS. 2" CLEARANCE @ SIDES, TYP.

H CONCRETE MOW CURB - 12" WIDE
SCALE: NTS — SECTION

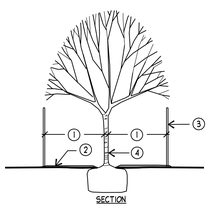


① TURF EDGE (6 / L-L501)
② TREE TRUNK
③ ROOTBALL
④ REMOVE SOD AT DRIPLINE OF TREE- MIN. WIDTH OF 3'-0" DIA.
⑤ MULCH AS SPECIFIED
⑥ ACCENT LIGHTING- IF USED, LOCATE ACCENT LIGHTS WITHIN THE TURF EDGE

I TREE IN TURF
SCALE: NTS — PLAN



PLAN



SECTION

① PROTECTIVE ROOT ZONE (PRZ)- TO CALCULATE CRITICAL ROOT RADIUS, MEASURE THE TREE'S DIAMETER (DBH) 4.5 FEET ABOVE THE GROUND. MEASURE IN INCHES. FOR EACH INCH, ALLOW FOR 1 TO 1.5 FEET OF CRITICAL ROOT RADIUS. IF A TREE'S DBH IS TEN INCHES, ITS CRITICAL ROOT RADIUS IS 10 TO 15 FEET.
② MULCH 1" TO 2" BACK FROM TRUNK WITHIN THE PRZ
③ TREE PROTECTION BARRIER- SEE SPECIFICATIONS. REVIEW DESIGN WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
④ TREE TRUNK

NOTES:
1. IF THERE IS TRENCHING WITHIN THE PRZ, TRENCHES SHALL ONLY BE DUG ON ONE SIDE OF THE TREE AND SHALL BE DONE ONLY DONE WITH APPROVAL FROM THE OWNER'S REPRESENTATIVE. HAND EXCAVATION ONLY.
2. DO NOT STOCKPILE ANY MATERIALS OR LOCATE ANY HEAVY MACHINERY WITHIN THE PRZ. THERE SHALL BE NO TRAFFIC ALLOWED WITHIN THE PRZ.
3. ONLY MOVE BARRIER WITH THE PERMISSION OF THE OWNER'S REPRESENTATIVE.

D TREE PROTECTION
SCALE: NTS — SECTION/PLAN

TREES	BOTANICAL NAME	COMMON NAME	CONT	CAL	QTY*
	Existing Tree	Existing Tree - Protect-in-Place	-		30
DECIDUOUS TREES	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**QTY***
	Acer freemanii 'Jeffersred'	Autumn Blaze Maple	B & B	2.5"	3
	Acer griseum	Paperbark Maple	B & B	2"	14
	Fraxinus pennsylvanica 'Cimmaron'	Cimmaron Seedless Ash	B & B	2.5"	3
	Zelkova serrata 'Green Vase'	Sawleaf Zelkova	B & B	2"	6
SHRUBS	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		**QTY***
CW	Cornus stolonifera 'Bailey'	Bailey Red Twigged Dognood	5 gal		35
FX	Forsythia hybrids 'Courtasol' TM	Gold Tide Forsythia	5 gal		14
J	Juniperus horizontalis 'Wiltoni'	Wilton Juniper	5 gal		10
JP	Juniperus procumbens 'Green Mound'	Green Mound Juniper	5 gal		88
PFX	Photinia fraseri	Photinia Standard	5 gal		30
RGA	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal		32
RT	Rhus typhina 'Tiger Eyes'	Tiger Eyes Sumac	5 gal		10
GRASSES	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		**QTY***
MS	Miscanthus sinensis 'Gracillimus'	Maiden Grass	1 gal		76
PERENNIALS	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		**QTY***
C	Coreopsis grandiflora 'Baby Sun'	Tickseed	1 gal		24
SC	Salvia superba 'May Knight'	Perennial Sage	1 gal		20
GROUND COVERS	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		**QTY***
	Seed Mix See Sht. L-L501 Dlt.-L	Seed Mix	seed		36,707 sf
	Turf Grass Seed **	Turf Grass Seed	seed		107,724 sf
	Turf-Grass *** REPAIR TURF AS NEEDED	Turf-Grass	sod		17,972 sf

* QUANTITY INFORMATION PROVIDED FOR REFERENCE ONLY. CONTRACTOR RESPONSIBLE TO VERIFY ALL QUANTITIES.

** USE "BLUE RIBBON SEED BLEND" FROM GRANITE SEED OR APPROVED EQUAL. PROPOSED SUBSTITUTIONS MUST BE SUBMITTED IN WRITTEN FORM BY THE CONTRACTOR AND APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.

*** USE "RTF" TURF FROM ALL-AMERICAN FARMS, "IMPERIAL BLUE" FROM CHANSWARE FARMS, "BIOBLUE" FROM BIOGRASS TURF FARMS OR APPROVED EQUAL. PROPOSED SUBSTITUTIONS MUST BE SUBMITTED IN WRITTEN FORM BY THE CONTRACTOR AND APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.

A PLANT SCHEDULE
SCALE: NTS — SCHEDULE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Arc Sitio Design, Inc
Landscape Architecture & Architectural Site Design
1058 East 2100 South
Salt Lake City, Utah 84106
office 801.487.4923
fax 801.466.3046
www.arcsitiodesign.com

MARK I. PAYNE BUILDING
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER
FILE
DRAWN BY EP
CHECKED BY SG
SCALE 1" = 20'-0"

LANDSCAPE DETAILS - PAYNE

L-L501

File : E:\11068_Utah State Hospital\Cadd\Planting.dwg Sep 07, 2012-10:44am

GENERAL STRUCTURAL NOTES

1. Design Criteria

1.1. Governing Building Code: 2009 International Building Code (IBC)

1.2. Floor Live Loading:
- A. Exit Facilities & Corridors: .... 100 psf Live Load
- B. Mechanical Rooms: .... 125 psf Live Load or actual weights, if larger

1.3. Roof Live Loading:
- A. Roof Live Load: .... 20 psf
- B. Roof Snow Load: .... 30 psf + Drift per IBC
  1. Ground Snow Load, P_g: .... 43 psf
  2. Snow Exposure Factor, C_e: 1.0
  3. Importance Factor, I_S: 1.0
  4. Thermal Factor, C_t: 1.0

1.4. Earthquake:
- A. Occupancy Category: II
- B. Seismic Design Category....................................... D
- C. Spectral Response Accelerations:
  - S_S = 1.252 g S_{DS} = 0.834 g
  - S_1 = 0.525 g S_{D1} = 0.525 g
- D. Soil Site Class: .... F (Used Site Class D for design)
  - F_a = 1.0 F_v = 1.5
- E. Basic Seismic-Force-Resisting System: .... Reinforced Masonry Shear Walls
  - R = 5 C_d = 3.5 Ω_0 = 2.5
- F. Importance Factor, I_E: 1.0
- G. Analysis Procedure: .... Equivalent Lateral Force (Static)

1.5. Wind:
- A. Basic Wind Speed (3-second gust): .... 90 mph
- B. Importance Factor, I_W: 1.0
- C. Exposure: C
- D. Internal Pressure Coefficient, GC_{pi}: 0.18
- E. Topographic Factor, K_{zt}: 1.0
- F. Components and Cladding Design Pressure:

Design Wind Pressure (psf)					
Location		Tributary Area (ft^2)			
		< 10	50	100	> 500
Walls	Within 6 ft of building corner	25.2	21.3	19.5	15.6
	All other areas	20.4	18.5	17.5	15.6
Roof	Within 6 ft of building corner	47.5	28.5	20.4	20.4
	Within 6 ft of building edge	31.5	23.7	20.4	20.4
	All other areas	18.8	17.7	17.2	17.2

1.6. Foundation:
- A. Subsurface Conditions:
  Soils report and log of borings was obtained by the Owner for the Engineer's use in the design of the foundation, and is not a part of the Contract Documents. This report and log of borings is available for the Contractor's information, but is not a warranty of the subsurface conditions. The Contractor may use the report at his own risk.
- B. Soils Report by GSH Geotechnical Consultants, dated July 22, 2011.
- C. Soil Bearing Pressure: .... 1500 psf, on suitable natural soils or compacted structural fill extending to natural soils.
- D. Lateral Soil Pressure Fluid Equivalent Density.
  1. Passive: .... 300 pcf
- E. Coefficient of Friction: 0.40

1.7. Classification for Fire Rated Construction:
- A. For the purpose of determining fire-resistive assemblies, open-web steel framing members shall be considered unrestrained. All other steel floor and roof framing members shall be considered restrained.

2. Earthwork

2.1. Clearing: The entire building area shall be scraped to remove all vegetation, loose, surficial or deleterious soils and debris. Remove any such material from below footings and replace it with compacted structural fill. Remove an area that is the width of the footing plus one foot for each foot of compacted structural fill. Non-native undocumented fills must be removed from the building footprint and 5 feet beyond.

2.2. Proof rolling: The natural undisturbed soil below all footings shall be proof rolled prior to placing concrete. Remove all soft spots and replace with compacted structural fill.

2.3. Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 4 inches and with not more than 18 percent passing a No. 200 sieve. Compacted structural fill shall have a plasticity index less than 18 percent. It shall be compacted to 95 percent of the maximum laboratory density as determined by ASTM D1557. All fill shall be tested (See Specifications and the Quality Assurance section of the GSN).

3. Concrete

3.1. Materials shall comply with the Standards specified in American Concrete Institute (ACI) 318-08, "Building Code Requirements for Structural Concrete."
- A. Concrete mix design requirements shall be as follows:

Location	f'c at 28 days (psi)	Max W/C Ratio	Air Content (%)	Max Aggregate Size	Exposure Classes* F	S	C
Footings	3000	0.50	-	1"	F0	S0	C0
Interior Slabs on Grade	3000	0.50	-	1.1/2"	F0	S0	C0
Exterior Walls	4500	0.45	5	¾"	F1	S0	C1
Suspended Slabs and Interior Walls	4000	0.45	-	¾"	F0	S0	C0
Tunnel lids, all other site cast concrete	4500	0.45	6	¾"	F2	S0	C1

* Exposure Classes are per ACI 318, Section 4.2.1, where F, S and C are exposure categories for freezing and thawing, sulfate, and corrosion protection of reinforcement, respectively.

- B. Cementitious Materials:
  1. Portland Cement (ASTM C150):
     a. Type I or II for exposure class S0.
  2. Fly Ash (ASTM C618, Class C or F): maximum fly ash content as a percentage of total weight of cementitious materials shall be 25 percent.
- C. Concrete Density (Maximum Air Dry Weight):
  1. Normal weight concrete shall be approximately 145 to 155 pounds per cubic foot. Aggregate shall be ASTM C33.
- D. Reinforcement steel:
  1. ASTM A615 Grade 60, fy = 60,000 psi min. unless noted otherwise.
  2. Reinforcement at shear wall jambs shall be ASTM A706 or ASTM A615 Grade 60, with the following properties:
     a. Actual yield strength based on mill tests shall not exceed 78,000 psi.
     b. Retest shall not exceed 81,000 psi.
     c. Ratio of actual ultimate tensile stress to actual yield strength shall not be less than 1.25.
     d. Mill tests shall be submitted to the Engineer.
- E. Admixtures:
  1. Air-entraining admixtures, comply with ASTM C 260 (when used).
     a. Tolerance on air content as delivered shall be +/- 1.5%.
     b. When air content of a trowel finished floor slab exceeds 3%, there is an increased risk for delaminations and blistering to occur. When this situation is present, the contractor shall pay special attention to the finishing procedures to help minimize such risks. Refer to ACI 302.1R-96 "Guide for Concrete Floor and Slab Construction" for proper finishing guidelines.
  2. The use of super plasticizers and water reducers is allowed, but not required.
  3. Calcium chloride or admixtures containing calcium chloride shall not be added to the concrete mix.
- F. Chloride Ion: Maximum water soluble chloride ion concentrations in hardened concrete at age between 28 and 42 days contributed from the ingredients including water, aggregates, cementitious materials, and admixtures shall not exceed a maximum, by weight of cement, of 1.00% for concrete with exposure class C0, 0.30% for concrete with exposure class C1, 0.15% for concrete with exposure class C2, and 0.06% for all prestressed concrete.
- G. Slump Limit: 4 inches, maximum for all concrete prior to the addition of plasticizers and water reducing admixtures. The concrete supplier shall indicate the final slump of each concrete mix in the submitted mix design.
- H. Shrinkage Limit: Interior slabs on grade shall have a drying shrinkage limit of 0.040 percent tested in accordance with ASTM C157. Drying shrinkage test results shall be submitted with mix designs.
- I. Only one grade or type of concrete shall be poured on the site at any given time.

3.2. Formwork shall comply with ACI Standards Publication 347 and the project specifications. The contractor shall be responsible for the design, detailing, care, placement and removal of the formwork and shores.
- A. Pre-camber forms and screeds with a camber of 1/4" per every 10'-0" of span to compensate for dead load deflection, unless noted otherwise. Post tensioned concrete slabs and beams do not require formwork to be pre-cambered.

3.3. Concrete cover requirements for deformed bar reinforcing steel shall comply with ACI 318, "Building Code Requirements for Structural Concrete".
- A. Cast-in-place Concrete: Specified Cover
  1. Cast against and permanently exposed to earth: .... 3"
  2. Formed concrete exposed to earth or weather:
     - #6 thru #18 bars .... 2"
     - #5 and smaller bars... 1.1/2"
  3. Concrete not exposed to weather or in contact with ground:
     - Slabs, Walls, Joists; #11 bars and smaller .... 3/4"
     - Beams, Columns: primary reinforcement, ties, stirrups, spirals............ 1.1/2"

3.4. Construction Joints and Control Joints:
- A. Provide a surface intentionally roughened to ¼" amplitude in all wall footings. A continuous keyway shall not be used for concrete shear wall to footing connections, unless specifically indicated. Refer to project plans, schedules and details for the shear wall to footing connection requirements.
- B. All horizontal and vertical construction joints shall have a surface intentionally roughened to ¼" amplitude. A continuous 2 X 4 keyway may be used on elements other than shear walls.
- C. Provide reinforcement dowels to match the member reinforcement across the joint, unless noted otherwise. For dowels across construction joints and wall to footing connections of concrete shear walls, refer to specific project plans, schedules, and details.
- D. Construction joints in suspended concrete pours shall be made at the center of spans.
- E. Slabs on grade shall have construction or control joints spaced not to exceed 30 times the slab thickness in any direction.
- F. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed within 12 hours of concrete placement. See typical details for joint configuration.
- G. Control joints in visually exposed walls, unless noted otherwise: (Joints shall line up with masonry and architectural joints, see drawings.)
  1. Vertical control joints at 10'-0" on center.
  2. Reinforcing shall be continuous through control and construction joints, unless noted otherwise.
  3. Control joints in concrete foundation walls shall line up with masonry control joints.

3.5. Detailing: All reinforcing, including welded wire fabric, shall be detailed, bolstered & supported to comply with ACI 315, "Details and Detailing of Concrete Reinforcement" and the Concrete Reinforcing Steel Institute (CRSI) recommendations. Reinforcing bars shall not be welded unless specifically shown on drawings.
- A. Lap splice lengths shall be detailed to comply with the CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE SCHEDULE.
- B. All mechanical splices shall have the capacity to develop at least 1.25fy of the bar in tension or compression. Type 2 couplers have the capacity to develop the full tension capacity of the bar. Type 1 couplers shall not be used in moment frames and shear wall jamb columns. Mechanical splices shall have a current ICC Code Evaluation Report; "Lenton" (ER-3967), "Taper-Lock" (ESR-2481) or "SAS Stressteel" (ESR-1163) tapered threaded rebar splices, "Bar-Lock" (ESR-2495) bolt coupling sleeves or approved equivalent may be used. Mechanical couplers on adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars.
- C. All embedded elements and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
- D. Use chairs or other support devices recommended by CRSI to support and tie reinforcement bars and welded wire fabric prior to placing concrete. Welded wire fabric shall be continuously supported at 36" o.c. maximum.
- E. See typical details for reinforcing at wall intersections and ends, reinforcing around wall openings and suspended slab openings, vertical wall dowels, concrete column ties and splices in vertical column reinforcing.
- F. See typical details for column cross-ties. The 90-degree hooks of two successive crossties engaging the same longitudinal bars shall be alternated end for end.
- G. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
- H. All reinforcement shall be bent cold, and shall be bent only once at the same location. All reinforcement shall be shop bent, unless otherwise permitted by the engineer.

3.6. Minimum Reinforcing: Wall reinforcing shall be as follows, unless noted otherwise:

Wall Thickness	Horizontal Reinforcing	Vertical Reinforcing
6"	#4 @ 13" o.c.	#4 @ 18" o.c.
8"	#5 @ 15" o.c.	#4 @ 16" o.c.
10"	#5 @ 12" o.c.	#4 @ 13" o.c.
12"	#4 @ 13" o.c. Each Face	#4 @ 18" o.c. Each Face
Others	0.25% of Wall Area	0.15% of Wall Area

Spacing shall exceed neither three times the wall thickness nor 18". In addition to the above reinforcing, 2 - #5 x continuous horizontal bars shall be placed at the bottom of the wall (near the footing) and at each floor level, at the roof level and at the top of wall.

3.7. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.

3.8. Unless otherwise noted, all slabs on grade shall be 4" thick.

4. Masonry

4.1. Materials, unless noted otherwise:
- A. Concrete Masonry Units: ASTM C 90, Lightweight.
- B. Material Strength: The Prism Test Method or the Unit Strength Method according to IBC Section 2105.2 may be used to determine the compressive strength of masonry assemblies. The contractor shall select the desired method and meet the required material strengths as follows:
  1. Prism Test Method, IBC 2105.2.2.1:
     a. Concrete Masonry Unit Assembly, f'm = 1500 psi.
  2. Unit Strength Method, IBC 2105.2.2.2:
     a. Concrete Masonry Units, minimum unit strength of 1900 psi average or better. (f'm = 1500 psi)
- C. Mortar: Use Type "S" according to ASTM C270, proportion specification. Admixtures shall not be added to the mortar mix.
- D. Grout: For masonry assemblies with f'm = 2,000 psi or less conform to ASTM C476, proportion specification. Grout that does not meet the requirements of ASTM C476 proportion specification or that is used in masonry assemblies with f'm > 2,000 psi shall meet the following requirements: Meet the material requirements of ASTM C476, obtain a minimum compressive strength of f'm or 2,000 psi, whichever is larger, at 28 days tested according to ASTM C1019, and a slump of 8 in. to 11 in. as determined by ASTM C143.
- E. Reinforcing: Grade 60 reinforcing steel shall comply with ASTM A615. Wire joint reinforcing shall comply with ASTM A951.
- F. Deformed Bar Anchors (DBA): All DBAs shall comply with ASTM A496.
- G. Anchor Bolts (AB): ASTM A307 with ASTM A563 heavy hex nuts and hardened washers, Grade A, unless noted otherwise.
- H. Headed Stud Anchors (HSA): Manufacture all HSAs in conformance with ASTM A108 with dimensions complying with AISC specifications.

4.2. Construction Requirements:
- A. Mortar Joints: Joints shall be "concave", "V-joint" or "weathered raked" for structural members unless noted otherwise on architectural drawings.
- B. Masonry walls, beams and columns shall be constructed with running bond, unless noted otherwise.
- C. Grouting Requirements: Comply with IBC Section 2104 and ACI 530.1/ASCE 6/TMS 602 Section 3.5. Grout shall be mechanically consolidated and mechanically reconsolidated according to TMS 602/ACI 530.1/ASCE 6 Section 3.5 E.
  1. Grout Pour Heights that exceed 4 feet shall meet the following requirements:
     a. Provide cleanouts in the bottom course of masonry for each grout pour in accordance with ACI530.1/ASCE 6/TMS 602 Section 3.2 F.
     b. For grout other than Self Consolidating Grout a demonstration panel representative of the proposed wall construction and construction procedures shall be provided and approved by the Architect. The demonstration panel may be a part of the completed construction as approved by the Architect.
     c. For Self Consolidating Grout placed in masonry that has cured for at least 4 hours, place in lifts not exceeding the Maximum Grout Pour Height in listed in ACI 530.1/ASCE 6/TMS 602 Table 7
  2. When grouting, form grout keys between grout pours. Form grout keys between grout lifts when the first lift is permitted to set prior to placement of the subsequent lift.
     a. Form a grout key by terminating the grout a minimum of 1.1/2 in. below a mortar joint.
     b. Do not form grout keys within beams.
     c. At beams or lintels laid with closed bottom units, terminate the grout pour at the bottom of the beam or lintel without forming a grout key.
- D. Reinforcing Bars shall not be welded unless specifically shown on drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for DBAs or HSAs.
- E. Control Joints: Spacing shall not exceed 40'-0" or 2.5 times the wall height, whichever is less. Joints shall not be located over masonry openings, and shall be a minimum of the schedule masonry column width away from masonry openings. See architectural drawings for locations.
- F. Grout all beam and joist pockets solid after installation of beams and joists.
- G. Masonry Veneer Attachment and Reinforcing:
  1. To steel stud walls: Veneer shall be attached to the studs Dur-O-Wal DA 213S seismic veneer anchors or Hohmann & Barnard DW-10HS seismic veneer anchors (or equal) spaced at 16" o.c. Veneer anchors shall be attached to studs with #10 corrosion resistant self drilling screws. Attach the veneer to the anchors with Dur-O-Wal Seismic Steel Pintles or Hohmann & Barnard Seismiclip Interlock System (or equal) spaced at a maximum of 16" o.c. in both directions. Anchor ties shall engage to a galvanized No. 9 gauge horizontal joint reinforcement wire in the veneer which shall be continuous and shall be placed at 16" o.c. maximum at the center of the veneer.
  2. To concrete walls: Galvanized dovetail slots shall be installed vertically in concrete at 16" o.c. Attach the veneer to dovetail slots with Dur-O-Wal 16 gage seismic dovetail anchor ties or Hohmann & Barnard #315 BT Flexible Brick Tie with Seismiclip Interlock System (or equal) spaced at a maximum of 16" o.c. in both vertical and horizontal directions. Anchor ties shall engage to a galvanized No. 9 gauge horizontal joint reinforcement wire in the veneer which shall be continuous and shall be placed at 16" o.c. maximum at the center of the veneer. Dovetail slots and anchor ties shall be galvanized.
  3. To reinforced masonry walls: Veneer shall be attached with tri-rod laddur type reinforcement spaced at a maximum of 16" o.c. vertically consisting of 3 - #9 gauge, galvanized, corrugated, wires. Veneer may also be attached with Dur-O-Wal DA 3600 S Seismic Ladur-Eye (or equal) spaced at 16" o.c. maximum in both vertical and horizontal directions. Where the joints in the veneer and masonry back up walls do not align, attach veneer with Dur-O-Wal DA 5213 S seismic veneer anchors (or equal) spaced at 16" o.c. maximum in both directions. Attach the veneer to the anchors with Dur-O-Wal Seismic Steel Pintles (or equal) that shall engage a galvanized No. 9 gauge horizontal joint reinforcement wire in the veneer which shall be continuous and shall be placed at 16" o.c. maximum at the center of the veneer.
  4. Other methods of attachment may be used after written acceptance by the architect and structural engineer.
  5. Steel Lintels: Provide steel angle lintels at all openings through the masonry veneer. Provide one inch of bearing for each foot of width of opening, with a minimum bearing of six inches. See the Steel Angle Lintel Schedule for size.

4.3. Detailing Requirements:
- A. Standards: Reinforcing detailing shall comply with American Concrete Institute (ACI) Standard 315, "Details and Detailing of Concrete Reinforcement."
- B. Reinforcement Protection (cover):
  1. Joint reinforcement shall have not less than 5/8" mortar coverage from the exposed face.
  2. Other reinforcement shall have a minimum coverage of one bar diameter over all the bars, but not less than 3/4". When masonry is exposed to soil, minimum coverage shall be 1.5".
- C. Vertical steel reinforcement shall be placed and secured against displacement prior to grouting by wire positioners or other suitable devices: at intervals not exceeding 112 bar diameters, at the grout lift heights, or at bar splice locations, whichever is less. Vertical reinforcing shall be located at the center of the wall, unless noted otherwise.
- D. Lap Splice Lengths: Lap all masonry reinforcing bars per the "Masonry Reinforcing Bar Lap Splice Schedule." Joint reinforcement shall lap a minimum of 6".
- E. Corner Bars: Horizontal reinforcement shall be continuous at all corners and at intersecting walls. Provide corner bars with the required lap splice length.
- F. Dowels: All vertical reinforcing shall be doweled to the foundation wall, footing (structure below) and to the structure above with the same size dowel, spacing (and in the same core) as the vertical wall reinforcing unless noted otherwise.
- G. Wall Openings 24" wide and wider: Provide reinforced masonry lintels per Masonry Lintel Schedule over the top of, and 2 - #5 bars, in grouted spaces, on all sides and adjacent to every unscheduled opening, unless noted otherwise. Bars for all openings shall extend a minimum of 48 bar diameters beyond the corners of the opening. Vertical bars shall extend from floor level below to the floor, or roof, level above. Where a 48 bar diameter extension is not possible, extend bars as far beyond the opening as possible and terminate them with a 90 degree standard ACI hook.
- H. Horizontal wall reinforcing shall be continuous through joining concrete walls, masonry walls, columns, and pilasters. Provide a key between the wall and the column or pilaster. Horizontal wall reinforcing shall be placed inside the column vertical reinforcing.
- I. Anchor bolts and headed stud anchors shall be set in a grouted cell. Anchor bolts and headed stud anchors shall have 1" grout surrounding the shank at its penetration. Grout shall be flush with the face or top of the masonry.
- J. All masonry column ties shall terminate with 135 degree hooks plus a 6 bar diameter extension (4" minimum).
- K. The exposed face of all embed plates shall be set flush with the face of masonry wall or column.

4.4. Minimum Reinforcing:
All masonry walls shall be reinforced as follows, unless shown otherwise on the drawings. Reinforcing shall be placed in grouted cells.

Wall Thickness	Horizontal Reinf.	Vertical Reinf.
6"	#4 @ 48" o.c.	#5 @ 32" o.c.
8"	#5 @ 48" o.c.	#5 @ 32" o.c.
10"	#6 @ 48" o.c.	#6 @ 32" o.c.
12"	2 - #5 @ 48" o.c.	#6 @ 32" o.c.

5. Structural Steel

5.1. Material:
- A. W-Shapes: ASTM A992, (F_y = 50 ksi), except as noted otherwise.
- B. All Other Shapes and Plates: ASTM A36 (Fy = 36 ksi), except as noted otherwise.
- C. Rectangular and Square Hollow Structural Sections (HSS): ASTM A500, Grade B (Fy = 46 ksi).
- D. Round HSS: ASTM A500, Grade B (Fy = 42 ksi).
- E. Steel Pipe: ASTM A53, Grade B (Fy = 35 ksi).
- F. Deformed Bar Anchors (DBA): ASTM A496.
- G. Headed Stud Anchors (HSA): ASTM A108, with dimensions complying with AISC specifications.
- H. Anchor Rods: ASTM F1554, Grade 36 with ASTM A563 heavy hex nuts and ASTM F436 hardened washers, unless noted otherwise.

5.2. Fabrication and construction shall comply with the following Codes and Standards:
- A. American Institute of Steel Construction (AISC) 360-05, "Specification for Structural Steel Buildings," dated March 9, 2005.
- B. AISC 303-05, "Code of Standard Practice for Steel Buildings and Bridges" excluding the following: Section 3.3 (last sentence of first paragraph), Section 4.4, Section 4.4.1, Section 4.4.2, Section 4.5, and Section 7.13.3.
  1. The architectural drawings are the prime contract drawings. Consultants' drawings by other disciplines are supplementary to the architectural drawings. The structural drawings shall be used in conjunction with the architectural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in architectural, structural, and/or other consultants' drawings. Refer to 7. Special Instructions, notes 7.2 and 7.3 on this sheet.
- C. AISC/RCSC 2004, "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
- D. American Welding Society (AWS) D1.1-04, "Structural Welding Code – Steel" (specific items do not apply when they conflict with the AISC requirements).
- E. American Welding Society (AWS) D1.8-05, "Structural Welding Code – Seismic Supplement" (specific items do not apply when they conflict with the AISC requirements).
- F. Steel Joist Institute (SJI) 2005, "Standard Specification, Load Tables and Weight Tables for Steel Joists and Joist Girders," and "Recommended Code of Standard Practice."
- G. American Iron and Steel Institute (AISI) 2007, "North American Specification for the Design of Cold-Formed Steel Structural Members."

5.3. Structural shapes and plates shall be fabricated from newly rolled (milled) one-piece sections without splices, unless specifically noted otherwise on the structural drawings. Connections for structural steel shall comply with the structural drawings, unless written approval is given by the structural engineer.

5.4. Welding:
- A. It is recommended the steel erection contractor and steel fabricator contact the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning.
- B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders who have been specifically certified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the architect prior to beginning work.
- C. Electrodes: E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof decks.
- D. Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Fillet weld sizes that are not shown shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected parts.
- E. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors (DBAs), machine bolts, or headed stud anchors (HSAs).
- F. Bolts: Do not apply any welds, including "tack" welds to bolts, including anchor bolts, except as specifically detailed in the drawings.
- G. Headed Stud Anchor (HSA) welding and Deformed Bar Anchor (DBA) welding shall conform to the manufacturer's specifications. Welding shall comply with AWS D1.1 Section 7.6 through 7.8 and Annex IX.
- H. Special Provisions for Welds in the SLRS (Seismic Load Resisting Systems): Welds used in members and connections of collector elements shall comply with these requirements. Welding methods, procedures and quality control shall comply with AISC 341, AWS D1.1, AWS D1.8 and the following:
  1. Welding shall be performed in accordance with AISC 341 Appendix W and a welding procedure specification (WPS) as required in AWS D1.1. WPS variables shall be within the parameters established by the filler metal manufacturer. WPS for demand critical welds shall also comply with AWS D1.8 Section 6.1.
  2. All welds except for demand critical welds shall be made with a filler metal that can produce welds that have a minimum Charpy V-Notch toughness of 20 ft-lb at 0 degrees Fahrenheit, as determined by the appropriate AWS A5 classification test method or manufacturer certification.
  3. Tack welds shall comply with AWS D1.1 Section 5.18 and AWS D1.8 Section 6.16.
  4. Unrepaired cracks, gouges, grooves and notches will not be permitted in the joint area. Arc strikes, gouges and other imperfections within or adjacent to the joint, shall be repaired or removed in accordance with AWS D1.8 Section 6.15.4.

5.5. Bolted Connections:
- A. Provide snug tightened joints with ASTM A325 Type 1 bolts for steel to steel connections, as noted herein or as noted on the drawings. Snug tightened joints shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. The snug tightened condition is usually attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. Bolts shall be tightened until all plies of the joint are in firm contact.
- B. Provide pretensioned joints with ASTM A325N Type 1 bolts for all steel to steel connections that are part of the Seismic Load Resisting System (SLRS) or have connections noted as collectors or drag struts. Faying surfaces shall meet the requirements of a slip-critical Class A surface except for faying surfaces of end plate moment connections. Tighten bolts by the turn of the nut, calibrated wrench, or direct tension indicator method. Alternate fastener designs as defined by AISC shall be submitted to the engineer for review and acceptability prior to installation. Provide hardened washers beneath turned element.
- C. Provide hardened washers beneath the turned element of all bolts or nuts. Provide hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. Hardened washers or plates installed over oversized holes or slotted holes shall be at least 5/16" thick and shall conform to ASTM F436. Plates or bars installed at slotted holes shall have a size sufficient to completely cover the slot after installation.
- D. Where a steel to steel beam connection is not detailed in the drawings, provide a standard AISC framed connection with the capacity to support one half of the total uniform load capacity of the given shape for the span and for the steel specified.
- E. Bolts, nuts and washers shall not be reused.

5.6. Steel Lintels
- A. Provide steel angle lintels at all openings through the masonry veneer. Provide one inch of bearing for each foot of width of opening, with a minimum bearing of six inches. See the Steel Angle Lintel Schedule for size.

5.7. Beam Web Stiffener Plates:
- A. Provide full-height web stiffener plates to each side of all beams above all bearing points. Stiffener plates shall be the thickness noted below unless noted otherwise and shall be welded on both sides of the stiffener plate with fillet welds (noted below) all around.

Beam Web stiffener thickness	For beams with flange widths between	Weld Size
1/4 inch thick	Greater than 0" and less than 8 1/4"	3/16"
3/8 inch thick	Greater than 8 1/4" and less than 12 1/4"	1/4"
1/2 inch thick	Greater than 12 1/4" and less than 16 1/2"	5/16"
5/8 inch thick	Greater than 16 1/2" and less than 20 3/4"	3/8"

SEE SHEET S002 FOR CONTINUATION OF GENERAL STRUCTURAL NOTES

ABBREVIATIONS

AB	ANCHOR BOLT (S)
ABV	ABOVE
@	AT
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
BM	BEAM
BLW	BELOW
BRG	BEARING
BTWN	BETWEEN
BLDG	BUILDING
BOT	BOTTOM
C.J.	CONSTRUCTION JOINT OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CMU	CONC MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CTR	CENTER
DB	DECK BEARING
DBA	DEFORMED BAR ANCHORS
DBL	DOUBLE
DET	DETAIL
DIA (OR)	DIAMETER
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
DWL	DOWEL
EA	EACH
E.J.	EXPANSION JOINT (SEISMIC SEPARATION JOINT)
ELEV	ELEVATION
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EQ	EQUAL
EXIST	EXISTING
EXP	EXPANSION / EXPOSED
EXT	EXTERIOR
E.F.	EACH FACE
E.W.	EACH WAY
F.D	FLOOR DRAIN
FDTN	FOUNDATION
F.F.	FINISH FLOOR
FIN	FINISH
FL	FLOOR
FT	FOOT
FTG	FOOTING
FV	FIELD VERIFY
GA	GAUGE
GALV	GALVANIZED
GLB	GLU-LAMINATED BEAM
GR	GRADE
GSN	GENERAL STRUCTURAL NOTES
HB	HORIZONTAL BRIDGING
HT	HEIGHT
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHORS
IBC	INTERNATIONAL BUILDING CODE
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
ICC	INTERNATIONAL CODE COUNCIL
IN.	INCH
INSUL	INSULATION
INT	INTERIOR
I.F.	INSIDE FACE
JT	JOINT
JST	JOIST
KLF	KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
K	KIPS - 1,000 POUNDS
LF	LINEAL FOOT
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAS	MASONRY
MAX	MAXIMUM
MCJ	MASONRY C.J.
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OPNG	OPENING
OPP	OPPOSITE
O.C.	ON CENTER
O.F.	OUTSIDE FACE
OWSJ	OPEN WEB STEEL JOIST
PCF	POUNDS/CUBIC FOOT
PL	PLATE
PLF	POUNDS/LINEAL FOOT
PNL	PANEL
PSF	POUNDS/SQ FOOT
PSI	POUNDS/SQ INCH
PT	POINT
REINF	REINFORCING
R.D.	ROOF DRAIN
REQ'D	REQUIRED
SHT	SHEET
SI	SPECIAL INSPECTION
SOG	SLAB ON GRADE
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
SQ	SQUARE
SIM	SIMILAR
STR	STRUCTURAL
STAG	STAGGERED
T&B	TOP AND BOTTOM
TEMP	TEMPERATURE
THDS	THREADS
T.O.	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
WWF	WELDED WIRE FABRIC

PLAN MARKS

BF-#	BRACED FRAME
CB-#	CONCRETE BEAM
CC-#	CONCRETE COLUMN
CDP-#	CONC DRILLED PIER
CFW-#	CONC FDTN. WALL
CGB-#	CONC GRADE BEAM
CJ-#	CONCRETE JOIST
CL-#	CONCRETE LINTEL
CP-#	CONCRETE PIER
CRW-#	CONC RETAINING WALL
CSG-#	CONC SLAB ON GRADE
CSS-#	CONC SUSPENDED SLAB
CSW-#	CONC SHEAR WALL
CW-#	CONCRETE WALL
FC#	CONTINUOUS FOOTING
FM#	MAT FOOTING
FR#	RECTANGULAR FOOTING
FS#	SQUARE FOOTING
FTS#	THICKEND SLAB FOOTING
MC-#	MASONRY COLUMN
MF-#	MOMENT FRAME
ML-#	MASONRY LINTEL
MP-#	MASONRY PIER
MW-#	MASONRY WALL
PD-#	PLYWOOD DIAPHRAGM
PSW-#	PLYWOOD SHEAR WALL
SBP-#	STEEL BASE PLATE
SC-#	STEEL COLUMN
SCP-#	STEEL CAP PLATE
SD-#	STEEL DECK

STRUCTURAL DRAWING LIST

SHEET NO.	SHEET NAME
S1	FOOTING & FOUNDATION DETAILS
S001	GENERAL STRUCTURAL NOTES
S002	GENERAL STRUCTURAL NOTES
S003	GENERAL STRUCTURAL NOTES
S101	FOOTING & FOUNDATION PLAN
S111	ROOF FRAMING PLAN
S401	SKYLIGHT FRAMING PLAN & DETAILS
S501	FOOTING & FOUNDATION DETAILS
S502	FOOTING & FOUNDATION DETAILS
S503	FOOTING & FOUNDATION DETAILS
S504	FOOTING & FOUNDATION DETAILS
S511	ROOF FRAMING DETAILS
S512	ROOF FRAMING DETAILS
S513	ROOF FRAMING DETAILS
S514	ROOF FRAMING DETAILS
S515	ROOF FRAMING DETAILS
S601	STRUCTURAL SCHEDULES
S602	STRUCTURAL SCHEDULES
S603	STRUCTURAL SCHEDULES
S604	STEEL STUD SCHEDULES & TYPICAL DETAILS
S605	STEEL STUD TYPICAL DETAILS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P:801.486.3883
F:801.485.0911
675 E. 500 S. Suite 400
Salt Lake City, Utah 84102
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

△	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

GENERAL STRUCTURAL NOTES

S001

9/7/2012 1:29:03 PM

GENERAL STRUCTURAL NOTES-CONT.

5.8. Open Web Steel Joists and Girders:
- A. The steel joist supplier shall be responsible for the design of all open web steel joists and girders. Joists or girders with slopes greater than 1/2 inch per foot shall be designed to meet or exceed the load capacities, listed in the SJI load tables, of the joist or girder sizes indicated on the framing plan, as if the joists or girders were installed level.
- B. Open web joists and girders shall be designed with deflection limits of L/240 for total load and L/360 for live load, where L is the joist span.
- C. Where uplift loads due to wind are indicated, rows of bottom chord bridging shall be provided at the first bottom chord panel points per SJI Specifications. This is in addition to the bridging shown on the framing plans.
- D. Provide special bearing ends to accommodate slopes from sloped joists, sloped girders or sloped bearing conditions.
- E. Camber: All joists shall be cambered as specified in the SJI specifications, unless noted otherwise.
- F. Field Modifications: Do not modify any joist or girder, including holes through the top and bottom chords, without the written consent and direction from the manufacturer.
- G. Shop Drawings and Design Calculations: Shop drawings for all joists and girders used in the project shall be submitted for review. Prior to the fabrication of joists and girders, the open web steel joist and girder manufacturer shall prepare complete joist and girder calculations under the direct supervision of a professional engineer licensed in the State of Utah. Calculations shall be submitted for review for joists and girders designated as SPECIAL or SP and for all joists or girders with axial loads or additional concentrated loads (as noted on the drawings). Submitted calculations shall bear the seal of a professional engineer licensed in the State of Utah.
- H. Stabilizer Plates: Provide steel joist and joist girder stabilizer plates as indicated. Stabilizer plates shall be 6" x 6" with a 13/16" diameter hole with 1.1/2" minimum edge distance, and shall extend 3" minimum below the bottom chord of the joist or girder. Plate thickness shall be equal to the chord gap minus 1/4", or 3/4", whichever is less.
- I. Verify size, weight, location and configuration of all roof top equipment with architect and mechanical engineer. Provide steel frames for support of roof top equipment as indicated on structural details in the structural drawings. Coordinate openings with the mechanical and general contractor.
- J. All concentrated loads greater than 100 pounds supported by open web steel joists and girders shall be located within 6 inches of joist or girder panel points or the joist or girder shall be reinforced with an additional web member. Refer to the "TYPICAL DETAIL AT ADDITIONAL CONCENTRATED POINT LOAD" in the structural drawings.
- K. Concentrated point loads, single or multiple, totaling 100 pounds or less can be located at any point along the top or bottom chord of an open web steel joist or girder between adjacent panel points without meeting the requirements above. A limit of four concentrated 100# maximum point loads per joist or girder will be permitted on spans of 12' or greater, one concentrated 100# max. load on spans less than 12', unless specifically noted otherwise on the structural drawings.
- L. Joist bridging shall never be used to support hanging loads.
- M. Bracing of miscellaneous items (mechanical, electrical, plumbing, etc.) to the bottom chord of joists or girders will not be allowed in any instance. All lateral braces must connect to the top flange/top chord of the framing member above unless noted otherwise on the structural drawings.
- N. After manufacturing of steel joists is complete, the joist manufacturer shall submit a certificate of compliance per IBC Section 1704.2.2 and IBC Section 2206.5 to the Engineer of Record, Architect, Owner, Contractor, and Building Official.

5.9. Steel Roof Deck:
- A. Steel roof deck shall comply with the latest requirements of the Steel Deck Institute (SDI). Submit ICC Code Evaluation Report with load and lateral shear capacities with shop drawings.
- B. Steel roof deck shall be 1 1/2" deep X 20 Gauge minimum galvanized (G60), type "B" wide rib deck with interlocking side seams with the following properties:

	20 Gauge	18 Gauge
Minimum S (in^3/ft)=	0.234	0.322
Minimum I (in^4/ft)=	0.213	0.296

  Painted roof deck shall be coated with special paint to receive sprayed-on fire proofing, where required.
- C. Minimum allowable deck diaphragm shear values shall be 890 lb/ft. for a 6'-0" deck span.
- D. Weld steel roof deck to supporting framing members with 3/4" diameter puddle welds at the following spacings (Closer spacings may be used to develop minimum shear requirements.):
  1. 6" o.c. to all supports perpendicular to deck corrugations (7 welds per 36" sheet).
  2. 6" o.c. to the following supports parallel to deck corrugations: All perimeter supports, all concrete or masonry walls, all joists or joist girders with a "T/C" designation, and all steel beams which are on a grid line with braced frames or moment frames.
  3. 12" o.c. to all other supports parallel to deck corrugations.
  4. All welded surfaces shall be dry before welding deck to supports.
- E. Attach interlocking seams with 1 1/2" long top seam welds at 12" o.c. minimum between adjacent pieces of decking. Crimp side seams before welding. Closer spacings may be used to develop minimum shear requirements.
- F. Alternate means of deck attachment and fastening using screws, pins or other mechanical fastening methods are permitted with approval of the engineer. The contractor shall submit the proposed attachment system and the code evaluation report demonstrating the system has the strength to meet the required deck shears specified above (in item C) and on the plans. The flexibility factor of the proposed deck attachment system shall be equal to or less than the flexibility factor for the specified welded deck attachment system. If the alternate attachment method is approved, it is the responsibility of the contractor to ensure that the deck type and profile is compatible with the fastening system being used.
- G. Provide a 2" minimum bearing and a 4-inch lap at the splice points of all pieces of deck.
- H. All deck shall be 3-span continuous minimum where possible. The contractor shall provide heavier gauge deck as required for one or two span conditions to meet equivalent loading of the above deck under a three span condition.
- I. Steel roof deck shall not be used to support loads from plumbing, HVAC ducts, light fixtures, architectural elements or equipment of any kind, unless specifically noted otherwise. Lightweight suspended acoustical ceilings with a total weight per wire not exceeding 50# may be hung from the steel roof deck. The hangers should be staggered to distribute the load over multiple deck flutes.

5.10. Cold-Formed Steel
- A. Non-Load-Bearing Exterior Light Gauge Steel Framing:
  1. Where steel framing size designators are used in the drawings, they follow the convention established by the Steel Stud Manufacturers' Association (SSMA) and the North American Steel Framing Alliance (NASFA). Framing members provided shall comply with the designations according to this convention.
  2. All load bearing stud (and/or) joist framing members along with all runner, bridging, and end track shall be of the designation shown on the plans. All studs with base metal thickness of 54 mil and 68 mil, and joists with base metal thickness of 54 mil, 68 mil and 97 mil, shall be formed from steel meeting the requirements of ASTM A570 except that the steel shall have a 50,000 psi yield stress. All track and end closures with base metal thickness of 54 mil and 68 mil, bridging with base metal thickness of 54 mil, and studs and track with base metal thickness of 43 mil and 33 mil, shall be formed from steel with a minimum yield of 33,000 psi. All components shall be galvanized.
  3. Follow all manufacturers' recommendations for the use of these products.
  4. Unless noted otherwise, all welded connections shall be done using 1/8" AWS type 6013 or 7014 rod with a welding heat of 60-110 amperes depending on the gauge of material and the fit of the parts. Wire tying of framing components shall not be permitted.
  5. Fasteners for steel stud construction shall be self-drilling and self-tapping meeting ASTM C1513. Screw-type fasteners shall penetrate the joined materials with a minimum of three threads exposed. Furnish, install, and tighten screws per the manufacturer's recommendations and per the sizes indicated in the details. The minimum screw-type fastener size shall be #10 for any connection or the manufacturers' minimum recommended size for framing clips and bridging. Wall studs and jamb studs shall receive a minimum of two #12 screws per stud to track connection, one each side
  6. Bridging shall be provided at a maximum spacing of 4'-0" on center, typical at all wall studs. Cold-rolled channel or steel angle bridging shall not be used without suitable full-depth angle clips fastened to the studs and channel or angle to prevent stud roll-over.
  7. Wall to roof connections shall use steel clips designed to accommodate vertical deflection of the floor or roof structure. See specific details for further information. Clips shall be welded to the structural steel.
- B. Interior Partition Bracing:
  1. All interior non-bearing steel stud walls that extend above the ceiling but do not attach to the floor or roof diaphragm (above) shall have diagonal braces at 45 degrees (+/-). The KL/r ratio of the brace shall not exceed 200 and shall not be spaced further apart than 10'-0". Connect diagonal braces to the top of the steel stud walls and to the underside of the top flange of the steel beams, open web joists or girders, etc. with 1/8" fillet welds all around. Diagonal angle braces may be connected to 8" x 8" x 1/4" steel plates which shall be anchored to the floor or roof decks which have concrete fill above with 2- 3/8" dia. expansion anchors for each plate. Connect angle to plate with a 1/4" fillet weld all around. Connect diagonal braces to roof decking which does not have concrete fill above per the non-bearing wall brace connection details shown on the structural drawings. Diagonal braces may be constructed from cold-formed light gauge steel studs but must conform to the kl/r ratio of less than 200 requirement. When diagonal brace lengths exceed 10'-0" (+/-), cold-formed box sections made from two 600S137-54 steel studs will likely be required.

5.11. Metal Bar Grating:
- A. Metal bar grating shall comply with the most recent requirements of the National Association of Architectural Metals Manufacturers, Metal Bar Grating Division (NAAMM MBG). Products shall conform to the latest edition of the Metal Bar Grating Manual, ANSI/NAAMM MBG 531, or the Heavy Duty Metal Bar Grating Manual, ANSI/NAAMM MBG 532, as appropriate.
- B. Materials: Unless noted otherwise, metal bar grating of the following types shall conform with the following standards:
  1. Steel: ASTM A569 (allowable fiber unit stress F = 18,000 psi)
  2. Stainless Steel: ASTM A167, alloys 304/316 (allowable fiber unit stress F = 20,000 psi)
  3. Aluminum: ASTM B221, alloys 6063-T6/6061-T6 (allowable fiber unit stress F = 12,000 psi)
- C. Metal bar grating shall be provided with mill finish, unless otherwise noted.
- D. Unless noted otherwise, provide W-19-4 (1.1/2" x 3/16") Steel grating in locations where metal bar grating is specified.
- E. All metal bar grating shall be firmly and positively anchored to supporting members. Unless noted otherwise, weld grating to supporting members with 3/16" fillet welds, 3/4" long. Locate welds at each end of bearing bars approximately 6 in from each side of grating panel. At intermediate supports in panel, locate one weld at middle of panel.

6. Wood

6.1. Materials:
- A. Framing Lumber: Number 2 Douglas Fir-Larch or better or as noted otherwise.
- B. Heavy Timber: Timbers larger than 5"x5" shall be Douglas-Fir Larch Number 1 or better or as noted otherwise, as graded by WWPA.
- C. Wood Structural Panel Sheathing: All panels shall be rated by the American Plywood Association (APA). Panels shall bear the stamp of an approved testing and grading agency. Panels shall be grade DOC PS 1 or PS 2 with exterior glue with the following panel span rating, unless noted otherwise,
  40/20 Roof (19/32" min. thickness)
- D. Nails for shear walls and floor or roof diaphragms: Standard common or galvanized box with the following properties:

Nail Size	Shank Diameter (Common)	Shank Diameter (Galvanized Box)	Min. Penetration into Supporting Member
6d	0.113"	0.099"	1.125"
8d	0.131"	0.113"	1.375"
10d	0.148"	0.128"	1.50"
16d	0.162"	0.135"	1.625"

Bolts for connections: ASTM A307 with ASTM A563 heavy hex nuts and standard washers unless noted otherwise.

6.2. Special Treatments:
- A. All wood in contact with concrete, masonry or soil: Preservative-treated wood shall meet the requirements in IBC Section 2303.1.8. Preservative-treated wood shall be treated to meet the the requirements of AWPA Standard U1 and M4 according to species, use, and preservative. Preservatives used shall be listed in AWPA U1, Section 4. Preservative-treated wood shall be identified by the mark of an accredited inspection agency.
- B. Fire-Retardant-Treated Wood: Fire retardant-treated wood shall meet requirements in IBC Section 2303.2. Fire-retardant-treated wood shall be treated to meet a flame spread index of 25 or less and show no evidence of significant progressive combustion when the test is continued for 20 minutes per ASTM E 84 or UL 723.

6.3. Minimum Nailing & Stapling Requirements (See drawings for areas with greater requirements):
- A. Roof: Use two plyclips between each support for spans of 48" o.c. and one plyclip between each support for lesser spans at all unsupported panel edges. Provide 1/8" gap between panels.
  1. Nail all sheathing panels with 10d common nails at 6" o.c. at all supported edges and at 12" o.c. at all intermediate supports.
- B. General Framing and Carpentry: Connect all items as per the "Minimum Nailing Schedule" contained within the contract drawings and IBC Table 2304.9.1, "Fastening Schedule", unless noted otherwise.
- C. Fasteners in contact with treated wood shall meet the following criteria as per IBC Section 2304.9.5:
  1. Fasteners in contact with preservative-treated wood shall be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, wood screws, timber rivets, and lag screws may be mechanically-deposited zinc-coated steel with coatings meeting ASTM B 695, Class 55 minimum. Fasteners used in exterior applications shall be per fastener manufacturer's recommendations.
  2. Fasteners in contact with fire-retardant-treated wood shall be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, wood screws, timber rivets, and lag screws may be mechanically-deposited zinc-coated steel with coatings meeting ASTM B 695, Class 55 minimum.

6.4. Framing Connections
- A. All Framing connections not shown or otherwise indicated on the drawings shall be connected in a manner similar to the connections shown in the drawings or with approved Simpson Strong-Tie Connectors or equivalent with approval of engineer. (The following notations refer to Simpson Strong-Tie Connectors):
  1. Solid Sawn Joists and Rafters:
     - a. "BA" top flange hanger as required.
     - b. "LUS" or "HUS" face mount hangers as required.

6.5. Blocking, Bridging, and Bracing:
- A. Provide solid shaped blocking at least 2 in.(nominal) thick and full depth of joist at ends and at each support of joist. Blocking cut from I-joist material of the same depth as the I-joists used in floor/roof construction may be used for flat floors or roofs.
- B. Solid blocking between joists shall be nailed to the wood plate at the top of shear walls with one Simpson "A35" framing anchor per each piece of blocking. Fill all holes in the framing anchors with 8-d short nails.
- C. Provide approved bridging at 8'-0" o.c. maximum between joist end supports for solid sawn floor or roof joists.

7. Special Instructions

7.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical details.

7.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the owner. Any work done by the contractor after discovery of such discrepancy shall be done at the contractor's risk.

7.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.

7.4. Shoring and Bracing Requirements:
- A. Floor and Roof Structures -- The General Contractor is responsible for the method and sequence of all structural erection. He shall provide temporary shoring and bracing as his method of erection requires to provide adequate vertical and lateral support. Shoring and bracing shall remain in place as the chosen method requires until all permanent members are in place and all final connections are completed, including all roof and floor attachments. The building shall not be considered stable until all connections are complete.
- B. Foundation walls must be braced until the complete floor or roof systems is completed. Do not backfill until floor or roof systems are in place.
- C. Walls above grade shall be braced until the structural system is complete. Walls shall not be considered to be self supporting.

7.5. All expansion joints (E.J.) shown in the structural drawings shall be considered seismic separation joints, unless noted otherwise.

7.6. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the contractor of the responsibility of completing the project according to the contract documents. The general contractor shall review and mark all shop drawings prior to submitting them to the Architect for his review. Shop Drawings made from reproductions of (these) contract drawings will be rejected.

7.7. Project Coordination: It shall be the responsibility of the general contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the general contractor and shall be coordinated with the Architect/Engineers. The order of construction is the responsibility of the general contractor. It is the contractor's obligation to provide all items necessary for his chosen procedure.

7.8. Contractor shall field verify all dimensions, and conditions. If the contract drawings do not represent actual conditions, contractor shall notify architect/engineer prior to fabrication or construction within that area.

7.9. Notice of Copyright: The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers and Associates, Inc., All Rights reserved. Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers and Associates, Inc.'s reserved rights. The documents defining the structure are instruments of service prepared by Reaveley Engineers and Associates, Inc. for one use only. Furthermore, these documents shall not be reproduced, or copied, in whole or in part by the contractor or his subcontractors for preparation of shop drawings or other submittals.

QUALITY ASSURANCE NOTES

1. Quality Assurance

1.1. Quality Assurance Agency Requirements:
- A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements
  1. The QAA shall be objective, competent and independent from the contractor responsible for the work being inspected. The agency shall also disclose possible conflicts of interest to confirm objectivity.
  2. The QAA shall have adequate equipment to perform required tests.
  3. The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and/or inspections. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities.
  4. Prior to the start of construction, the QAA shall submit to the building official, the owner architect and engineer copies of the following:
     - a. Current calibration records for all equipment to be used for the work being inspected and/or tested.
     - b. Current certification and training records for each individual performing the inspections and/or testing.
     - c. Sample inspection and testing reports and the distribution list for the records.
     - d. Proposed inspection procedures and frequency for each inspection required by the work.
     - e. Proposed testing methods and frequency of testing required by the work.
  5. The QAA shall send copies of all inspection and testing reports to the building official, owner, architect, engineer and contractor. Reports shall indicate that the work inspected was or was not completed in conformance to the approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official, architect and engineer.
  6. The QAA shall submit a final report documenting required special inspections and correction of any discrepancies noted in the inspections. The final report shall be distributed to the building official, owner, architect and engineer in a timely manner prior to the completion of the project.

1.2. Contractor Responsibilities:
- A. Each contractor responsible for the construction of a system or component requiring special inspections or testing shall submit a written statement of responsibility to the building official, owner, architect and engineer prior to the commencement of the work. The contractor's statement of responsibility shall contain the following:
  1. Acknowledgement of awareness of the special requirements defined in the statement of special inspections.
  2. Acknowledgement that control will be exercised in order to obtain conformance to the approved construction documents.
  3. Contractor's internal quality control procedures, methods and measures to be used in order to obtain conformance to the approved construction documents. Include copies of quality control reports, frequency of reporting and distribution of reports.
  4. Identification and qualifications of the person(s) responsible for quality control and their position(s) within the organization.
- B. Notification of Engineer: The contractor shall notify the engineer twenty-four hours prior to:
  1. Placing concrete in any footing.
  2. Closing any wall forms.
  3. Placing concrete in any column, beam or suspended slab.
  4. Grouting any masonry.
  5. Completing the welding of major sections of steel decking.
- C. Notification of QAA: The contractor shall notify the QAA in a timely manner so that inspection and testing may be performed as outlined in the statement of special inspections.

1.3. Structural Observations by the Engineer of Record.
- A. The Engineer of Record will perform structural observations at critical phases of the project. Copies of the engineer's report will be directly distributed to the architect, contractor, owner, and building official. The following structural observations are anticipated for the project.
  1. Observation of progress on footings & foundation walls.
  2. Observation of masonry construction prior to first grout pours and during one other stage of masonry construction.
  3. Observations of structural steel erection and steel deck installation in one to two different areas.
  4. Observation of structural steel erection, steel deck installation, and headed stud installation for mezzanine areas.
  5. Observation of wood construction.
- B. Observation visits to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.
- C. At the completion of the project, the contractor shall notify the Engineer of Record of any unresolved or outstanding items in the engineer's reports.

2. Statement of Special Inspections

2.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC).

2.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task.

Steel Construction per IBC Sections 1704.3, 1707.2 & 1708.3

Item	Frequency	Detailed Instructions
Material Verification (IBC Table 1704.3)		
Material verification of structural steel and cold-formed steel deck	Periodic	Verify identification markings of steel conform to ASTM standards noted in General Structural Notes. Verify manufacturer's certified test reports.
Material verification of high-strength bolts, nuts and washers	Periodic	Verify identification markings to conform to ASTM standards noted in General Structural Notes. Manufacturer's certificate of compliance is required.
Material verification of weld filler materials	Periodic	Verify identification markings to conform to AWS specification. Manufacturer's certificate of compliance is required.
Welding (IBC 1704.3.1)		
Complete & partial penetration groove welds	Continuous	Pre-welding inspections are to be performed to ensure that proper materials, welding procedures, and welding personnel qualifications are appropriate and comply with AWS D1.1.
Multi-pass fillet welds	Continuous	
Single-pass fillet welds > 5/16"	Continuous	
Plug, slot, seam or flange welds	Continuous	
Single-pass fillet welds ≤ 5/16"	Periodic	A visual inspection of all welds must be provided with periodic inspections made of work in progress.
Floor & roof deck welds	Periodic	
Shear connector (i.e. stud) welds	Periodic	
Cold-formed steel welds	Periodic	
Welds of stairs & railing systems	Periodic	
Details of Steel Frame (IBC 1704.3.2)		
Item	Frequency	Detailed Instructions
Member locations, bracing, gusset plates, stiffeners and other connection components	Periodic	All steel frames shall be inspected to verify compliance with the approved construction documents, such as bracing, stiffening, member size and location, and proper application of joint details at each connection.
High-Strength Bolting (IBC 1704.3.3)		
Pretensioned & slip-critical joints	Periodic	See steel section of the General Structural Notes and Section 9.2 and 9.3 of the RCSC Specification.
Snug-tightened joints	Periodic	Verify that all joints use proper fastener components, connected elements are fabricated properly, the bolted joint is drawn into firm contact, and that the nuts cannot be removed without the use of a wrench. (See Section 9.1 of RCSC Specification).
Structural Steel in Seismic-Force-Resisting Systems (IBC 1707.2 & 1708.3 and AISC 341 Appendix Q)		
Visual inspection prior to welding	Continuous	Verify materials, fit-up of groove welds, configuration and finish of access holes and fit-up of fillet welds.
Visual inspection during welding	Continuous	Verify: WPS followed, use of qualified welders, control and handling of welding consumables, environmental conditions, welding techniques and no welding over cracked tacks.
Visual inspection after welding	Periodic	Verify: welds are cleaned; welder identification is legible; size, length and location of welds; verify that welds meet acceptance criteria; placement of reinforcement fillets; removal of backing bars and weld tabs as required; and repair activities.
Nondestructive testing of welds Ultrasonic testing	(1) All complete joint penetration (CJP) groove welds in materials 5/16" thick or greater. (2) For base metal thickness greater than 1-1/2" and connected material greater than 3/4" thick containing CJP groove welds loaded in tension in the through thickness direction in tee and corner joints. (3) Where approved by the Engineer and the Building Official, the amount of required ultrasonic testing may be reduced to 25% provided the demonstrated reject rate of a welder or welding operator is 5% or less and at least 40 completed welds have been used to calculate reject rate.	
Nondestructive testing of welds Magnetic particle testing (MT)	(1) When welding of doubler plates, continuity plates or stiffeners has been done in the k-area, the web shall be tested for cracks using magnetic particle testing (MT). Inspection area shall include the k-area base metal within 3 in. of the weld. (2) 25 percent of all beam-to-column CJP groove welds. (3) At welded splices and connections, thermally cut surfaces of beam copes and access holes shall be tested when the flange thickness exceeds 1½" for rolled shapes or when the web thickness exceeds 1½" for built-up shapes. (4) The ends of welds from which the weld tabs have been removed, except for continuity plate weld tabs. (5) Where approved by the Engineer and the Building Official, the amount of required MT on CJP groove welds may be reduced to 10% provided the demonstrated reject rate of a welder or welding operator is 5% or less and at least 20 completed welds have been used to calculate reject rate. This reduction only applies to welds in item (2) above, and is not permitted on other welds requiring MT.	
Inspection prior to bolting	Periodic	Verify: proper bolts and bolting procedure are selected for joint details; connecting elements are fabricated properly, including faying surface and hole preparation; pre-installation verification testing of fastener assemblies and methods; and proper storage is provided for bolts, nuts, washers and fastener components.
Inspection during bolting	Periodic	Verify: fastener assemblies placed in all holes and washers are properly positioned, joint brought to snug-tight condition prior to pretensioning, fastener components not turned by the wrench are prevented from rotating, bolts are progressing systematically from most rigid point toward free edges.
Inspection after bolting	Continuous	Document accepted and rejected connections.

Concrete Construction per IBC Sections 1704.4 & 1708.2

Item	Frequency	Detailed Instructions
Reinforcing steel	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Cast-in bolts & embeds	Continuous	
Post-installed anchors or dowels		All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report.
Use of required mix design	Periodic	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 4, 5.2-5.4; and IBC 1904.3, 1913.2, 1913.3.
Concrete sampling for strength tests, slump, air content, and temperature	Continuous	Samples for strength tests shall be taken in accordance with ASTM C172, cured per ASTM C31 and tested in accordance with ASTM C39. Acceptance criteria for strength tests shall be per ACI 318 Section 5.6.3.3. For each mix placed, samples shall be taken not less than once a day, nor less than once for each 150 yd^3 of concrete, nor less than once for each 5000 ft^2 of surface area for slabs or walls. At the time fresh concrete is is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.
Concrete & shotcrete placement	Continuous	
Curing temperature and techniques	Periodic	Verify that the ambient temperature for concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 5.11.3). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
In-situ strength verification	Periodic	Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons.
Formwork	Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.
Reinforcement in special moment frames, special structural walls and coupling beams	Periodic	Verify that ASTM A 615 reinforcing steel used in these areas complies with ACI 318: 21.1.5.2 by means of certified mill test reports.

SEE SHEET S003 FOR CONTINUATION OF QUALITY ASSURANCE NOTES

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P: 801.486.3883
F: 801.485.0911
675 E. 500 S. Suite 400
Salt Lake City, Utah 84102
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

GENERAL STRUCTURAL NOTES

S002

9/7/2012 1:29:10 PM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

QUALITY ASSURANCE NOTES-CONT.

Masonry Construction per IBC Section 1704.5

Item	Frequency	Detailed Instructions
Review material certificates, mix designs, test results and construction procedures	Periodic	It shall be confirmed that materials used conform to the requirements of the approved construction documents. Mortar mix designs shall show compliance with the proportion or property specification of ASTM C270. Grout shall comply with the proportion or strength requirements of ASTM C476 or be based upon compressive strength tests in accordance with ASTM C1019. Material certificates shall be provided for the following: reinforcement; anchors, ties, fasteners, and metal accessories; masonry units; mortar and grout materials. Construction procedures for cold-weather or hot-weather construction shall be reviewed.
Verify f'_m prior to construction	Periodic	Determine the compressive strength for each wythe by the "unit strength method" or by the "prism test method" as specified in Section 1.4B of ACI 530.1-08 prior to construction.
Self-consolidating grout	Continuous	
Grout placement	Continuous	
Preparation of required grout specimens, mortar specimens and/or prisms shall be observed	Periodic	If the prism test method is used a minimum of three prisms shall be constructed in accordance with ASTM C1314. If the unit strength method is selected the compressive strength of the grout shall be determined per ASTM C1019 (not required if grout complies with ASTM C476).
Post-installed anchors or dowels		All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report.
Prior to Grouting:		
Item	Frequency	Detailed Instructions
Grout space is clean	Periodic	Verify that grout space is free of mortar droppings, debris, loose aggregate, and material deleterious to masonry grout.
Placement of reinforcement an connectors	Periodic	Verify that reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors are installed in accordance with Section 3.4 of ACI 530.1-08.
Proportions of site-prepared grout	Periodic	Verify that grout is proportioned per ASTM C476 and has a slump between 8-11 inches. Self-consolidated grout shall not be proportioned onsite.
As Masonry Construction Begins:		
Proportions of site-prepared mortar	Periodic	Ensure that mortar that begins to stiffen or is not used within 2½ hours is discarded. No admixtures containing > 0.2% chlorides shall be used. Jobsite pigments shall meet the limitations of Section 2.6A of ACI 530.1-08.
Construction of mortar joints	Periodic	Unless specified otherwise construct 3/8" bed and head joints, except at foundation or glass unit masonry. Bed joint at foundation shall be >1/4" and ≤ 3/4". Tool joints with a round jointer when mortar is thumbprint hard. Remove masonry protrusions extending ≥ 1/2" into cells to be grouted. Solidly fill collar joints < 3/4" with mortar during construction.
Location of reinforcement and connectors	Periodic	Verify compliance with approved construction documents. Do not place dissimilar metals in contact with each other.
During Construction:		
Size and location of structural elements	Periodic	Verify that structural elements are placed in locations specified on the approved construction documents and to the tolerances noted in Section 3.3F of ACI 530.1-08.
Type, size and location of anchors and other details of masonry anchorages to structural members	Periodic	Verify that structural elements are placed in locations specified on the approved construction documents. Headed or bent bar anchor bolts shall be embedded in grout.
Size, grade and type of reinforcement, and metal accessories	Periodic	Verify that materials meet the requirements of Section 2.4 of ACI 530.1-08. All reinforcement shall be placed in grout with minimum grout cover of 1/2" for coarse grout and 1/4" for fine grout. Verify that reinforcement protection, standard hooks and minimum bend diameters comply with Section 1.15 of ACI 530-08.
Preparation, construction and protection of masonry during cold or hot weather construction	Periodic	When the ambient air temperature is <40°F ensure that construction complies with Section 1.8C of ACI 530.1-08. When the ambient air temperature is >100°F, or >90°F with a wind velocity >8mph, ensure that construction complies with Section 1.8D of ACI 530.1-08.

Soils per IBC Section 1704.7

Item	Frequency	Detailed Instructions
Verify subgrade is adequate to achieve design bearing capacity	Periodic	Prior to placement of concrete.
Verify excavations extend to proper depth and material	Periodic	Prior to placement of compacted fill or concrete.
Verify that subgrade has been appropriately prepared prior to placing compacted fill	Periodic	Prior to placement of compacted fill.
Item	Frequency	Detailed Instructions
Perform classification and testing of compacted fill materials	Periodic	All materials shall be checked at each lift for proper classifications and gradations not less than once for each 10,000ft² of surface area.
Verify proper materials, densities and lift thicknesses during placement and compaction.	Continuous	

REAVELEY
ENGINEERS + ASSOCIATES
Consulting Structural Engineers

P 801.486.3883
F 801.485.0911

4175 S 500 S, Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

△	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

GENERAL STRUCTURAL NOTES

S003

9/7/2012 1:29:13 PM

FOOTING & FOUNDATION PLAN LEGEND

- FOOTING STEP
- FOOTING - CONTINUOUS
- FOOTING - THICKENED SLAB
- FOOTING - SQUARE FOOTING - RECTANGULAR FOOTING - MAT FOOTING
- CONCRETE WALL, CONCRETE FOUNDATION WALL, OR CONCRETE RETAINING WALL
- CONCRETE FOUNDATION WALL - RECESSED
- CONCRETE PIER IN CONCRETE WALL. TOP OF PIER RECESSED 8" BELOW SLAB. TYP U.N.O.
- CONCRETE JAMB COLUMN POURED MONOLITHIC WITH CONCRETE WALL
- MASONRY WALL
- MASONRY WALL - RECESSED
- MASONRY COLUMN IN MASONRY WALL
- STEEL COLUMN - TUBE
- 0" CHANGE IN ELEVATION
- SLAB BLOCK-OUT AT COLUMN
- CJ SLAB CONTROL/CONSTRUCTION JOINT
- SPECIAL SLAB AREA
- RECESSED/DEPRESSED SLAB
- OPENING

FOOTING & FOUNDATION PLAN NOTES

1. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS ETC.

2. SEE ARCHITECTURAL DRAWINGS AND FINISH SCHEDULE FOR SLAB AREAS TO RECEIVE FLOOR TILE.

3. SEE ARCHITECTURAL DRAWINGS FOR SLAB DEPRESSIONS AND SLOPES TO DRAINS, ETC.

4. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL EXTERIOR CONCRETE RETAINING AND / OR SITE WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

5. SEE D1/S501 FOR TYPICAL EXTERIOR CONCRETE FOOTING STEP DETAIL. SEE D4/S502 FOR TYPICAL EXTERIOR TO INTERIOR FOOTING STEP.

6. SEE C1/S501 FOR TYPICAL REINFORCEMENT AT WALL CORNERS AND INTERSECTIONS.

7. SEE A2/S501 FOR TYPICAL DETAIL AT SLAB JOINTS IN CONCRETE SLABS ON GRADE.

8. SEE A2/S501 FOR TYPICAL DETAIL AT DEPRESSED CONCRETE SLABS ON GRADE.

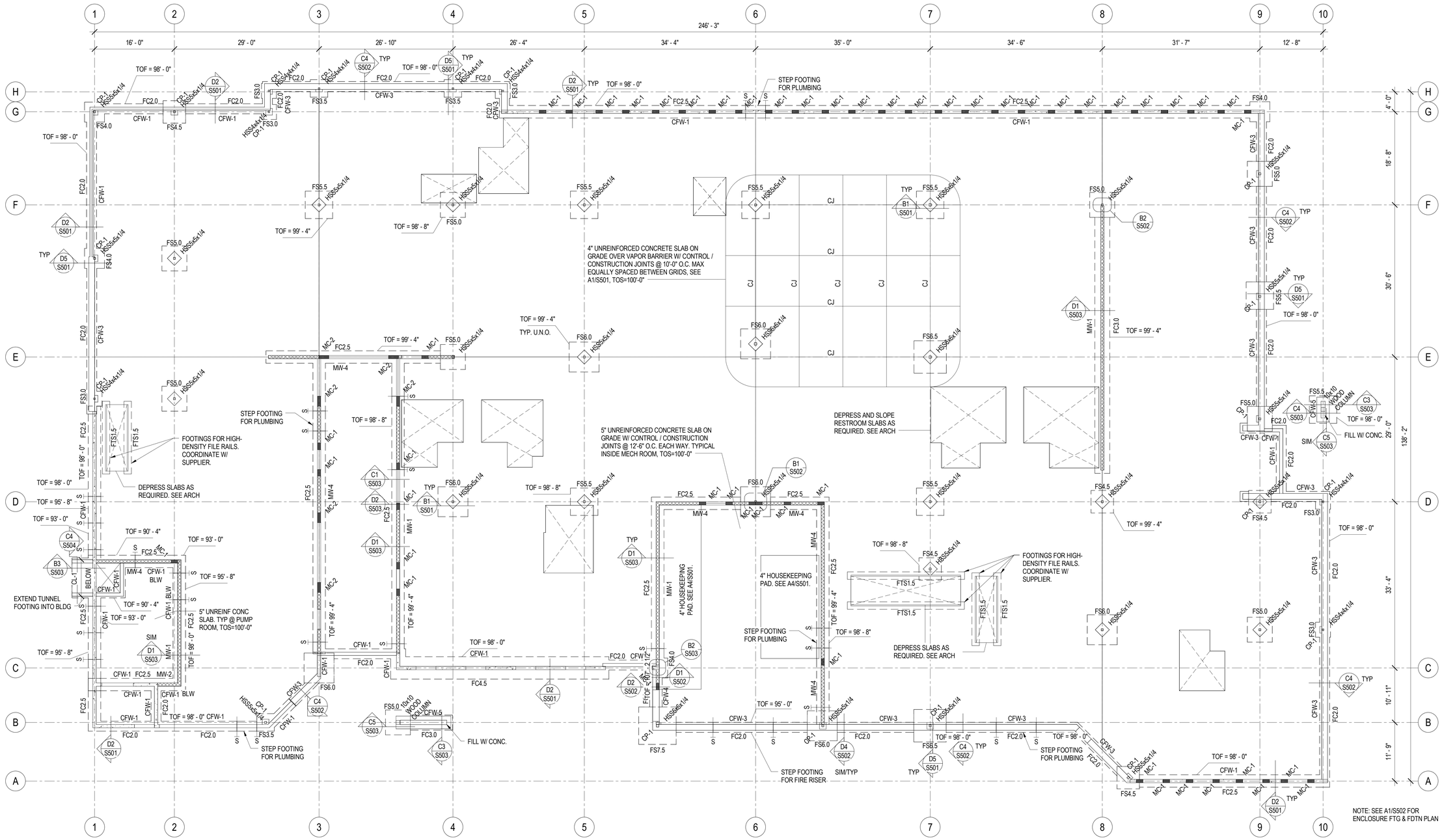
9. SEE A2/S501 FOR REINFOREMENT AT DISCONTINUOUS CONSTRUCTION/CONTROL JOINTS IN CONCRETE SLAB ON GRADE.

10. REFER TO GENERAL STRUCTURAL NOTES AND SEE C5/S502 FOR COMPACTED FILL REQUIREMENTS BELOW FOOTINGS.

11. AT ALL MASONRY BEARING WALLS PROVIDE ADDITIONAL DUCTILITY REINFORCING PER C4/S602, TYP.

12. SEE C1/S502 FOR CONTROL JOINT IN 8" MASONRY WALL.

13. SEE C2/S502 FOR TYPICAL RECESS IN 8" MASONRY WALL.



B1 / S101 FOOTING & FOUNDATION PLAN

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

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

FOOTING & FOUNDATION PLAN

S101

9/7/2012 1:29:15 PM

ROOF FRAMING PLAN LEGEND

- CONCRETE WALL
- CONCRETE LINTEL IN CONCRETE WALL
- CONCRETE COLUMN IN CONCRETE WALL
- CONCRETE JAMB COLUMN POURED MONOLITHIC WITH CONCRETE WALL
- MASONRY WALL
- MASONRY LINTEL IN MASONRY WALL
- MASONRY COLUMN IN MASONRY WALL
- STEEL STUD WALL
- STEEL COLUMN - TUBE
- STEEL ANGLE BRACE OR STEEL STUD WALL BRACE
- MOMENT CONNECTION
- COLLECTOR CONNECTION SEE A2/S603
- COLLECTOR/CHORD CONNECTION AT BEAMS PARALLEL TO MARK.
- STEEL BEAM OR GIRDER
- STEEL JOIST OR PURLIN
- CROSS BRIDGING
- HORIZONTAL BRIDGING
- 0" CHANGE IN ELEVATION
- ROOF DECK
- SPECIAL DECK AREA
- OPENING

ROOF FRAMING PLAN NOTES

1. VERIFY SIZE, WEIGHT, LOCATION AND CONFIGURATION OF ALL ROOF TOP EQUIPMENT WITH ARCHITECT AND MECHANICAL ENGINEER. PROVIDE STEEL FRAMES FOR SUPPORT OF ROOF TOP EQUIPMENT AS INDICATED IN DETAIL A2/S511 COORDINATE OPENINGS WITH MECHANICAL AND ELECTRICAL AND GENERAL CONTRACTORS.

2. ALL ROOF OPENINGS SHALL BE FRAMED AS INDICATED IN DETAIL A1/S511. FOR ROUND OPENINGS WHICH ARE LESS THAN 12" DIA. SEE DETAIL A3/S511.

3. SEE ARCHITECTURAL FOR ROOF SLOPES AND DRAINS. SEE A5/S511 FOR ROOF DRAIN OPENING FRAME.

4. OPEN WEB STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE MECHANICAL AND LATERAL LOADS SHOWN ON THE ROOF FRAMING PLANS IN ADDITION TO THE UNIFORM AND POINT LOADS SHOWN.

5. +##K ADD - INDICATES ADDITIONAL UPLIFT / DOWNWARD FORCE ON STEEL JOIST IN ADDITION TO REGULAR LOADS.

6. T/C=##K - INDICATES ADDITIONAL TOP CHORD AXIAL FORCE ON STEEL JOIST OR GIRDER IN ADDITION TO REGULAR LOADS. THIS FORCE IS A SEISMIC LRFD LOAD THAT SHALL BE CONSIDERED IN BOTH TENSION AND COMPRESSION; INCLUDES APPLICABLE OVERSTRENGTH FACTORS FROM IBC SECTION 1613 AND ASCE 7 SECTION 12.10. STEEL JOISTS AND GIRDERS WITH T/C FORCE SHALL BE DESIGNED AS COLLECTOR ELEMENTS PER IBC SECTION 1613 AND ASCE 7 SECTION 12.10 WITH STRENGTH TO RESIST APPLICABLE LOAD COMBINATIONS OF IBC SECTION 1605.4 AND ASCE 7 SECTION 12.4.

7. ALL LOADS SUPPORTED BY OPEN WEB STEEL JOISTS AND GIRDERS SHALL BE LOCATED WITHIN 6" OF JOIST OR GIRDER PANEL POINT OR THE JOIST OR GIRDER SHALL BE REINFORCED PER DETAIL A4/S512.

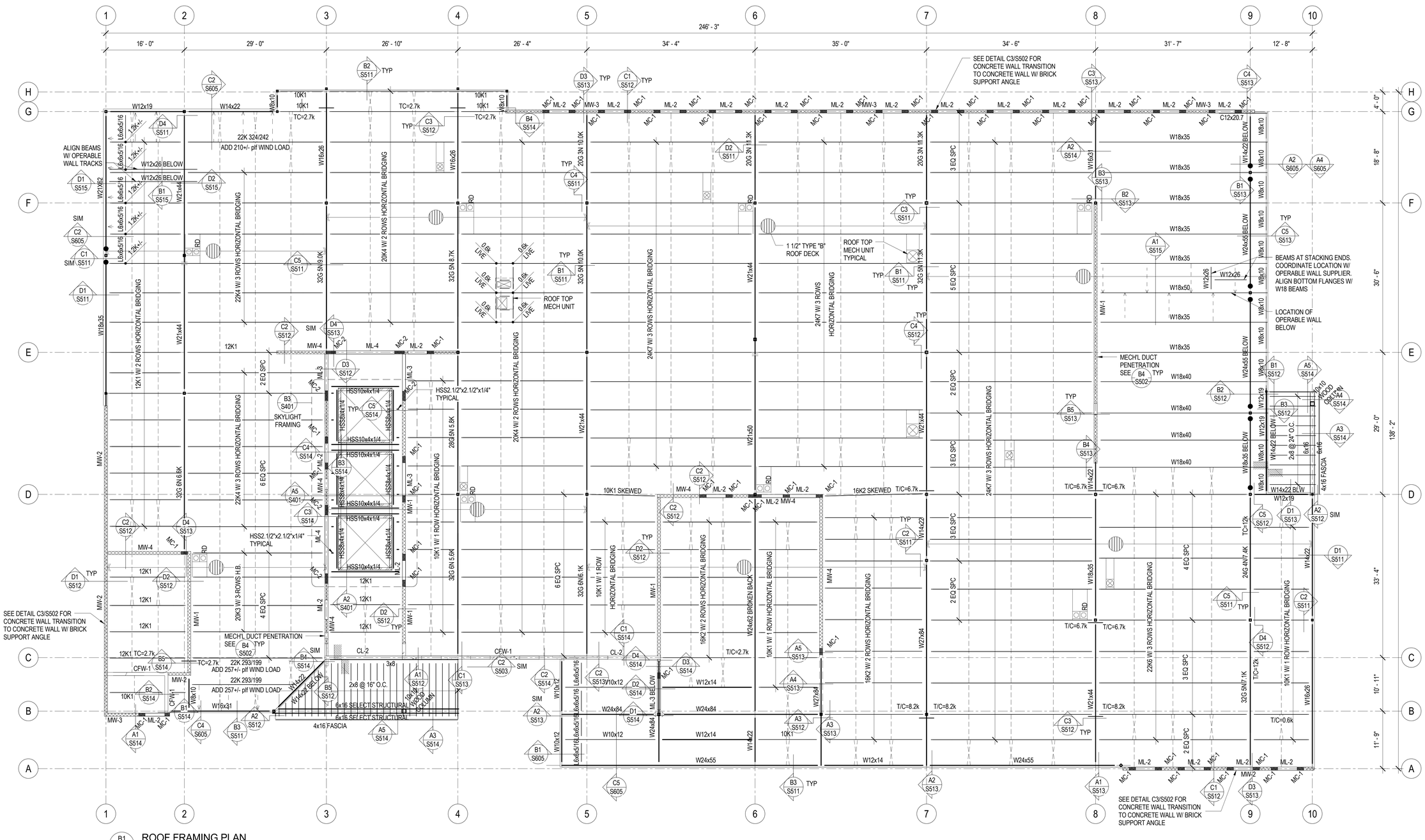
8. SEE DETAIL A5/S512 FOR SUPPORT OF HANGING MECHANICAL UNITS.

9. HORIZONTAL AND CROSS BRIDGING SHALL BE SIZED AND SUPPLIED BY THE JOIST MANUFACTURER. CONNECT TO WALLS AS INDICATED IN DETAILS.

10. WHERE SKYLIGHTS OR MECHANICAL UNITS INTERRUPT HORIZONTAL BRIDGING PROVIDE CROSS BRIDGING AT JOIST SPACES ON EACH SIDE. TYPICAL.

11. ALL JOISTS TO BE DESIGNED FOR:
    A. 2.5k TOP CHORD AXIAL FORCE, CONSIDERED AS EARTHQUAKE OR WIND PER NOTE 6. U.N.O. ON PLAN.
    B. 20psf NET WIND UPLIFT (ASD)

12. AT ALL MASONRY BEARING WALLS PROVIDE ADDITIONAL DUCTILITY REINFORCING PER C4/S602, TYP.



B1 / S111 ROOF FRAMING PLAN

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

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4175 S. 500 S, Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

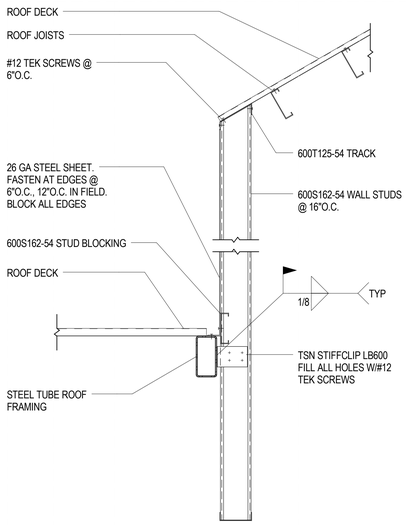
DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

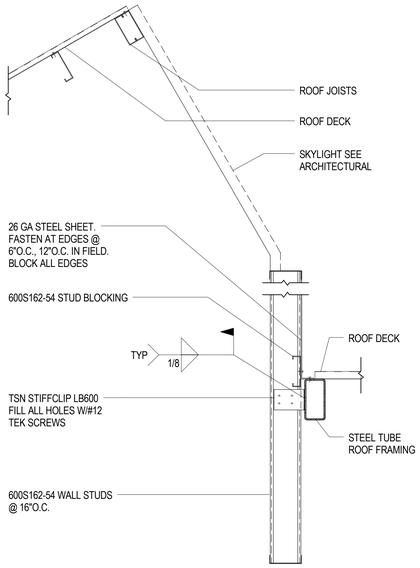
ROOF FRAMING PLAN

S111

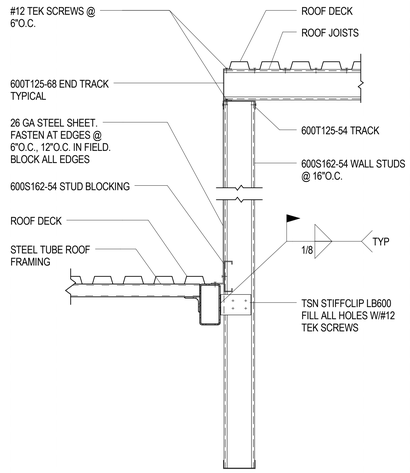
9/7/2012 1:29:17 PM



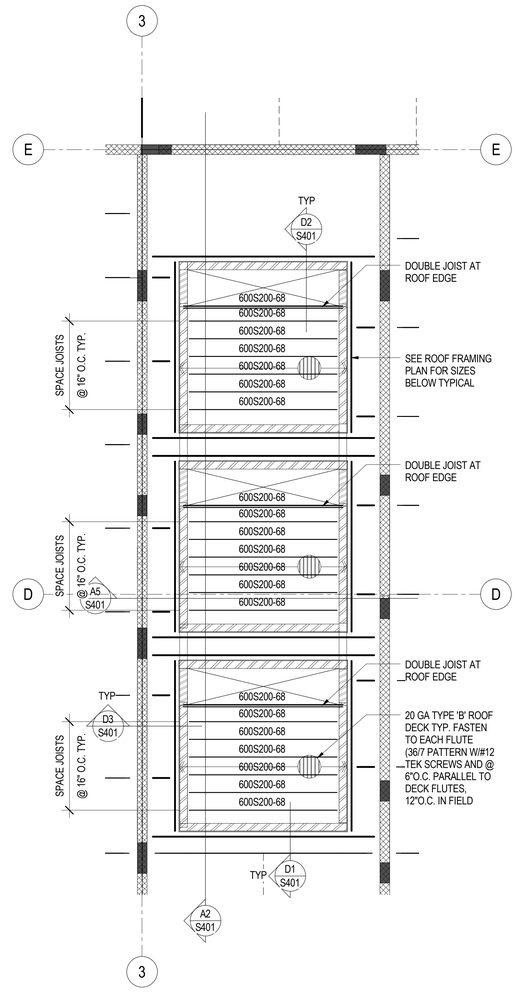
D1 / S401 TYPICAL SKYLIGHT FRAMING DETAIL
NO SCALE



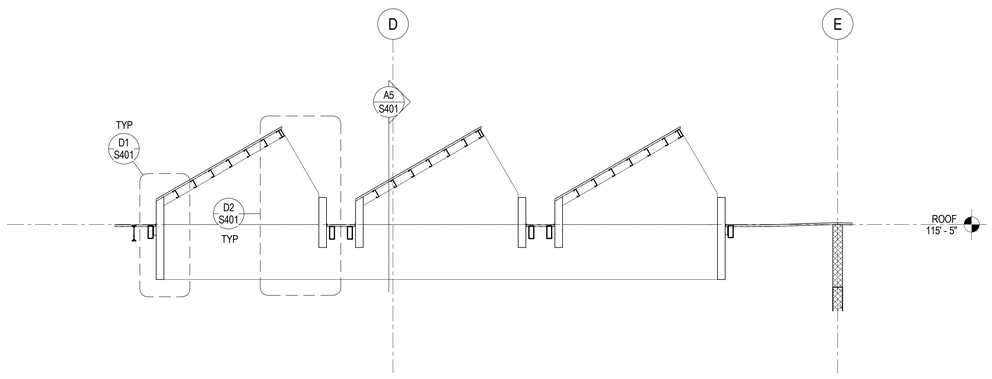
D2 / S401 TYPICAL SKYLIGHT FRAMING DETAIL
NO SCALE



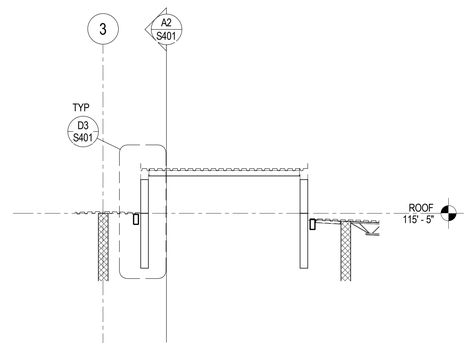
D3 / S401 TYPICAL SKYLIGHT FRAMING DETAIL
NO SCALE



B3 / S401 SKYLIGHT FRAMING PLAN
SCALE: 1/4" = 1'-0"



A2 / S401 SKYLIGHT SECTION
SCALE: 1/4" = 1'-0"



A5 / S401 SKYLIGHT SECTION
SCALE: 1/4" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4715 S 500 S, Suite 400
Salt Lake City, Utah 84107
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

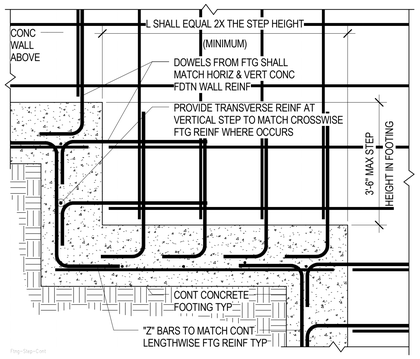
△	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

SKYLIGHT FRAMING PLAN & DETAILS

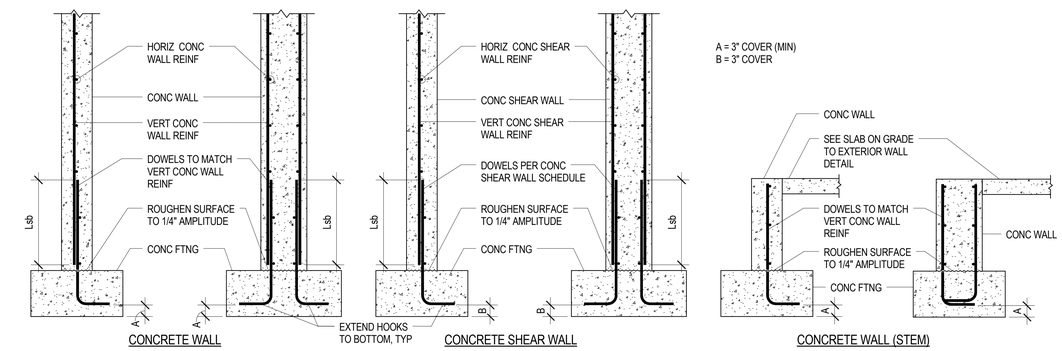
S401

9/7/2012 1:29:18 PM



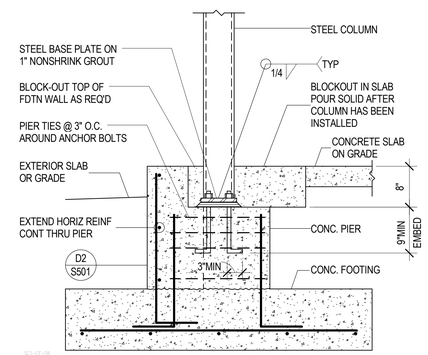
D1 / S501 TYPICAL STEP DETAIL AT CONTINUOUS FOOTING

NO SCALE



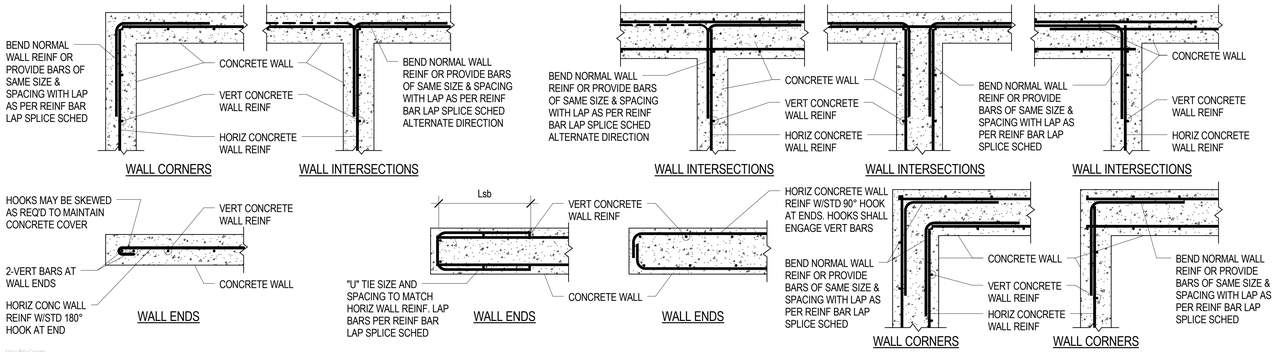
D2 / S501 TYPICAL CONCRETE WALL CONNECTION TO CONCRETE FOOTING

NO SCALE



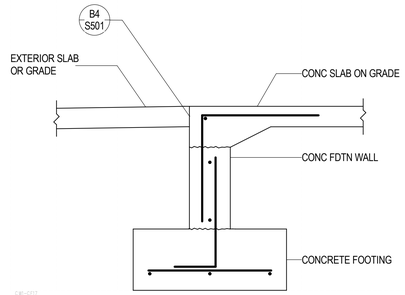
D5 / S501 TYPICAL STEEL COLUMN BASE AT CONC PIER IN FOUNDATION WALL

NO SCALE



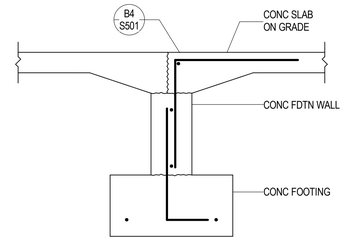
C1 / S501 TYPICAL CONCRETE WALL INTERSECTIONS AND ENDS (PLAN VIEWS)

NO SCALE



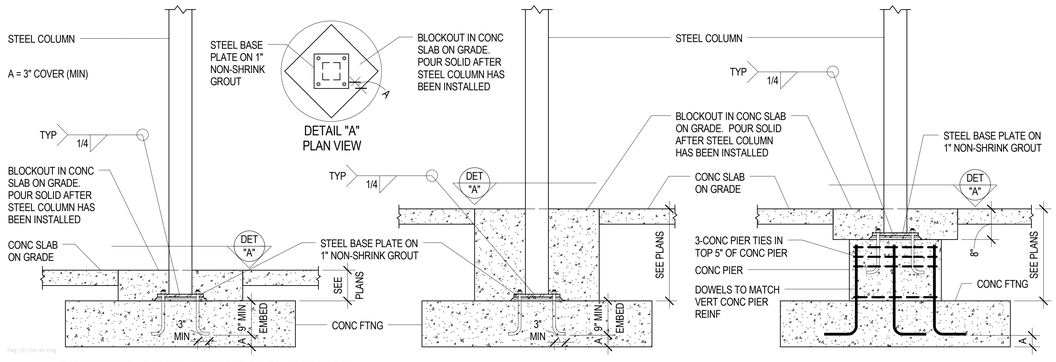
C4 / S501 TYP CONCRETE SLAB TO FOUNDATION WALL AT DOOR OPENING

NO SCALE



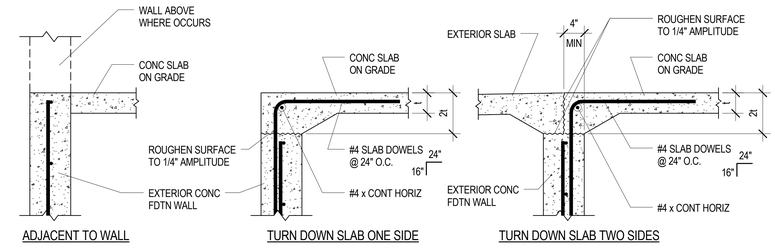
C5 / S501 TYPICAL SLAB AT DOOR OPENING

NO SCALE



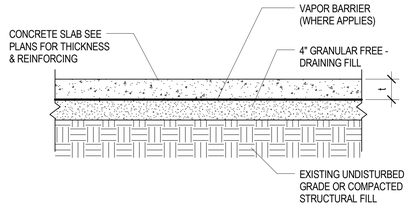
B1 / S501 TYPICAL STEEL COLUMN CONNECTION TO CONCRETE FOOTING/CONCRETE PIER

NO SCALE



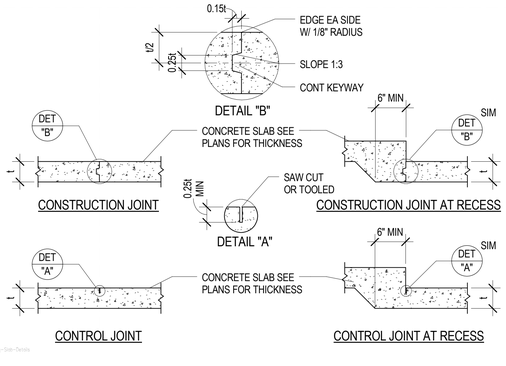
B4 / S501 TYPICAL CONCRETE SLAB ON GRADE TO EXTERIOR CONCRETE FOUNDATION WALL

NO SCALE



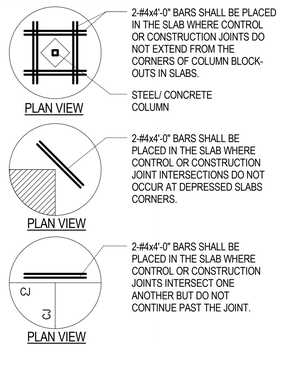
A1 / S501 TYPICAL CONCRETE SLAB ON GRADE PROFILE

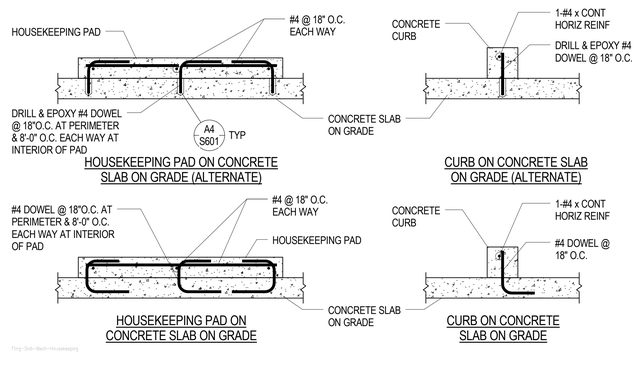
NO SCALE



A2 / S501 TYPICAL CONCRETE SLAB ON GRADE DETAILS

NO SCALE





A4 / S501 TYPICAL HOUSEKEEPING PAD & CURB DETAILS

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4715 S 500 S, Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

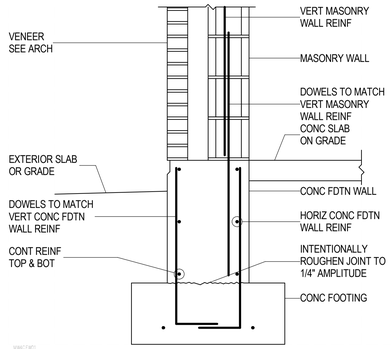
DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

FOOTING & FOUNDATION DETAILS

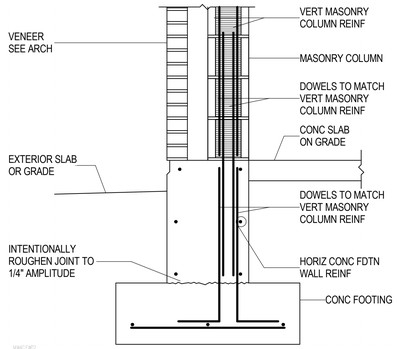
S501

9/7/2012 1:29:20 PM



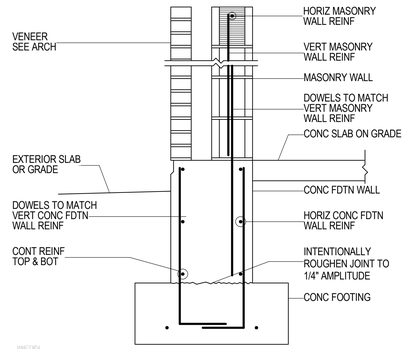
D1 / S502 TYP MASONRY WALL W/ VENEER ON CONCRETE FOUNDATION WALL

NO SCALE



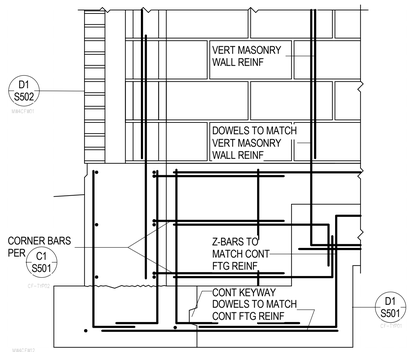
D2 / S502 TYP MASONRY COLUMN W/ VENEER ON CONCRETE FOUNDATION WALL

NO SCALE



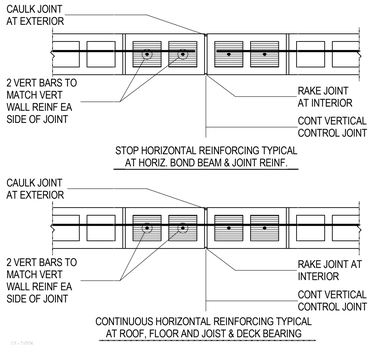
D3 / S502 TYP MASONRY WALL W/ VENEER ON CONCRETE FOUNDATION WALL

NO SCALE



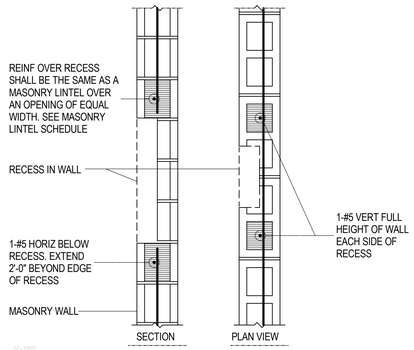
D4 / S502 TYP FOOTING STEP FROM EXTERIOR FDTN WALL TO INTERIOR WALL

NO SCALE



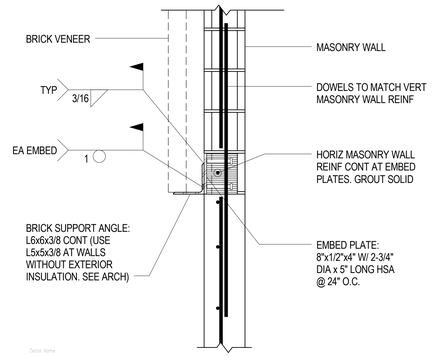
C1 / S502 TYPICAL CONTROL JOINTS IN 8" MASONRY WALLS

NO SCALE



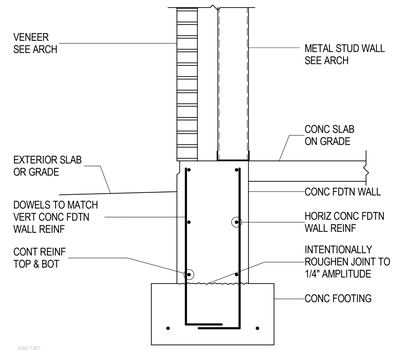
C2 / S502 TYPICAL RECESS IN 8" MASONRY WALL

NO SCALE



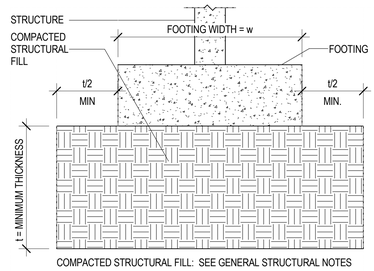
C3 / S502 CONCRETE WALL TO MASONRY WALL TRANSITION W/ BRICK SUPPORT ANGLE

NO SCALE



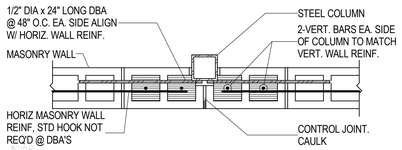
C4 / S502 TYP MASONRY WALL W/ VENEER ON CONCRETE FOUNDATION WALL

NO SCALE



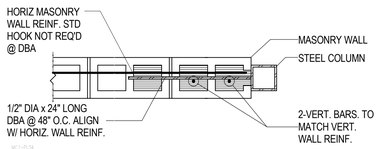
C5 / S502 TYP COMPACTED STRUCTURAL FILL DETAIL

NO SCALE



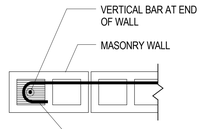
B1 / S502 TYPICAL STEEL COLUMN IN MASONRY WALL

NO SCALE



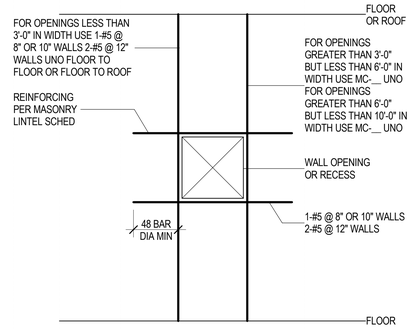
B2 / S502 TYPICAL STEEL COLUMN IN MASONRY WALL

NO SCALE



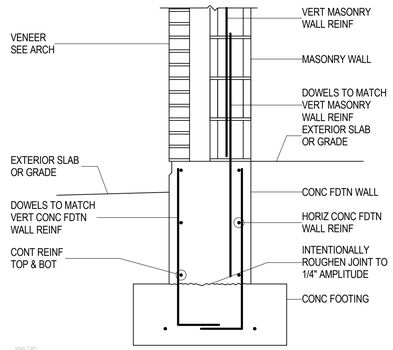
B3 / S502 TYPICAL MASONRY WALL END DETAIL

NO SCALE



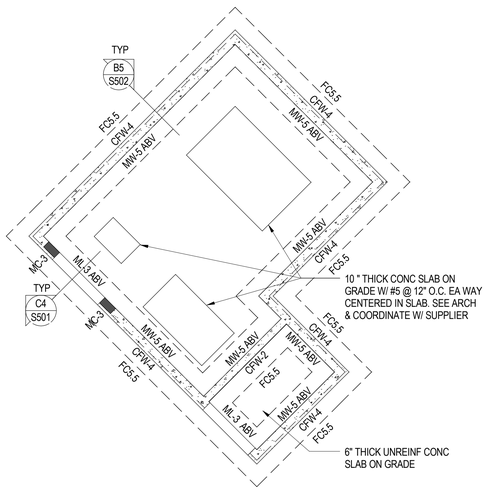
B4 / S502 TYP REINF AROUND MISC OR RECESSED MASONRY OPENINGS

NO SCALE



B5 / S502 MASONRY WALL W/ VENEER ON CONCRETE FOUNDATION WALL

NO SCALE



A1 / S502 ENCLOSURE FOOTING & FOUNDATION PLAN

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

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4175 S. 500 S, Suite 400
Salt Lake City, Utah 84107
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

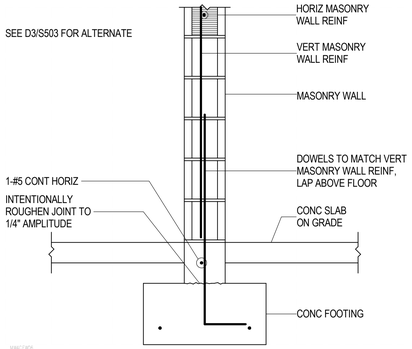
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

FOOTING & FOUNDATION DETAILS

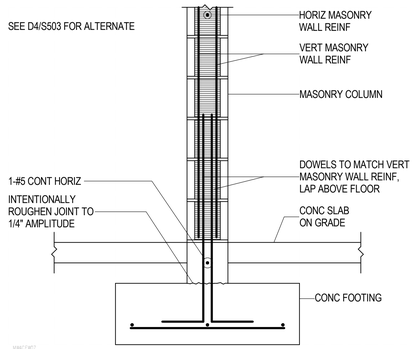
S502

9/7/2012 1:29:22 PM



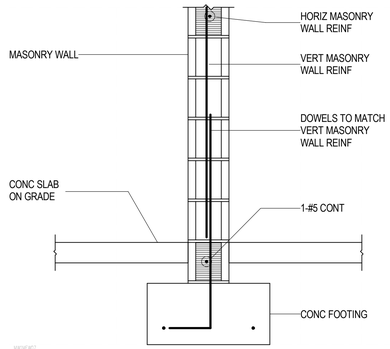
D1 / S503 TYP INTERIOR MASONRY WALL ON CONCRETE CURB WALL

NO SCALE



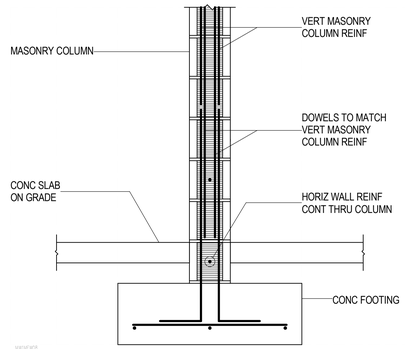
D2 / S503 TYP INTERIOR MASONRY COLUMN ON CONCRETE CURB

NO SCALE



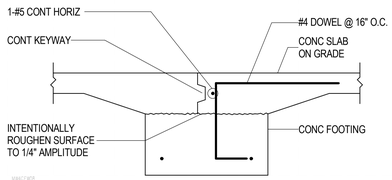
D3 / S503 TYP INTERIOR MASONRY WALL AT MASONRY FOUNDATION WALL

NO SCALE



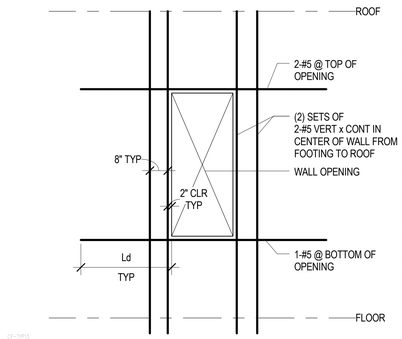
D4 / S503 TYP INTERIOR MASONRY COLUMN AT MASONRY FOUNDATION WALL

NO SCALE



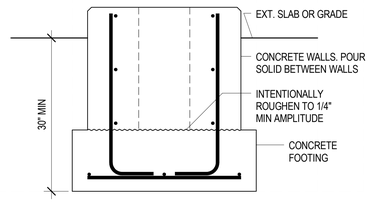
C1 / S503 TYPICAL DOOR OPENING AT INTERIOR

NO SCALE



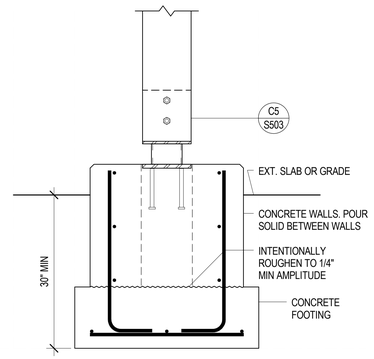
C2 / S503 TYP REINF AROUND OPENING IN CONCRETE WALL

NO SCALE



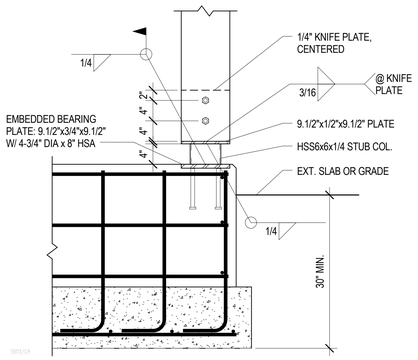
C3 / S503 CONCRETE FOUNDATION WALL BEYOND WOOD POST

NO SCALE



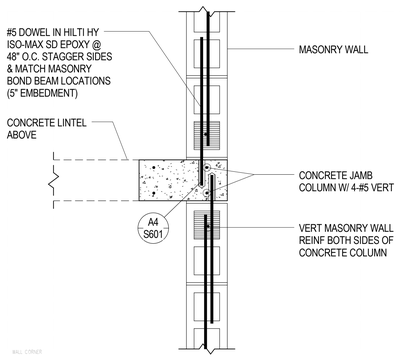
C4 / S503 CONCRETE FOUNDATION WALL AT EXTERIOR WOOD POST

NO SCALE



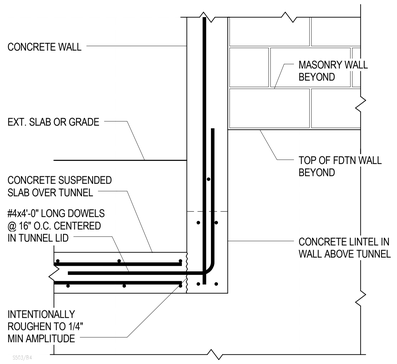
C5 / S503 STUB COLUMN FOR WOOD POST

NO SCALE



B2 / S503 MASONRY WALL & CONCRETE WALL INTERSECTION

NO SCALE



B3 / S503 CONCRETE LINTEL IN CONCRETE WALL AT TUNNEL LID

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4715 S. 500 S, Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

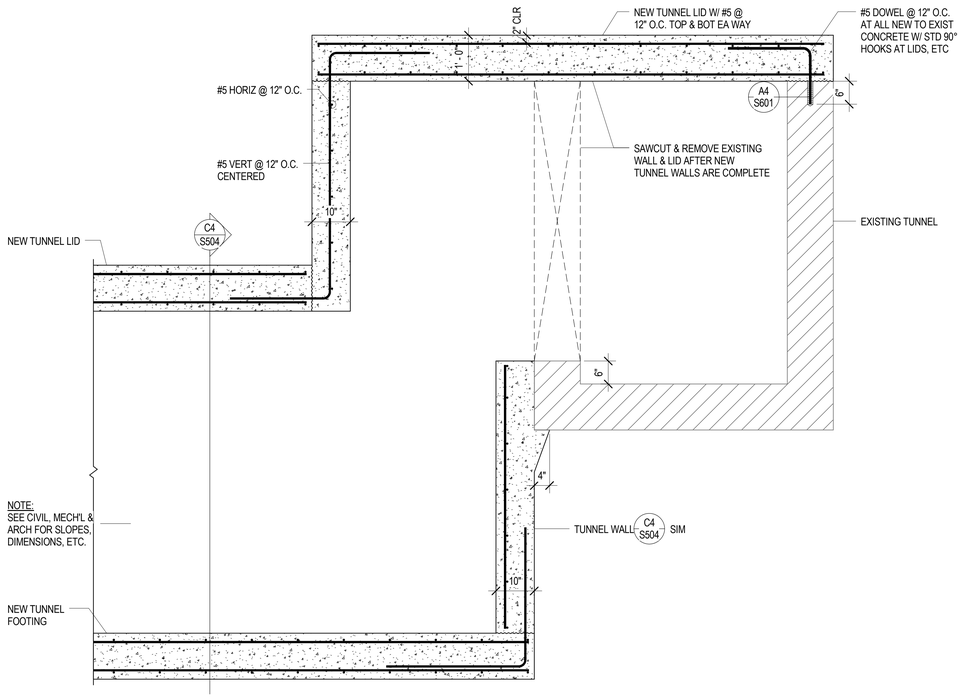
△	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

FOOTING & FOUNDATION DETAILS

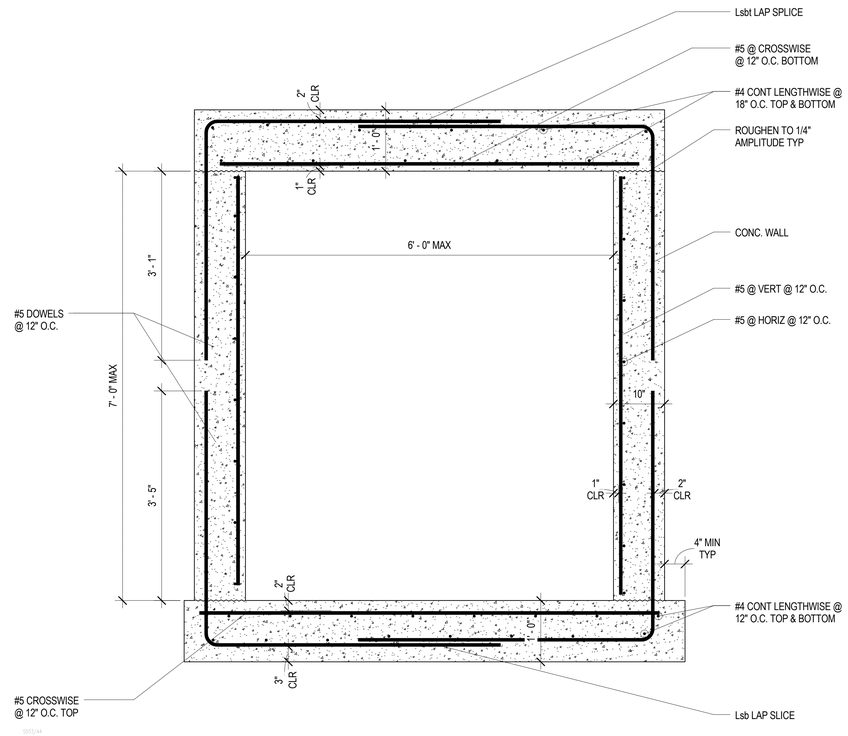
S503

9/7/2012 1:29:23 PM



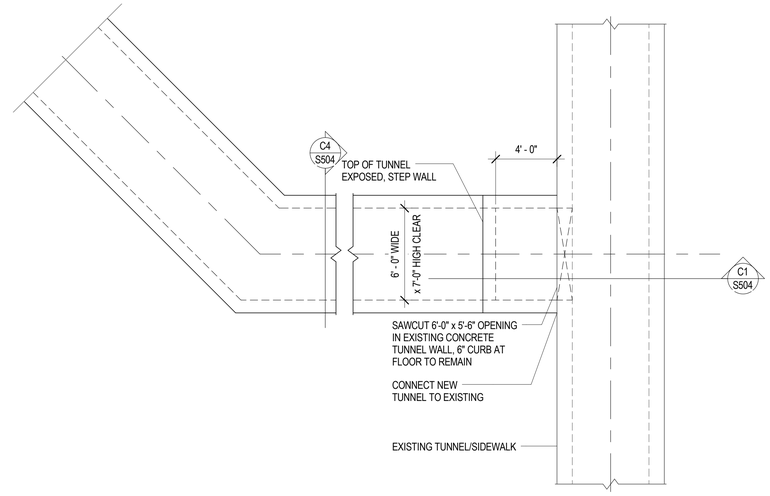
C1 / S504 TUNNEL NODE SECTION

NO SCALE



C4 / S504 TYPICAL TUNNEL SECTION

NO SCALE



B4 / S504 TUNNEL PLAN

NO SCALE

DFCM APPROVAL STAMP

REFERENCE NOTES

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REAVELEY
ENGINEERS + ASSOCIATES
Consulting Structural Engineers

P 801.466.3663
F 801.485.0911

4715 S. 500 S. Suite 400
Salt Lake City, Utah 84152
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

	DATE	REVISION

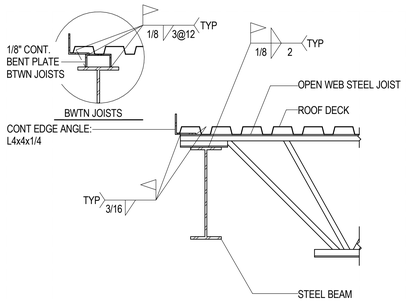
PROJECT NUMBER 11111

FILE 11111 USH Payne

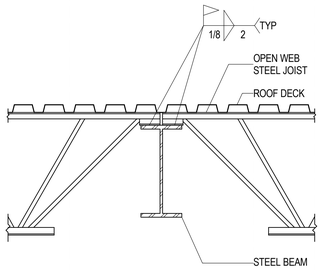
FOOTING & FOUNDATION DETAILS

S504

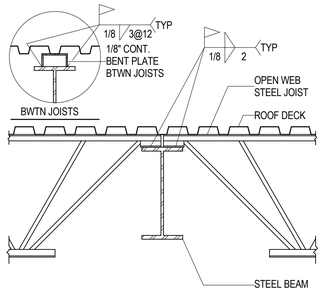
9/7/2012 1:29:24 PM



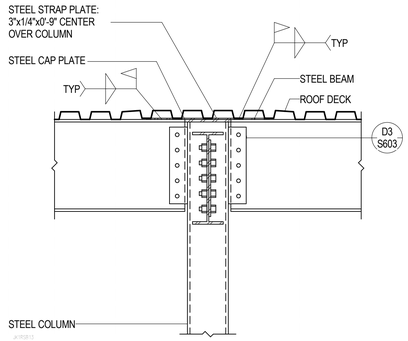
D1 S511 TYP JOIST BEARING AT STEEL BEAM W/ CHORD TIE/DRAG STRUT
NO SCALE



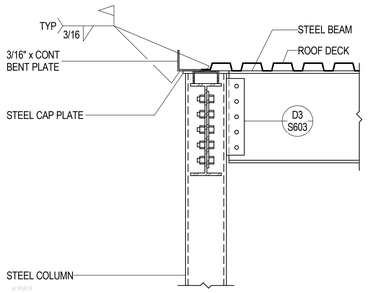
D2 S511 TYP JOIST BEARING AT STEEL BEAM
NO SCALE



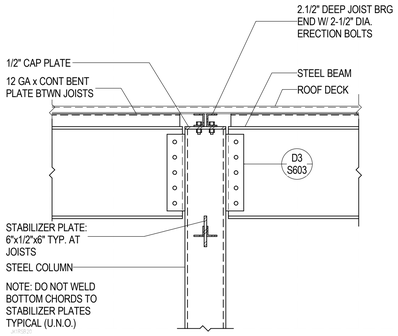
D3 S511 TYP JOIST BEARING AT STEEL BEAM W/ CHORD TIE/DRAG STRUT
NO SCALE



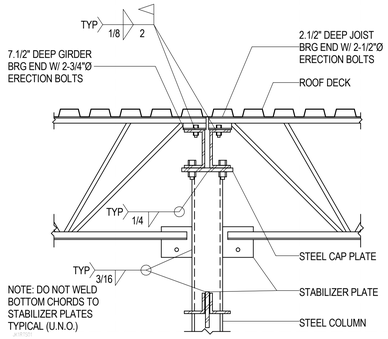
D4 S511 TYPICAL STEEL BEAM TO STEEL COLUMN CONNECTION W/ DRAG STRUT
NO SCALE



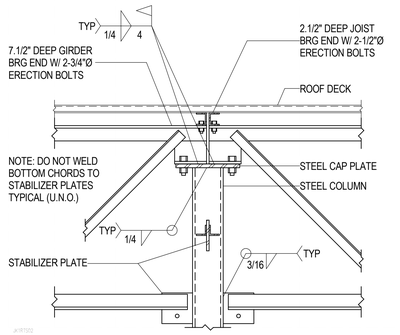
C1 S511 TYP STEEL BEAM CONNECTION TO STEEL COLUMN
NO SCALE



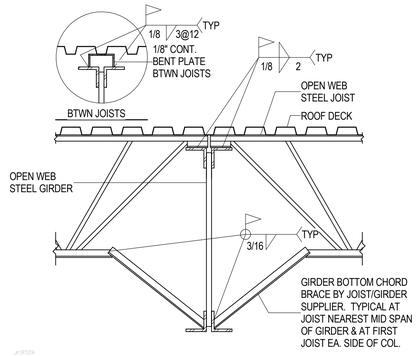
C2 S511 TYP STEEL JOIST & STEEL BEAM BEARING AT STEEL COLUMN
NO SCALE



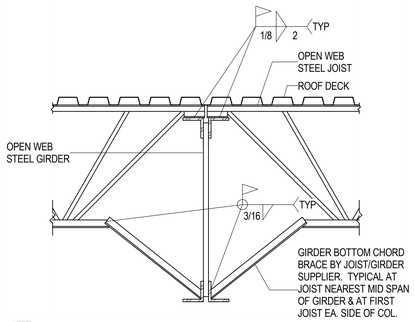
C3 S511 TYPICAL JOIST & GIRDER BEARING ON STEEL COLUMN
NO SCALE



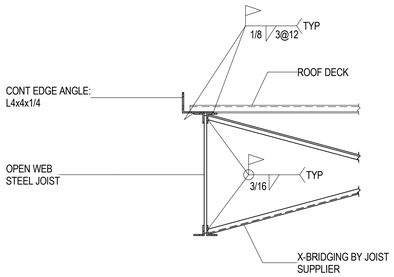
C4 S511 TYPICAL JOIST & GIRDER BEARING ON STEEL COLUMN
NO SCALE



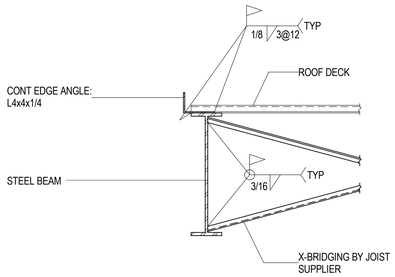
C5 S511 TYPICAL JOIST BEARING AT GIRDER W/ DRAG STRUT/CHORD TIE
NO SCALE



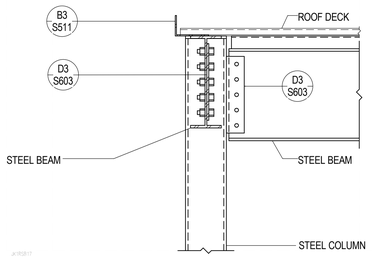
B1 S511 TYPICAL JOIST BEARING AT GIRDER
NO SCALE



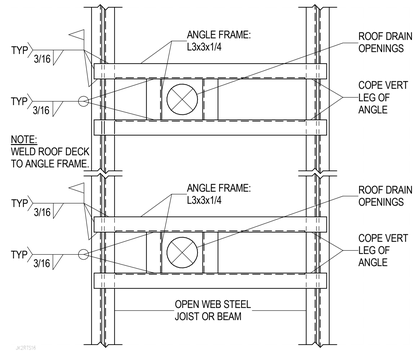
B2 S511 TYPICAL EDGE JOIST W/ BRIDGING
NO SCALE



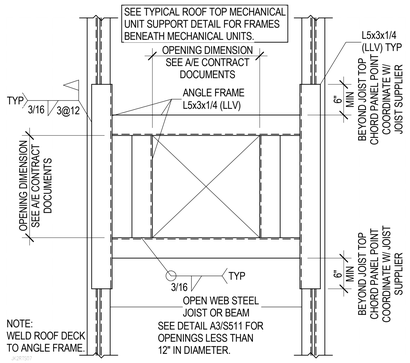
B3 S511 TYPICAL EDGE JOIST W/ BRIDGING
NO SCALE



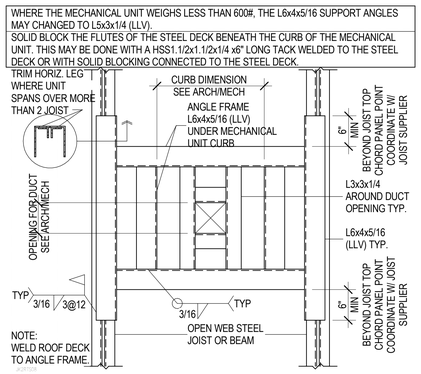
B4 S511 TYPICAL STEEL BEAM CONNECTION TO STEEL COLUMN
NO SCALE



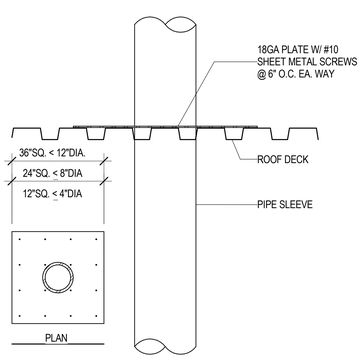
B5 S511 TYPICAL ROOF DRAIN OPENING (PLAN VIEW)
NO SCALE



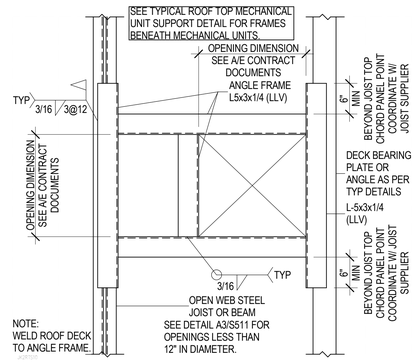
A1 S511 TYPICAL ROOF OPENING DETAIL (PLAN VIEW)
NO SCALE



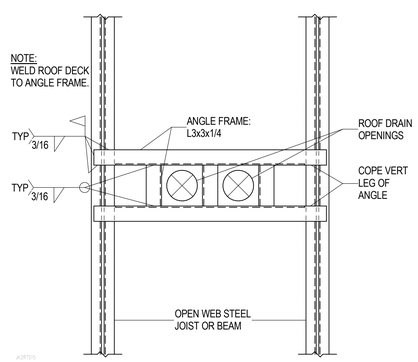
A2 S511 TYP ROOF TOP MECHANICAL UNIT SUPPORT DETAIL (PLAN VIEW)
NO SCALE



A3 S511 TYPICAL PIPE SLEEVE HOLE THRU ROOF DECK
NO SCALE



A4 S511 TYP ROOF OPENING DETAIL (PLAN VIEW) ADJACENT TO MASONRY WALL
NO SCALE



A5 S511 TYPICAL ROOF DRAIN OPENING (PLAN VIEW)
NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P: 801.466.3883
F: 801.485.0911
4175 S. 500 S. Suite 400
Salt Lake City, Utah 84102
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

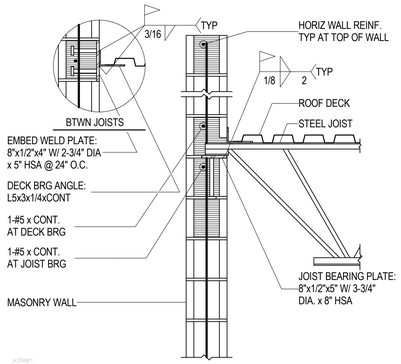
DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

ROOF FRAMING DETAILS

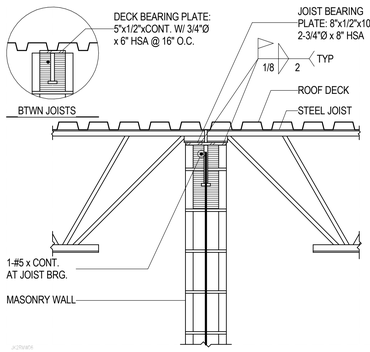
S511

9/7/2012 1:29:26 PM



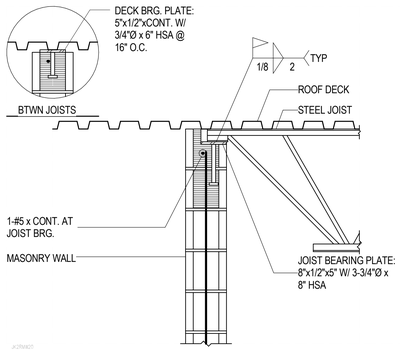
D1 / S512 TYPICAL JOIST/DECK BEARING AT MASONRY WALL

NO SCALE



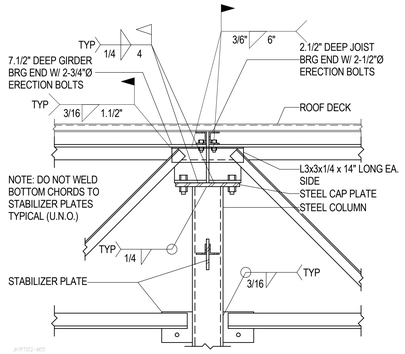
D2 / S512 TYPICAL JOIST/DECK BEARING AT MASONRY WALL

NO SCALE



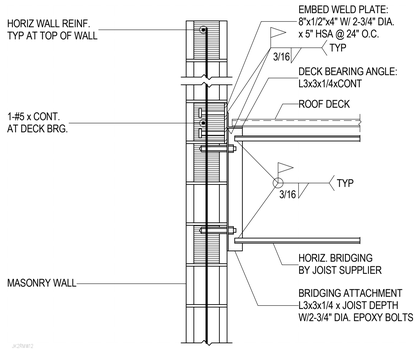
D3 / S512 TYPICAL JOIST/DECK BEARING AT MASONRY WALL

NO SCALE



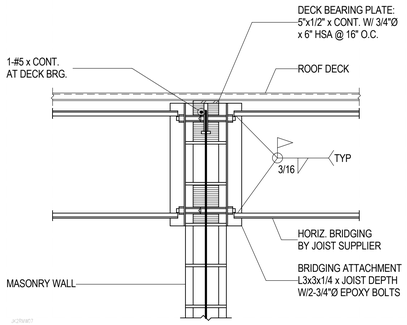
D4 / S512 TYPICAL JOIST & GIRDER BEARING ON STEEL COLUMN

NO SCALE



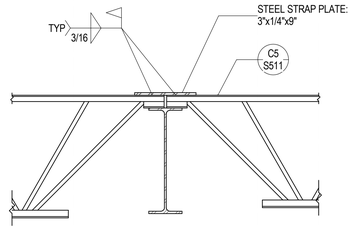
C1 / S512 TYP DECK BEARING AT MASONRY WALL WITH BRIDGING ATTACHMENT

NO SCALE



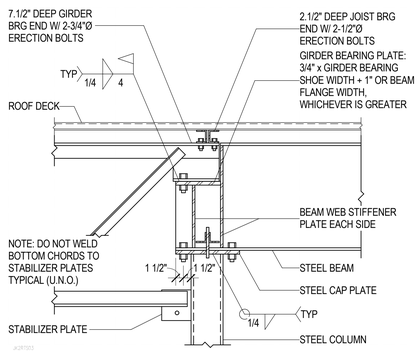
C2 / S512 TYP DECK BEARING AT MASONRY WALL WITH BRIDGING ATTACHMENT

NO SCALE



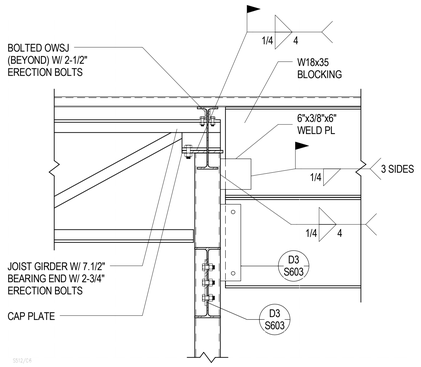
C3 / S512 TYPICAL JOIST CHORD TIE/DRAG STRUT AT GIRDER

NO SCALE



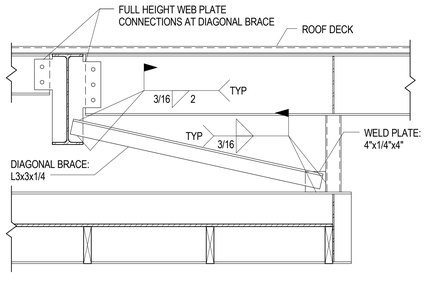
C4 / S512 TYPICAL JOIST, GIRDER & STEEL BEAM BEARING ON STEEL COLUMN

NO SCALE



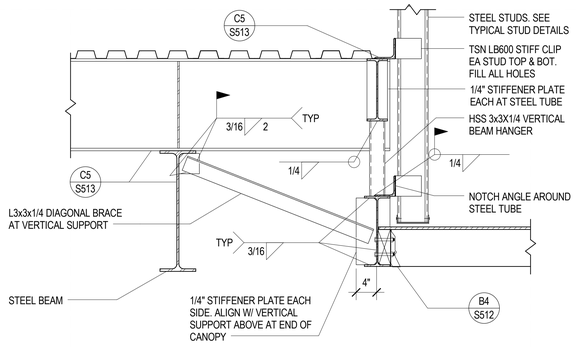
C5 / S512 STEEL JOIST GIRDER TO STEEL COLUMN

NO SCALE



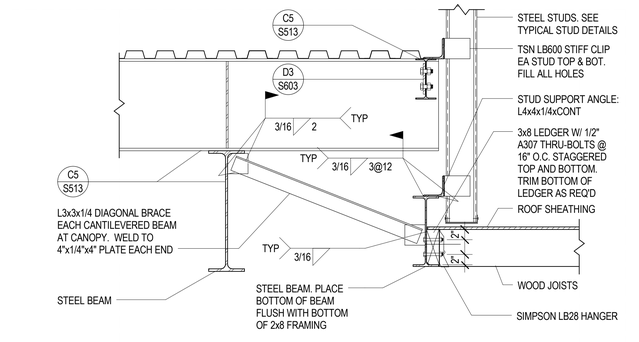
B1 / S512 DIAGONAL BRACE AT SUSPENDED BEAM

NO SCALE



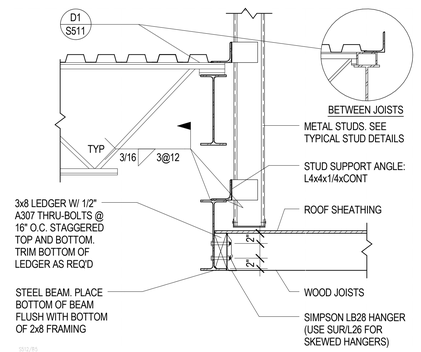
B2 / S512 WOOD JOIST TO STEEL BEAM W/ DIAGONAL BRACE AT SUSPENDED BEAM

NO SCALE



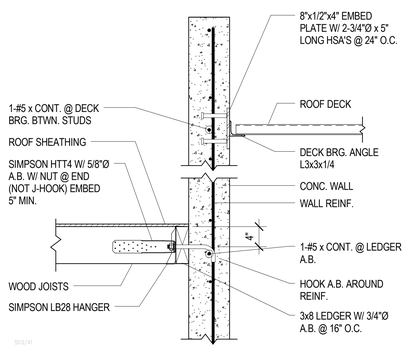
B3 / S512 WOOD JOIST TO STEEL BEAM W/ DIAGONAL BRACE

NO SCALE



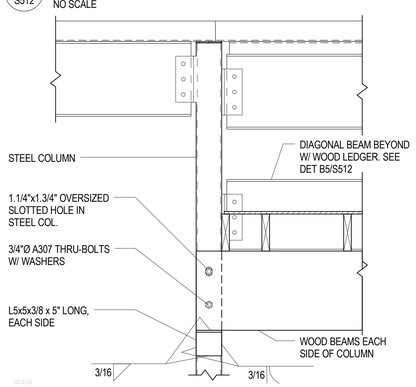
B5 / S512 WOOD JOIST TO STEEL BEAM

NO SCALE



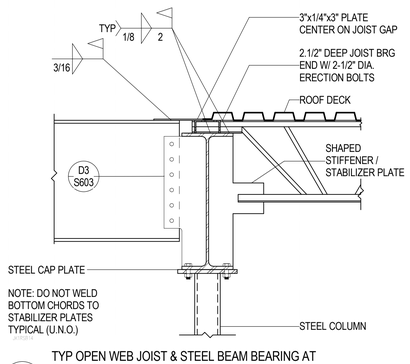
A1 / S512 ROOF TO CONCRETE WALL

SCALE: 1" = 1'-0"



A2 / S512 WOOD BEAM AT STEEL COLUMN

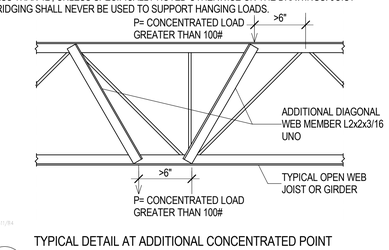
NO SCALE



A3 / S512 TYP OPEN WEB JOIST & STEEL BEAM BEARING AT EXTERIOR STEEL COLUMN

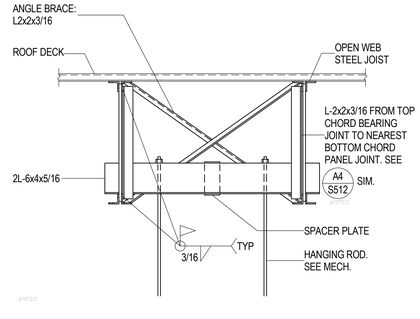
NO SCALE

NOTE: WHEN CONCENTRATED LOADS (GREATER THAN 100#) ON OPEN WEB JOISTS OR GIRDERS ARE LOCATED MORE THAN 6 INCHES FROM THE PANEL WORKPOINTS AT EITHER THE TOP OR BOTTOM CHORD ADDITIONAL DIAGONAL WEB MEMBERS SHALL BE FURNISHED AND INSTALLED AT THE LOCATION OF THE CONCENTRATED LOAD BY THE CONTRACTOR. CONCENTRATED POINT LOADS, SINGLE OR MULTIPLE, TOTALING 100# OR LESS CAN BE LOCATED AT ANY POINT ALONG THE TOP OR BOTTOM CHORD OF AN OPEN WEB JOIST OR GIRDER BETWEEN ADJACENT PANEL POINTS WITHOUT MEETING THESE REQUIREMENTS. A LIMIT OF FOUR CONCENTRATED 100# MAX. POINT LOADS PER JOIST OR GIRDER WILL BE PERMITTED ON SPANS OF 12' & GREATER, ONE CONCENTRATED 100# MAX. LOAD ON SPANS LESS THAN 12', UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. JOIST BRIDGING SHALL NEVER BE USED TO SUPPORT HANGING LOADS.



A4 / S512 TYPICAL DETAIL AT ADDITIONAL CONCENTRATED POINT LOAD

NO SCALE



A5 / S512 TYPICAL HANGING MECHANICAL UNIT SUPPORT DETAIL

NO SCALE

DFCM APPROVAL STAMP

FFKR
ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY
ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4715 S. 500 S, Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

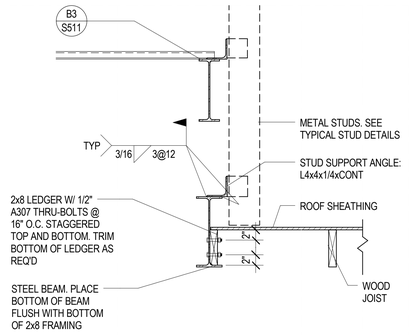
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

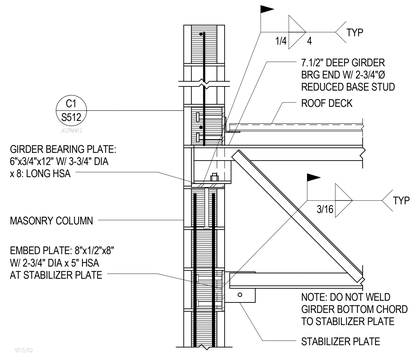
ROOF FRAMING DETAILS

S512

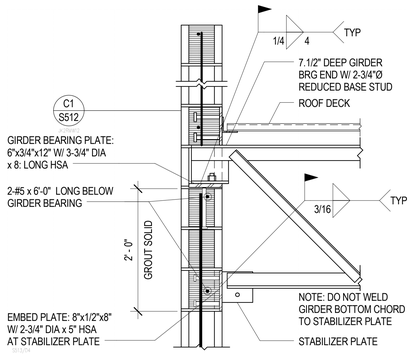
9/7/2012 1:29:29 PM



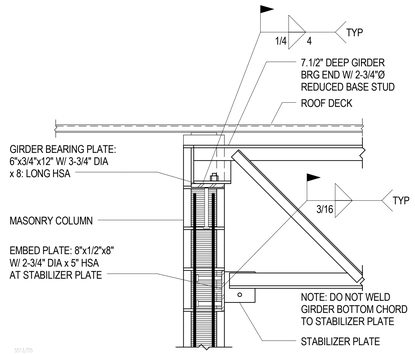
D1 / S513 WOOD ROOF SHEATHING TO STEEL BEAM AT CANOPY
NO SCALE



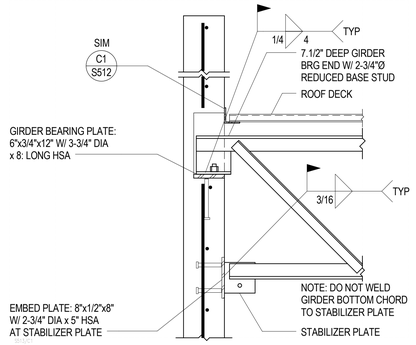
D2 / S513 TYPICAL GIRDER BEARING AT MASONRY COLUMN IN MASONRY WALL
NO SCALE



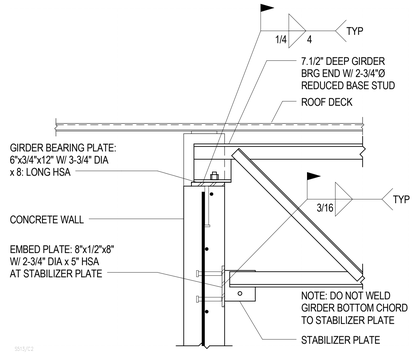
D3 / S513 TYPICAL GIRDER BEARING ON MASONRY WALL
NO SCALE



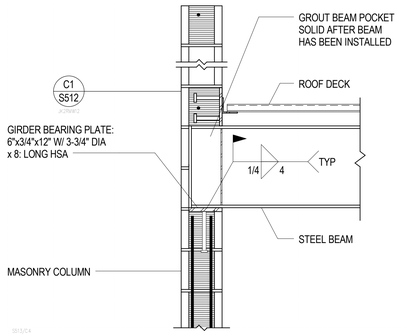
D4 / S513 TYPICAL GIRDER BEARING AT MASONRY COLUMN IN MASONRY WALL
NO SCALE



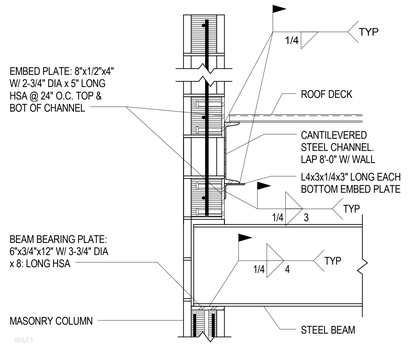
C1 / S513 TYPICAL GIRDER BEARING AT CONCRETE WALL
NO SCALE



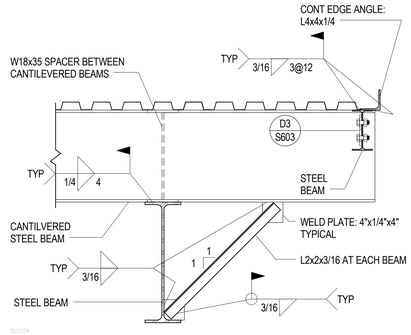
C2 / S513 TYPICAL GIRDER BEARING AT CONCRETE WALL
NO SCALE



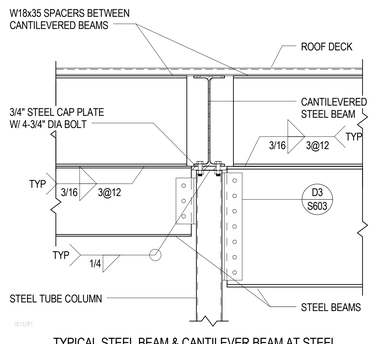
C3 / S513 TYPICAL BEAM BEARING AT MASONRY COLUMN IN MASONRY WALL
NO SCALE



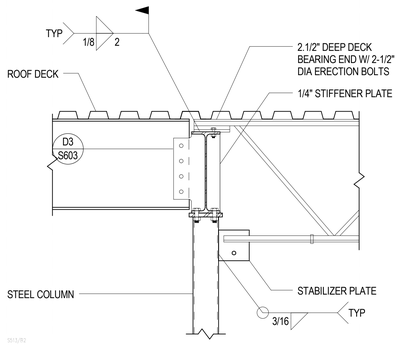
C4 / S513 TYPICAL BEAM BEARING AT MASONRY COLUMN AT CANTILEVERED STEEL CHANNEL
NO SCALE



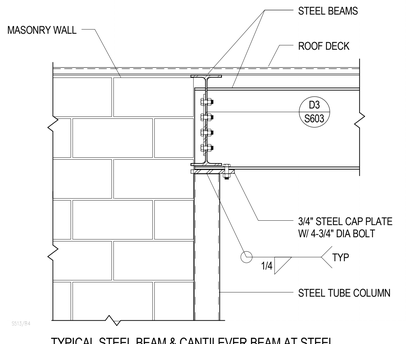
C5 / S513 CANTILEVERED STEEL BEAM AT ROOF OVERHANG
NO SCALE



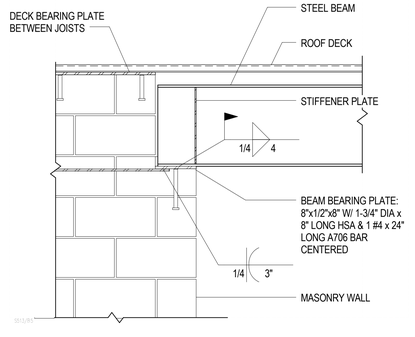
B1 / S513 TYPICAL STEEL BEAM & CANTILEVER BEAM AT STEEL COLUMN
NO SCALE



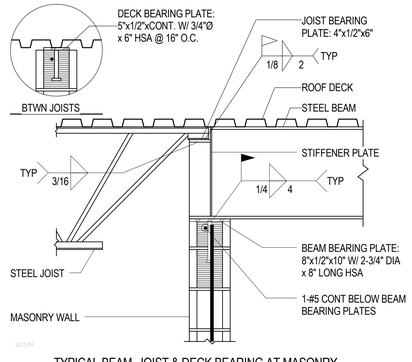
B2 / S513 CANTILEVERED STEEL BEAM AT ROOF OVERHANG
NO SCALE



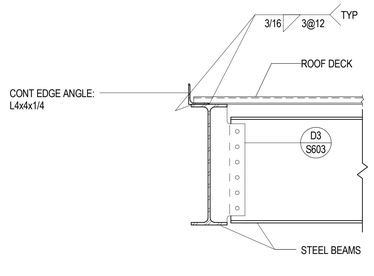
B3 / S513 TYPICAL STEEL BEAM & CANTILEVER BEAM AT STEEL COLUMN
NO SCALE



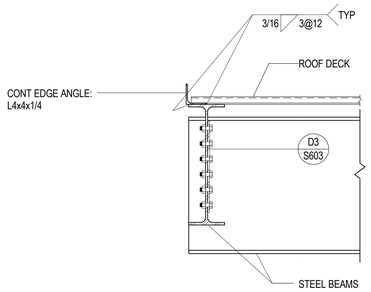
B4 / S513 STEEL BEAM BEARING AT MASONRY WALL
NO SCALE



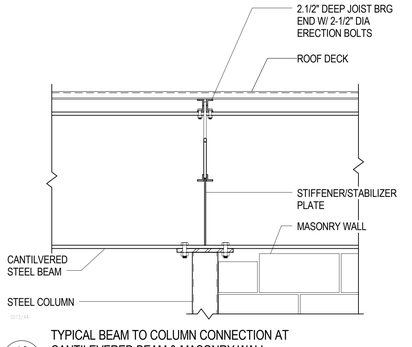
B5 / S513 TYPICAL BEAM, JOIST & DECK BEARING AT MASONRY WALL
NO SCALE



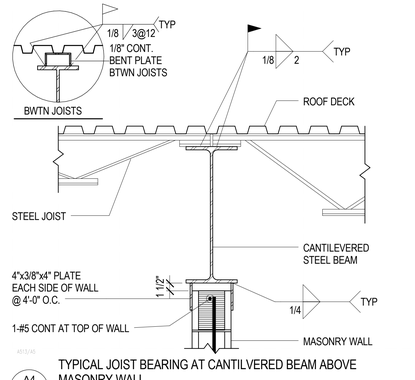
A1 / S513 TYPICAL BEAM TO BEAM CONNECTION AT ROOF EDGE
NO SCALE



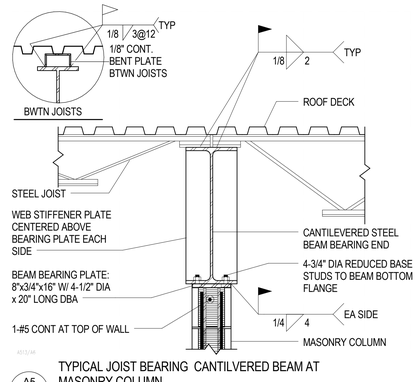
A2 / S513 TYPICAL BEAM TO BEAM CONNECTION AT ROOF EDGE
NO SCALE



A3 / S513 TYPICAL BEAM TO COLUMN CONNECTION AT CANTILEVERED BEAM & MASONRY WALL
NO SCALE



A4 / S513 TYPICAL JOIST BEARING AT CANTILVERED BEAM ABOVE MASONRY WALL
NO SCALE



A5 / S513 TYPICAL JOIST BEARING CANTILVERED BEAM AT MASONRY COLUMN
NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4715 S. 500 S. Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

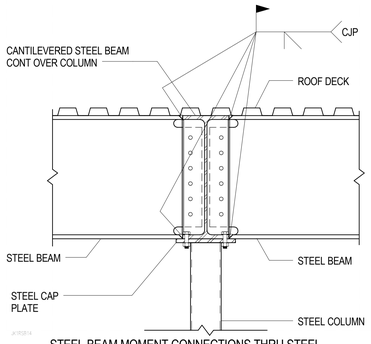
△	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

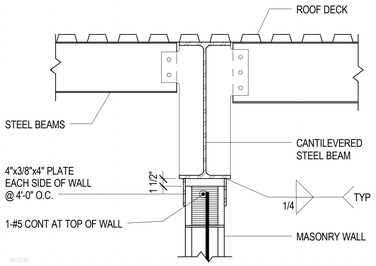
ROOF FRAMING DETAILS

S513

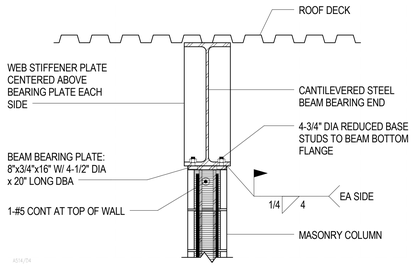
9/7/2012 1:29:31 PM



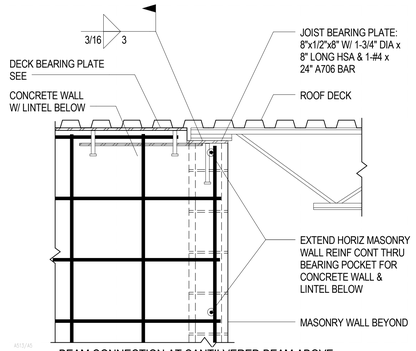
D1 / S514 STEEL BEAM MOMENT CONNECTIONS THRU STEEL CANTILEVERED BEAM AT STEEL COLUMN
NO SCALE



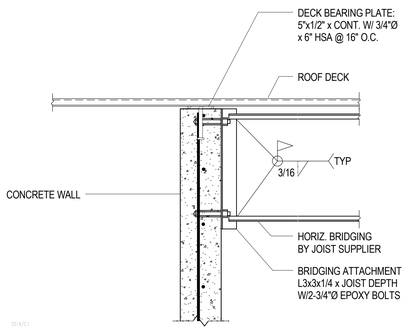
D2 / S514 BEAM CONNECTION AT CANTILVERED BEAM ABOVE MASONRY WALL
NO SCALE



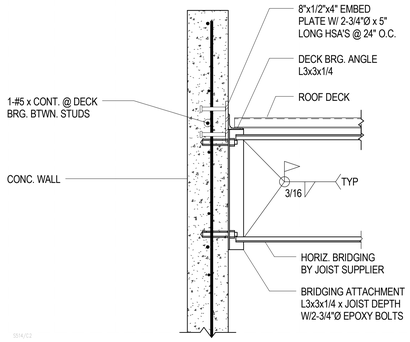
D3 / S514 TYPICAL CANTILVERED BEAM BEARING AT MASONRY COLUMN
NO SCALE



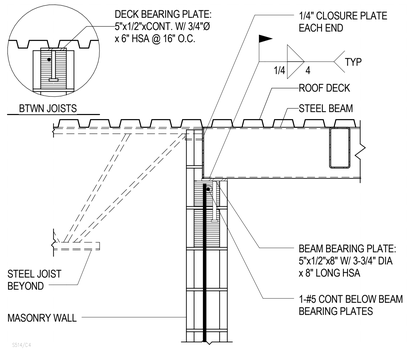
D4 / S514 BEAM CONNECTION AT CANTILVERED BEAM ABOVE MASONRY WALL
NO SCALE



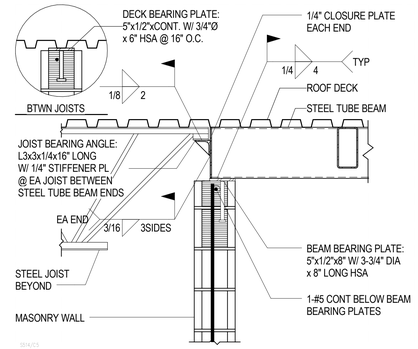
C1 / S514 DECK BEARING AT CONCRETE WALL W/ BRIDGING ATTACHMENT
NO SCALE



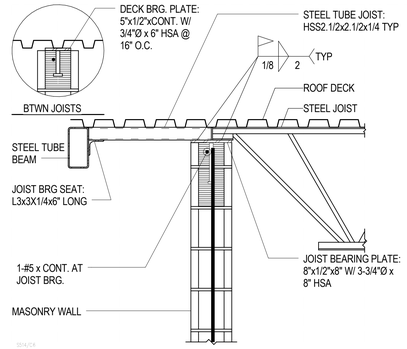
C2 / S514 ROOF DECK TO CONCRETE WALL W/ BRIDGING ATTACHMENT
NO SCALE



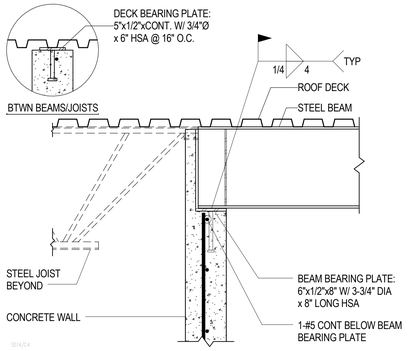
C3 / S514 TYPICAL BEAM, JOIST & DECK BEARING AT MASONRY WALL
NO SCALE



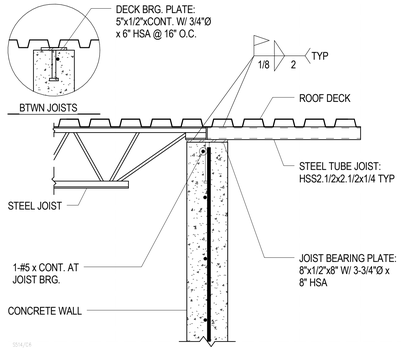
C4 / S514 TYPICAL BEAM, JOIST & DECK BEARING AT MASONRY WALL
NO SCALE



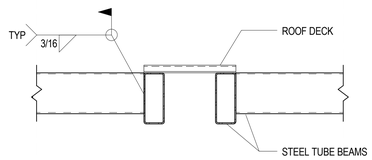
C5 / S514 TYPICAL JOIST/DECK BEARING AT MASONRY WALL
NO SCALE



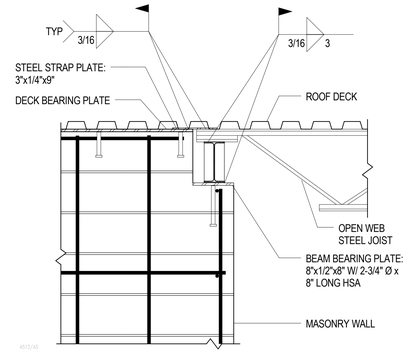
B1 / S514 TYPICAL BEAM, JOIST & DECK BEARING AT CONCRETE WALL
NO SCALE



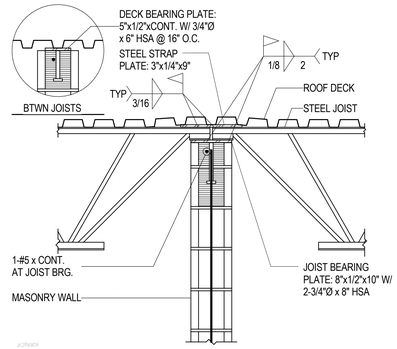
B2 / S514 TYPICAL JOIST/DECK BEARING AT CONCRETE WALL
NO SCALE



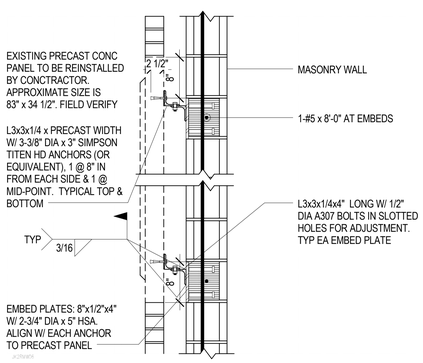
B3 / S514 STEEL TUBE BEAM TO STEEL TUBE BEAM CONNECTION
NO SCALE



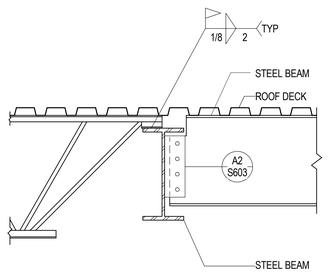
B4 / S514 DRAG STRUT CONNECTION AT JOIST/BEAM BEARING
NO SCALE



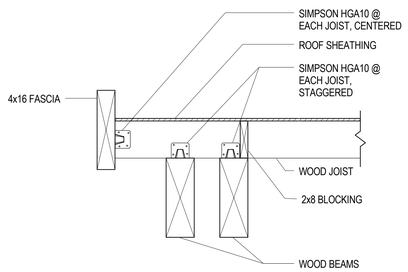
B5 / S514 JOIST CHORD TIE/DRAG STRUT BEARING AT MASONRY WALL
NO SCALE



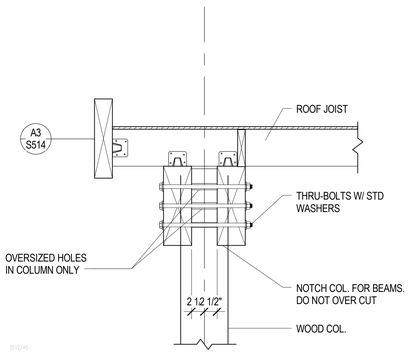
A1 / S514 ESISTING PRECAST PANEL RE-INSTALLATION AT MASONRY WALL
NO SCALE



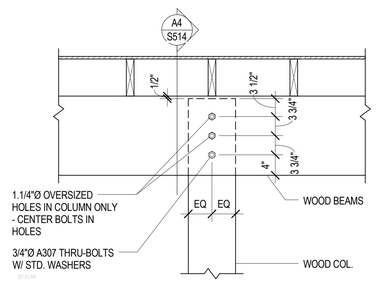
A2 / S514 STEEL BEAM & JOIST BEARING AT STEEL BEAM
NO SCALE



A3 / S514 ROOF EDGE DETAIL
NO SCALE



A4 / S514 WOOD BEAM TO WOOD POST
NO SCALE



A5 / S514 WOOD BEAM AT WOOD POST
NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4715 S. 500 S. Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

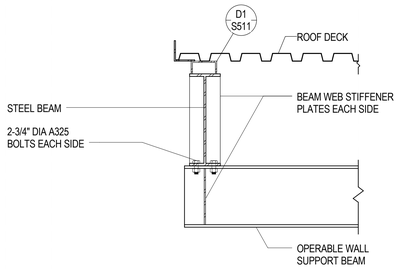
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

ROOF FRAMING DETAILS

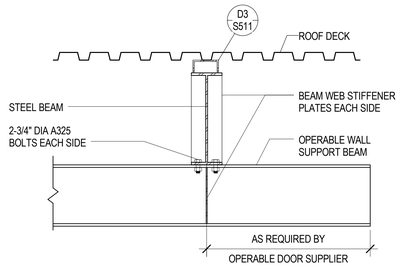
S514

9/7/2012 1:29:33 PM



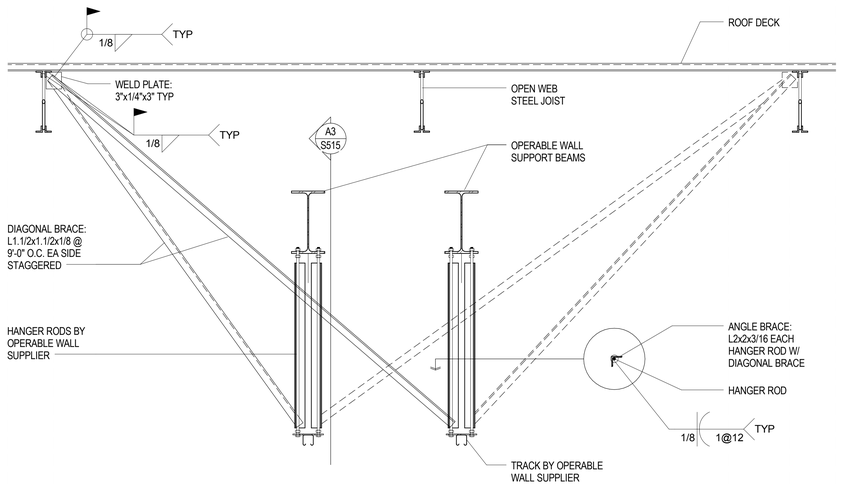
D1 S515 OPERABLE WALL SUPPORT BEAM TO ROOF BEAM

NO SCALE



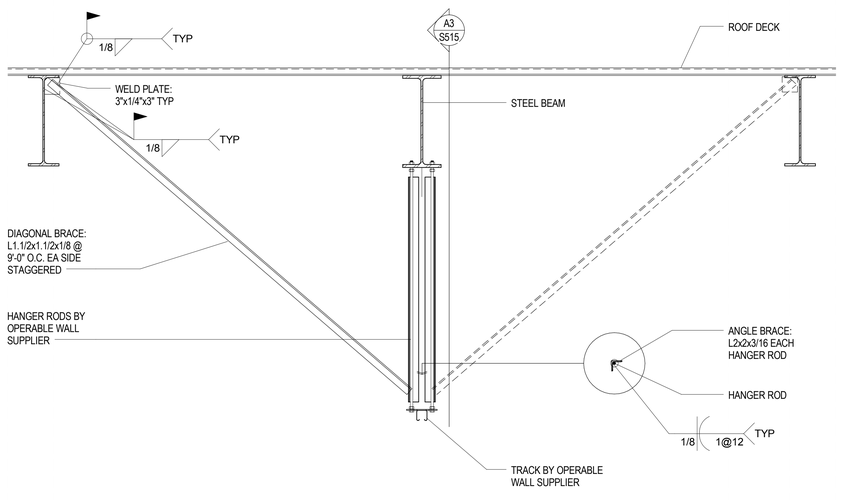
D2 S515 OPERABLE WALL SUPPORT BEAM TO ROOF BEAM

NO SCALE



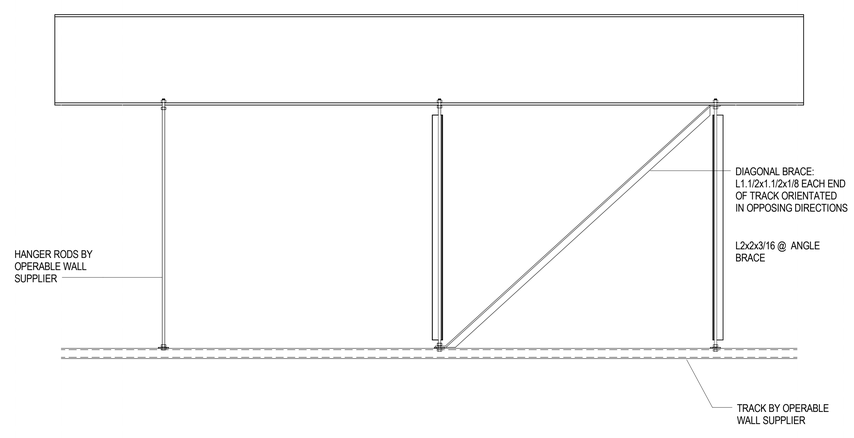
B1 S515 OPERABLE WALL SUPPORTS WITH DIAGONAL BRACING

NO SCALE



A1 S515 OPERABLE WALL SUPPORTS WITH DIAGONAL BRACING

NO SCALE



A3 S515 OPERABLE WALL SUPPORTS WITH DIAGONAL BRACING

NO SCALE

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REAVELEY
ENGINEERS + ASSOCIATES
Consulting Structural Engineers

P 801.466.3883
F 801.485.0911

4175 S 500 S, Suite 400
Salt Lake City, Utah 84107
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

	DATE	REVISION

PROJECT NUMBER 11111

FILE 11111 USH Payne

ROOF FRAMING DETAILS

S515

9/7/2012 1:29:34 PM

CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICK	CROSSWISE REINFORCING				LENGTHWISE REINFORCING				REMARKS
				NO.	SIZE	LENGTH	SPACE	NO.	SIZE	LENGTH	SPACE	
FC1.5	1'-6"	CONT.	12"	--	NONE	REQ'D	--	3	#4	CONT.	6"	
FC2.0	2'-0"	CONT.	12"	--	NONE	REQ'D	--	3	#4	CONT.	9"	
FC2.5	2'-6"	CONT.	12"	--	#5	2'-0"	14"	3	#5	CONT.	12"	
FC3.0	3'-0"	CONT.	12"	--	#5	2'-6"	14"	3	#5	CONT.	15"	
FC4.5	4'-6"	CONT.	12"	--	#5	4'-0"	14"	4	#5	CONT.	16"	
FC5.5	5'-6"	CONT.	12"	--	#5	5'-0"	14"	5	#5	CONT.	15"	
FS3.0	3'-0"	3'-0"	12"	4	#4	2'-6"	10"	4	#4	2'-6"	10"	
FS3.5	3'-6"	3'-6"	12"	5	#4	3'-0"	9"	5	#4	3'-0"	9"	
FS4.0	4'-0"	4'-0"	12"	6	#4	3'-6"	8.4"	6	#4	3'-6"	8.4"	
FS4.5	4'-6"	4'-6"	12"	6	#4	4'-0"	9.6"	6	#4	4'-0"	9.6"	
FS5.0	5'-0"	5'-0"	12"	5	#5	4'-6"	13.5"	5	#5	4'-6"	13.5"	
FS5.5	5'-6"	5'-6"	12"	5	#5	5'-0"	15"	5	#5	5'-0"	15"	
FS6.0	6'-0"	6'-0"	12"	6	#5	5'-6"	13.2"	6	#5	5'-6"	13.2"	
FS6.5	6'-6"	6'-6"	12"	7	#5	6'-0"	12"	7	#5	6'-0"	12"	
FS7.5	7'-6"	7'-6"	14"	9	#5	7'-0"	10.5"	9	#5	7'-0"	10.5"	

NOTES:
1. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER UNLESS NOTED OTHERWISE.

2. TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" CLEAR CONCRETE COVER.

3. SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS, UNLESS NOTED OTHERWISE.

4. ALL FOOTINGS SHALL BE FORMED. FOOTINGS SHALL NOT BE EARTH FORMED OR OVERSIZED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.

CONCRETE PIER SCHEDULE

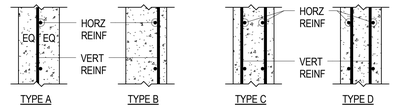
MARK	DIMENSIONS		REINFORCING		REMARKS
	DEPTH	WIDTH	VERTICAL	TIES	
CP-1	1' - 4"	1' - 4"	4- #8	#3@8" O.C.	

CONCRETE FOUNDATION WALL SCHEDULE

MARK	THICK	VERTICAL REINFORCING	HORIZONTAL REINFORCING	TOP & BOTTOM HORIZONTAL BARS	PLACEMENT
CFW-1	8"	#5 @ 16" O.C.	#5 @ 15" O.C.	1-#5	TYPE A
CFW-2	12"	#4 @ 18" O.C.E.F.	#4 @ 12" O.C.E.F.	1-#4 E.F.	TYPE C or D
CFW-3	14"	#4 @ 18" O.C.E.F.	#4 @ 11" O.C.E.F.	1-#4 E.F.	TYPE C or D
CFW-4	16"	#4 @ 16" O.C.E.F.	#5 @ 15" O.C.E.F.	1-#5 E.F.	TYPE C or D
CFW-5	10"	#5 @ 12" O.C.	#6 @ 14" O.C.	1-#5	TYPE A

NOTES:
1. HORIZONTAL WALL REINFORCING SHALL BE CONTINUOUS THRU CONSTRUCTION & CONTROL JOINTS.
2. SPLICES IN HORIZONTAL WALL REINFORCING SHALL BE TYPE Lsb, STAGGERED SUCH THAT SPLICES DO NOT OVERLAP. SPLICES IN TWO CURTAINS SHALL NOT OCCUR IN THE SAME LOCATION.

PLACEMENT TYPE



E.F. = EACH FACE
O.F. = OUTSIDE FACE (AGAINST SOIL)
I.F. = INSIDE FACE
3L = THREE LAYERS

CONCRETE LINTEL SCHEDULE

MARK	THICK	DEPTH	REINFORCING		REMARKS
			HORIZONTAL	STIRRUPS	
CL-1	8"	24"	2-#5 TOP & BOTTOM	NONE REQ'D	
CL-2	8"	24"	2-#5 TOP & BOTTOM	#3@10" O.C.	SEE DETAIL
CL-3	8"	30"	2-#6 TOP & BOTTOM	#3@10" O.C.	SEE DETAIL

CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE LENGTH SCHEDULE

BAR SIZE	f'c = 3000 PSI				f'c = 4000 PSI				f'c = 4500 PSI				f'c = 5000 PSI				f'c = 6000 PSI				f'c = ALL	
	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ldc	Lsc
#3	17"	22"	22"	28"	15"	19"	19"	25"	14"	18"	18"	23"	13"	17"	17"	22"	12"	16"	16"	20"	8"	12"
#4	22"	29"	29"	38"	19"	25"	25"	33"	18"	24"	24"	31"	17"	23"	23"	29"	16"	21"	21"	27"	10"	15"
#5	28"	36"	36"	47"	24"	31"	31"	41"	23"	30"	30"	38"	22"	28"	28"	36"	20"	26"	26"	33"	12"	19"
#6	33"	43"	43"	56"	29"	37"	37"	49"	27"	35"	35"	46"	26"	34"	34"	44"	24"	31"	31"	40"	15"	23"
#7	48"	63"	63"	81"	42"	54"	54"	71"	40"	51"	51"	67"	38"	49"	49"	63"	34"	45"	45"	58"	17"	27"
#8	55"	72"	72"	93"	48"	62"	62"	81"	45"	59"	59"	76"	43"	56"	56"	72"	39"	51"	51"	66"	19"	30"
#9	62"	81"	81"	105"	54"	70"	70"	91"	51"	66"	66"	86"	48"	63"	63"	81"	44"	57"	57"	74"	22"	34"
#10	70"	91"	91"	118"	61"	79"	79"	102"	57"	74"	74"	96"	54"	71"	71"	92"	50"	64"	64"	84"	24"	39"
#11	78"	101"	101"	131"	67"	87"	87"	114"	64"	82"	82"	107"	60"	78"	78"	102"	55"	71"	71"	93"	27"	43"
#14	93"	121"	NA	NA	81"	105"	NA	NA	76"	99"	NA	NA	72"	94"	NA	NA	66"	86"	NA	NA	33"	NA
#18	124"	161"	NA	NA	108"	140"	NA	NA	101"	132"	NA	NA	96"	125"	NA	NA	88"	114"	NA	NA	43"	NA

NOTES:
1. DEFINITIONS:
   - Ld: TENSION DEVELOPMENT LENGTH FOR REINFORCEMENT SATISFYING THE FOLLOWING CONDITIONS:
     - SLABS AND WALLS: CLEAR SPACING > 2db AND CONCRETE CLEAR COVER > db
     - BEAMS AND COLUMNS: CLEAR COVER SPACING > db AND CONCRETE CLEAR COVER > db
   - Lt: DEVELOPMENT LENGTH FOR TOP BARS IN TENSION
   - Lsb: TENSION LAP SPLICE LENGTH FOR OTHER THAN TOP BARS (CLASS B)
   - Lsbt: TENSION LAP SPLICE LENGTH OF TOP BARS.
   - Ldc: DEVELOPMENT LENGTH FOR BARS IN COMPRESSION
   - Lsc: TIED COLUMN LAP SPLICE IN COMPRESSION
   - db: NOMINAL BAR DIAMETER (INCHES)
   - TOP BARS: HORIZONTAL BEAM REINFORCEMENT WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW

2. MULTIPLY VALUES IN SCHEDULE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET REQUIREMENTS FOR Ld IN NOTE 1.

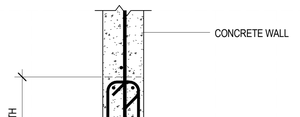
3. MULTIPLY VALUES IN SCHEDULE BY 1.3 FOR USE IN LIGHTWEIGHT AGGREGATE CONCRETE.

4. FOR EPOXY COATED BAR: MULTIPLY VALUES IN SCHEDULE BY 1.5 FOR BARS WITH CLEAR COVER < 3db OR CLEAR SPACING < 6db. OTHERWISE MULTIPLY VALUES BY 1.2.

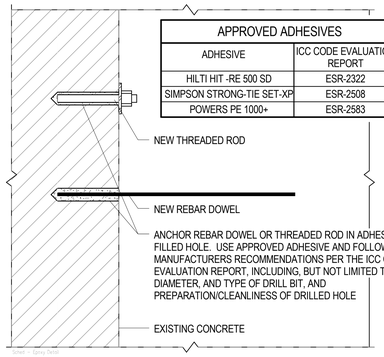
5. a. FOR BUNDLED BARS OF THREE OR LESS MULTIPLY LENGTHS BY 1.2.
   b. FOR BUNDLED BARS OF FOUR OR MORE MULTIPLY LENGTHS BY 1.33.
   c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.

6. SCHEDULE LENGTHS ARE FOR fy=60ksi REINFORCING, MULTIPLY LENGTHS BY 1.25 FOR fy=75ksi REINFORCING.

7. LAP SPLICES ARE NOT PERMITTED FOR #14 & #18 BARS. USE BAR COUPLERS PER G.S.N.



A3 / S601 CONCRETE LINTAL DETAIL CL-2 & CL-3
NO SCALE



APPROVED ADHESIVES

ADHESIVE	ICC CODE EVALUATION REPORT
HILTI HIT -RE 500 SD	ESR-2322
SIMPSON STRONG-TIE SET-XP	ESR-2508
POWERS PE 1000+	ESR-2583

ADHESIVE ANCHORING SCHEDULE

REINFORCING		THREADED ROD	
DOWEL SIZE	EMBEDMENT LENGTH (SEE NOTE #2)	SIZE (DIA)	EMBEDMENT LENGTH (SEE NOTE #2)
#3	4"	3/8"	4 1/2"
#4	6"	1/2"	6"
#5	9"	5/8"	7 1/2"
#6	10"	3/4"	9"
#7	12"	7/8"	10 1/2"
#8	13"	1"	12"
#9	14"	1 1/4"	15"
#10	18"		
#11	18"		

NOTES:
1. THIS SCHEDULE SHALL BE USED ONLY WHERE SPECIFICALLY REFERENCED ON THE DRAWINGS AND AT OTHER LOCATIONS WITH THE APPROVAL OF THE ENGINEER.
2. EMBEDMENT LENGTHS SPECIFIED ON PLANS OR DETAILS TAKE PRECEDENCE OVER EMBEDMENT LENGTHS IN THIS SCHEDULE.
3. WHERE THE THICKNESS OF THE EXISTING CONCRETE MEMBER IS NOT SUFFICIENT TO ACHIEVE SCHEDULED EMBEDMENT AND SPECIFIED CLEAR COVER FOR THE ANCHOR, CONTACT THE ENGINEER.
4. USE PROCEDURES AND PRODUCTS RECOMMENDED BY ADHESIVE MANUFACTURER FOR OVERHEAD INSTALLATION.
5. SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION OF ALL ADHESIVE ANCHORS PER THE CODE EVALUATION REPORT FOR THE ANCHOR AND THE QUALITY ASSURANCE SECTION OF THE GENERAL STRUCTURAL NOTES.

A4 / S601 ADHESIVE ANCHORING SCHEDULE
NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3663
F 801.485.0911
4175 S. 500 S, Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

STRUCTURAL SCHEDULES

S601

9/7/2012 1:29:36 PM

MASONRY WALL SCHEDULE

MARK	THICK	MATERIALS	REINFORCING			NOTES
			VERTICAL	HORIZONTAL	JOINTS	
MW-1	8"	CMU	1-#5 @ 32" O.C.	1-#5 @ 48" O.C.	-	f'm=1500psi
MW-2	8"	CMU	1-#5 @ 24" O.C.	1-#5 @ 32" O.C.	-	f'm=1500psi SOLID GROUT
MW-3	8"	CMU	1-#5 @ 24" O.C.	1-#5 @ 24" O.C.	-	f'm=1500psi SOLID GROUT
MW-4	12"	CMU	1-#5 @ 24" O.C.	1-#5 @ 48" O.C.	-	f'm=1500psi SOLID GROUT
MW-5	12"	CMU	2-#4 @ 24" O.C.	1-#6 @ 24" O.C.	-	f'm=1500psi

NOTES:

1. PROVIDE SCHEDULED VERTICAL REINFORCING BARS AT ALL CORNERS, ENDS OF WALLS, AND SPACED AS SCHEDULED, UNLESS NOTED OTHERWISE.

2. HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS AND AT INTERSECTING WALLS. PROVIDE CORNER BARS WITH THE REQUIRED LAP SPLICE LENGTH.

3. TERMINATE ALL HORIZONTAL REINFORCING BARS AT ENDS OF WALLS AND EDGES OF OPENINGS WITH A STANDARD HOOK AROUND VERTICAL REINFORCING BARS. SEE B3/SB502.

4. SEE PLANS, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.

5. GROUT SOLID ALL CELLS BELOW GRADE, CELLS CONTAINING EMBEDS (HSA'S, DBA'S, ANCHOR BOLTS, ETC.), AND CELLS CONTAINING REINFORCING. CONSOLIDATE GROUT AS PER THE GENERAL STRUCTURAL NOTES.

6. HORIZONTAL WALL REINFORCING SHALL BE PLACED INSIDE THE VERTICALS OF MASONRY COLUMNS.

7. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.

MASONRY LINTEL SCHEDULE

MARK	LINTEL DEPTH	LINTEL WIDTH	MASONRY TYPE	LINTEL		MAXIMUM SPAN	REMARKS
				HORIZONTAL	STIRRUPS		
ML-1	8"	6",8",10" OR 12"	BRICK OR CMU	1- #5 CONT.	-----	3'-4"	
ML-2	16"	6",8",10" OR 12"	BRICK OR CMU	1- #4 CONT. TOP & BOT.	----	5'-4"	
ML-3	24"	6",8",10" OR 12"	BRICK OR CMU	1- #5 CONT. TOP & BOT.	#3 @ 8" O.C.	8'-0"	
ML-4	32"	6",8",10" OR 12"	BRICK OR CMU	1- #7 CONT. TOP & BOT.	#3 @ 8" O.C.	10'-0"	

NOTES:

1. MASONRY LINTELS ML-1 THROUGH ML-4 SHALL BE USED OVER OPENINGS IN MASONRY WALLS WHEN A SPECIFIC MASONRY LINTEL IS NOT OTHERWISE SPECIFIED. THE MASONRY LINTEL TO BE USED SHALL BE DETERMINED BY THE MAXIMUM SPAN AS SPECIFIED IN THIS SCHEDULE. WHEN A SPECIFIC MASONRY LINTEL IS CALLED OUT ON THE PLAN, THE MAXIMUM SPAN AS NOTED IN THIS SCHEDULE SHALL NOT APPLY

2. MASONRY LINTELS ML-1 THROUGH ML-4 SHALL NOT BE LOCATED BELOW ANY FLOOR, OR ROOF BEAM, OR GIRDER, OR ANY OTHER CONCENTRATED LOAD UNLESS SHOWN SPECIFICALLY ON THE PLAN SHEET. JOISTS SHALL NOT BEAR ON ANY LINTEL LESS THAN 16" DEEP.

3. FOR MASONRY LINTELS NOT SHOWN ON THE DRAWINGS THAT CARRY ANY FLOOR, OR ROOF BEAM, OR GIRDER, OR ANY OTHER CONCENTRATED LOAD, OR THAT SPAN GREATER THAN 10'-0" CONSULT THE STRUCTURAL ENGINEER.

4. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING, PROVIDE 90 DEGREE STANDARD HOOK.

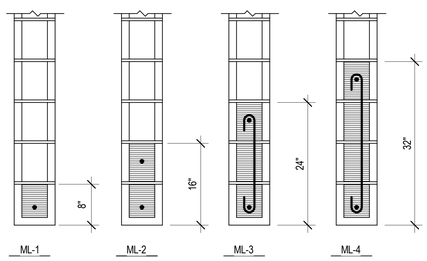
5. GROUT MASONRY LINTELS MONOLITHICALLY WITH THE SUPPORT WALL OR COLUMN AT EACH END.

6. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.

7. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.

8. FOR WALL ABOVE LINTEL, DOWEL VERTICAL REINFORCING INTO FULL DEPTH OF THE LINTEL OR 48 BAR DIAMETERS, WHICHEVER IS LESS.

9. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.



B3 / S602 TYPICAL MASONRY LINTEL DETAILS

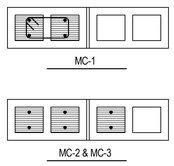
NO SCALE

MASONRY COLUMN SCHEDULE

MARK	SIZE	REINFORCING		REMARKS
		VERTICAL	TIES	
MC-1	8"x16"	4-#4	#2 @ 8" O.C.	
MC-2	8"x24"	6-#4	-	
MC-3	12"x24"	6-#5	-	

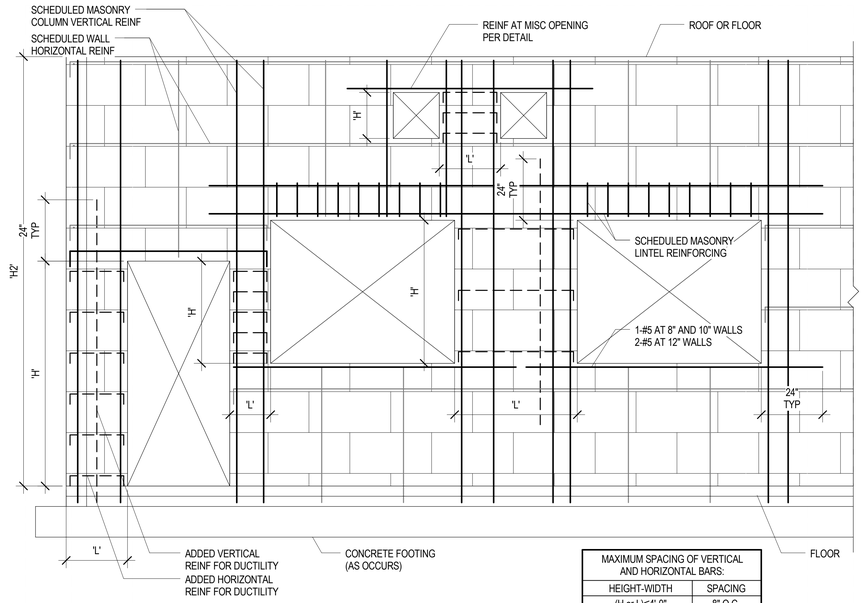
NOTES:

1. THE CENTERLINE OF VERTICAL BARS SHALL BE LOCATED 2.1/2" FROM THE FACE OF THE MASONRY. HORIZONTAL BARS SHALL BE LOCATED TO THE INSIDE OF THE VERTICAL BARS.
2. UNLESS NOTED OTHERWISE, VERTICAL REINFORCING AND TIES SHALL EXTEND FULL HEIGHT OF THE WALL.
3. MASONRY COLUMN VERTICAL BARS OR DOWELS IN CONCRETE FOUNDATION WALLS SHALL EXTEND TO FOOTINGS AND BE LOCATED PER NOTE 1.



A1 / S602 TYPICAL MASONRY COLUMN DIAGRAMS

NO SCALE



NOTES:
1. ADDED BAR SIZE SHALL BE 1-#4 MINIMUM.
2. ALL ADDED BARS SHALL BE EMBEDDED IN GROUT.
3. ALL ADDED HORIZONTAL REINFORCING SHALL BE TERMINATED WITH A 90° OR 180° STANDARD HOOK AROUND THE VERTICAL REINFORCING.
4. FOR WALLS WITH 'H2' AND 'L' 12'-0" OR LARGER ADDITIONAL REINFORCING FOR DUCTILITY IS NOT REQUIRED.

WALL REINFORCING LEGEND

- SCHEDULED WALL REINF
- SCHEDULED OPENING REINF
- ADD'L REINF FOR DUCTILITY

MAXIMUM SPACING OF VERTICAL AND HORIZONTAL BARS:	
HEIGHT-WIDTH	SPACING
(H or L)≤4'-0"	8" O.C.
4'-0"≤(H or L)≤6'-0"	16" O.C.
6'-0"≤(H or L)≤8'-0"	24" O.C.
8'-0"≤(H or L)≤10'-0"	32" O.C.
10'-0"≤(H or L)≤12'-0"	40" O.C.
12'-0"≤(H or L)	48" O.C.

C4 / S602 MASONRY WALL OPENINGS WITH ADDITIONAL DUCTILITY REINFORCING; FOR LOAD BEARING MASONRY WALLS

NO SCALE

MASONRY REINFORCING BAR LAP SPLICE SCHEDULE

BAR SIZE	f'm = 1500 psi							f'm = 2500 psi		
	6" CMU	8" CMU		10" CMU		12" CMU		6" ATLAS	8" ATLAS	
	CLASS	CLASS		CLASS		CLASS		CLASS	CLASS	
	A	A	B	A	B	A	B	A	A	B
#3	19"	19"	19"	19"	19"	19"	19"	15"	15"	15"
#4	25"	25"	30"	25"	28"	25"	28"	20"	20"	24"
#5	35"	31"	49"	31"	45"	31"	45"	31"	24"	40"
#6	81"	57"	**	53"	92"	53"	92"	64"	45"	87"
#7	-	79"	**	61"	**	61"	**	-	63"	**
#8	-	**	**	87"	**	75"	**	-	89"	**
#9	-	-	-	**	**	90"	**	-	-	-

NOTES:

1. CLASS A SPLICES MAY BE USED WHEN ONLY ONE BAR IS CONTINUOUS IN THE MASONRY CELL OR COURSE.
2. CLASS B SPLICES SHALL BE USED WHEN TWO BARS ARE CONTINUOUS IN THE MASONRY CELL OR COURSE.
3. ** INDICATES THAT A LAP SPLICE IS NOT ALLOWED AND MECHANICAL BAR COUPLERS ARE REQUIRED FOR THE BAR SPLICES.
4. WHERE VERTICAL BARS HAVE A REQUIRED LAP SPLICE GREATER THAN THE HEIGHT OF THE GROUT POUR. THE BAR SPLICE SHALL BE MADE WITH A MECHANICAL BAR COUPLER. WHERE THE HEIGHT OF THE GROUT POUR EXCEEDS 60 INCHES, HIGH LIFT GROUTING PROCEDURES SHALL BE FOLLOWED.
5. WHERE MECHANICAL BAR COUPLERS ARE USED, THE CONNECTOR SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION AND COMPRESSION.

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4175 S. 500 S. Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

STRUCTURAL SCHEDULES

S602

9/7/2012 1:29:37 PM

STEEL ANGLE LINTEL SCHEDULE

BEARING EQUALS 1" PER FOOT OF OPENING OR 6" MINIMUM TYPICAL

OPENING SIZE	ANGLE SIZE
0'-0" - 7'-0"	L3.1/2x3.1/2x1/4
7'-0" - 9'-0"	L4x3.1/2x1/4
9'-0" - 10'-0"	L5x3.1/2x1/4

NOTES:

LINTELS ARE DESIGNED TO SUPPORT UNIFORM LOADS CONSISTING ONLY OF WEIGHT OF WALL WITHIN A 60 DEGREE ISOSCELES TRIANGLE AREA ABOVE OPENING.

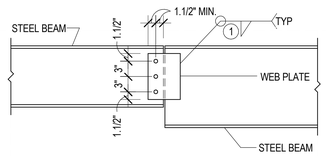
ALL STEEL LINTELS ARE TO HAVE LONG LEG VERTICAL.

LINTEL SCHEDULE FOR 4" VENEER

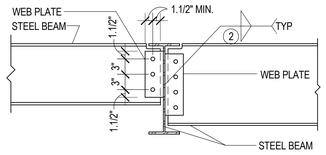
ALL ANGLE LINTELS SHALL BE GALVANIZED.

D1 / S603 STEEL ANGLE LINTE SCHEDULE

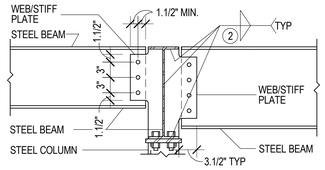
NO SCALE



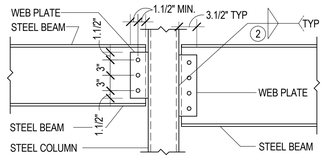
BEAM TO BEAM WEB PLATE CONNECTION



BEAM TO BEAM WEB PLATE CONNECTION



BEAM TO COLUMN WEB/STIFFENER PLATE CONNECTION



BEAM TO COLUMN WEB PLATE CONNECTION

D3 / S603 TYP BOLTED WEB PLATE CONN. W/ BOLT SCHED. (SINGLE SHEAR)

NO SCALE

A325 BOLT SCHEDULE

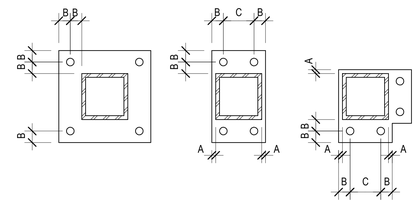
MAXIMUM BEAM SIZE IN EACH BEAM DEPTH GROUP	WEB PLATE THICKNESS	A325N BOLTS	
		NUMBER	SIZE
W8, W10	3/8"	2	3/4"
W12, C12, W14	3/8"	3	3/4"
W16	3/8"	4	3/4"
W18	3/8"	5	3/4"
W21, W24	3/8"	6	3/4"
W27	1/2"	7	3/4"
W30	1/2"	8	3/4"
W33	1/2"	9	3/4"

NOTES:

1. FILLET WELDS ONE SIDE SHALL EQUAL THE PLATE THICKNESS MINUS 1/16" (1/4" MIN.)
2. FILLET WELDS TWO SIDES SHALL BE 3/4 THE PLATE THICKNESS (1/4" MIN.) EACH SIDE
3. BOLT EDGE DISTANCE SHALL BE 1.1/2" MIN. AT ALL EDGES. BOLT SPACING SHALL BE 3" MIN.
4. THICKNESS EQUALS BEAM FLANGE THICKNESS OF BEAM FRAMING INTO COLUMN WEB. (3/8" MIN.)

STEEL COLUMN SCHEDULE

COLUMN LOCATION	COLUMN SIZE	BASE PLATE	CAP PLATE
A(8")-8(5' - 2 3/8")	HSS5x5x1/4	3/4", SBP-3	--
B(-8")-5(14' - 8 3/8")	HSS6x6x1/4	1", SBP-2	1", SCP-1
B(-8")-6(13' - 5 3/4")	HSS5x5x1/4	7/8", SBP-2	3/4", SCP-1
B(-8")-7	HSS5x5x1/4	7/8", SBP-2	3/4", SCP-1
B-3(-10' - 8 5/8")	HSS5x5x1/4	3/4", SBP-2	--
C(7' - 8")-8	HSS5x5x1/4	7/8", SBP-1	1/2", SCP-1
C(7' - 8")-9	HSS5x5x1/4	3/4", SBP-1	1/2", SCP-1
C(7' - 8")-10	HSS4x4x1/4	3/4", SBP-2	1/2", SCP-2
D(-13' - 5 7/8")-7	HSS5x5x1/4	3/4", SBP-1	1/2", SCP-2
D-4	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-1
D-5	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-1
D-6	HSS5x5x1/4	7/8", SBP-1	--
D-7	HSS5x5x1/4	3/4", SBP-1	1/2", SCP-1
D-8	HSS5x5x1/4	3/4", SBP-1	1/2", SCP-1
D-9	HSS5x5x1/4	3/4", SBP-2	3/4", SCP-2 SEE DETAIL
D-10	HSS4x4x1/4	5/8", SBP-2	--
E(2' - 7 5/8")-6	HSS6x6x1/4	3/4", SBP-1	--
E(12' - 1 7/8")-9	HSS5x5x1/4	3/4", SBP-2	3/4", SCP-1
E(-8' - 4 3/8")-1	HSS4x4x1/4	5/8", SBP-2	1/2", SCP-2
E(-8' - 4 3/8")-2	HSS5x5x1/4	3/4", SBP-1	1/2", SCP-1
E(-12' - 4 5/8")-9	HSS5x5x1/4	3/4", SBP-2	3/4", SCP-1
E-4	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-1
E-5	HSS5x5x1/4	7/8", SBP-1	3/4", SCP-1
E-7	HSS6x6x1/4	7/8", SBP-1	3/4", SCP-1
F(6' - 2 5/8")-9	HSS5x5x1/4	3/4", SBP-2	--
F(-10' - 8 5/8")-1	HSS5x5x1/4	3/4", SBP-2	--
F(-10' - 8 5/8")-2	HSS5x5x1/4	3/4", SBP-1	--
F-3	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-1
F-4	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-1
F-5	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-1
F-6	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-1
F-7	HSS6x6x1/4	3/4", SBP-1	3/4", SCP-1
F-8	HSS5x5x1/4	3/4", SBP-1	3/4", SCP-2
G-1	HSS5x5x1/4	3/4", SBP-3	1/2", SCP-2
G-2	HSS5x5x1/4	3/4", SBP-2	1/2", SCP-1
G-3(-10' - 0 3/8")	HSS4x4x1/4	5/8", SBP-2	1/2", SCP-2
H(2 1/4")-3(-10' - 0 3/8")	HSS4x4x1/4	5/8", SBP-3	1/2", SCP-2
H(8")-3	HSS4x4x1/4	5/8", SBP-2	1/2", SCP-1
H(8")-4	HSS4x4x1/4	5/8", SBP-2	1/2", SCP-1
H-4(10' - 0")	HSS4x4x1/4	5/8", SBP-3	1/2", SCP-2



TYPE SBP-1 TYPE SBP-2 TYPE SBP-3

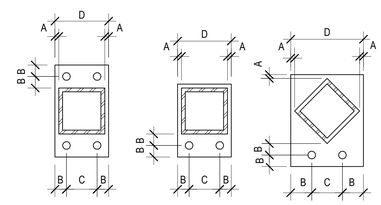
A = 1/2" MIN.

B = 1 1/2" (PER TABLE J3.5 OF THE MANUAL OF STEEL CONSTRUCTION FOR BOLTS LARGER THAN 7/8" DIAMETER)

C = 3" MIN.

C6 / S603 TYPICAL STEEL BASE PLATES - PLAN VIEW

NO SCALE

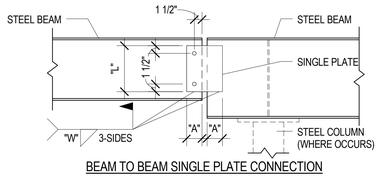


TYPE SCP-1 TYPE SCP-2 TYPE SCP-3

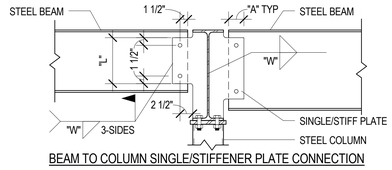
A = 1/2" MIN.
B = 1 1/2" MIN.
C = GAGE OF CONNECTED MEMBER
D = COLUMN WIDTH + 1", BEAM OR GIRDER WIDTH + 1", OR BOLT GAGE + 3", WHICHEVER IS GREATER.

B6 / S603 TYPICAL STEEL CAP PLATES - REFLECTED PLAN VIEW

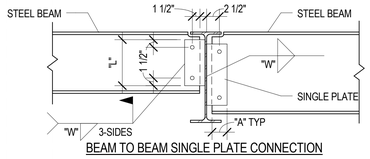
NO SCALE



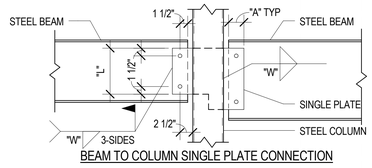
BEAM TO BEAM SINGLE PLATE CONNECTION



BEAM TO COLUMN SINGLE/STIFFENER PLATE CONNECTION



BEAM TO BEAM SINGLE PLATE CONNECTION



BEAM TO COLUMN SINGLE PLATE CONNECTION

SINGLE PLATE COLLECTOR/CHORD CONNECTION SCHEDULE

BEAM SIZE	WEB PLATE				ERECTION BOLTS
	"L"	"A"	WELD "W"	THICKNESS	
W14	9"	3"	1/4"	3/8"	2
W18	15"	3"	1/4"	3/8"	2
W21	17"	3"	1/4"	3/8"	2
W24	20"	3"	1/4"	3/8"	2

NOTES:

1. ERECTION BOLT SHALL BE 7/8"Ø A325N BOLTS.
2. FILLET WELDS TWO SIDES SHALL BE 3/4 THE PLATE THICKNESS (1/4" MIN.) EACH SIDE
3. BOLT EDGE DISTANCE SHALL BE 1.1/2" AT ALL EDGES U.N.O.

A2 / S603 TYPICAL WELDED SINGLE PLATE COLLECTOR/CHORD CONNECTION DETAILS & SCHEDULE

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4775 S 500 S, Suite 400
Salt Lake City, Utah 84123
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

STRUCTURAL SCHEDULES

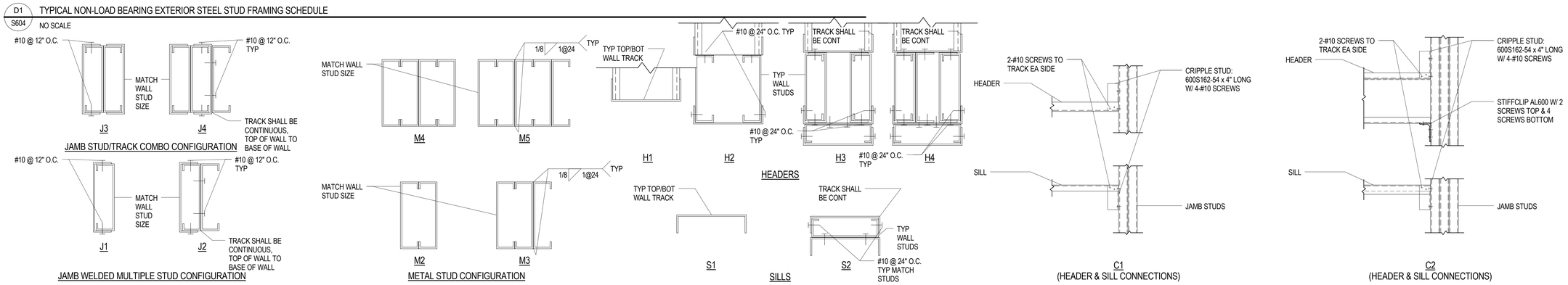
S603

9/7/2012 1:29:39 PM

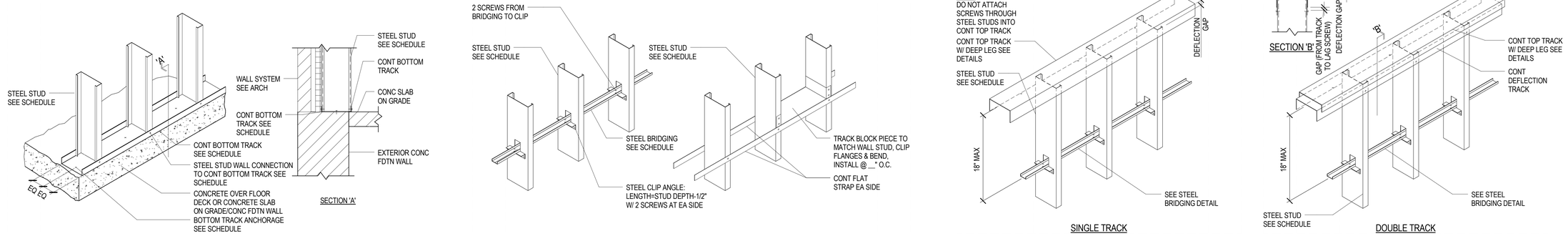
WALL						JAMB						HEADER	SILL	
HEIGHT	WALL STUD/SIZE SPACING	TOP & BOTTOM TRACKS	BOTTOM TRACK CONNECTION	TRACK/TOP OF WALL CONNECTION	WALL STUD BRIDGING	OPENING WIDTH	SINGLE STUD	STUD/TRACK COMBO (2)	MULTIPLE STUDS (3)	JAMB CONNECTION		TYPE	TYPE	HEADER & SILL CONNECTION
							SIZE	TYPE	TYPE	TOP	BASE (6) (7) (8)			
UP TO 17'-0" TO ROOF CONNECTION WITH 3'-0" PARAPET	600S162-54 @ 16" O.C. MAX	600T125-54	TYPICAL PER NOTE 7	VERTICLIP DSLB600 (5)	COLD-ROLLED CHANNEL @ 4'-0" O.C. CAPABLE OF RESISTING A MOMENT OF M=0.22 KIP-IN	UP TO 3'-6"	600S350-54	J1	M2	VERTICLIP SLB600 (5)	-	H1	S1	C1
						3'-7" TO 6'-6"	600S300-97	J2	M3	VERTICLIP SLB600 (5)	STIFFCLIP CL600 PATTERN 3 (AT DOORS ONLY)	H2	S2	C2
						6'-7" TO 10'-0"	NOT AVAILABLE	J3	M4	VERTICLIP SLB601 (5)	STIFFCLIP CL600 PATTERN 3 (AT DOORS ONLY)	H3	S2	C2
						10'-1" TO 16'-0"	NOT AVAILABLE	J4	M5	2-VERTICLIP SLB602 (5)	STIFFCLIP CL600 PATTERN 3 (AT DOORS ONLY)	H4	S2	C2

NOTES:
1. THREE JAMB OPTIONS ARE LISTED, BUT ONLY ONE SHALL BE USED FOR THE JAMBS OF THE SAME OPENING. EQUIVALENT PROPRIETARY JAMB STUDS MAY BE SUBMITTED & USED WITH WRITTEN PERMISSION OF ENGINEER
2. JAMB STUD/TRACK COMBINATION MUST BE FASTENED TOGETHER PER TYPICAL JAMB CONFIGURATION DETAILS.
3. MULTIPLE STUDS SHALL BE STITCH WELDED TOGETHER PER DETAILS.
4. CONNECTION HARDWARE LISTED IS THE BASIS OF DESIGN. EQUIVALENT ALTERNATIVE HARDWARE MAY BE SUBMITTED & USED WITH WRITTEN PERMISSION OF ENGINEER.
5. FILL ALL HOLES IN CONNECTION HARDWARE WITH APPROPRIATE SCREWS UNLESS NOTED OTHERWISE. CONNECTION HARDWARE TO BE ATTACHED TO SUBSTRATE WITH (2) HILTI X-U FASTENERS TO STEEL DECK EDGE ANGLE, UNLESS NOTED OTHERWISE.
6. WHERE NO BASE CONNECTION CLIP IS SPECIFIED, THE JAMB SHALL BE ATTACHED TO THE BASE TRACK W/ A MINIMUM OF TWO #10 SCREWS PER STUD. FOR STIFFCLIP CONNECTION, SEE TYPICAL BASE CONNECTION DETAILS.
7. BOTTOM TRACK ANCHORAGE SHALL BE ONE OF THE FOLLOWING, UNLESS NOTED OTHERWISE IN SCHEDULE:
   a. 1/2" DIAMETER J-BOLTS WITH 6" EMBEDMENT & 1.1/2" PROJECTION AT 32" O.C.
   b. 1/2" DIAMETER SIMPSON TITEN HD WITH 4" EMBEDMENT AT 32" O.C.
   c. 1/2" DIAMETER THREADED ROD IN SIMPSON SET-XP EPOXY, 6" EMBEDMENT AT 32" O.C.
8. STIFFCLIP JAMB CONNECTION SHALL USE TYPICAL BOTTOM TRACK ANCHORAGE LISTED ABOVE.
9. ALTERNATE BRIDGING SYSTEMS CAPABLE OF RESISTING THE MOMENTS LISTED IN THE SCHEDULE MAY BE SUBMITTED & USED WITH WRITTEN PERMISSION OF ENGINEER.
10. HEADER VERTICAL STUDS SHALL NOT HAVE PUNCHOUTS OR BE CONFIGURED TO NOT HAVE PUNCHOUTS WITHIN 1'-0" OF EITHER END.
11. WALL HEIGHT IN SCHEDULE IS DEFINED AS THE VERTICAL DISTANCE BETWEEN CONNECTIONS OF STUDS TO STRUCTURAL FLOORS, ROOFS, OR GIRTS.

D1 / S604 TYPICAL NON-LOAD BEARING EXTERIOR STEEL STUD FRAMING SCHEDULE
NO SCALE



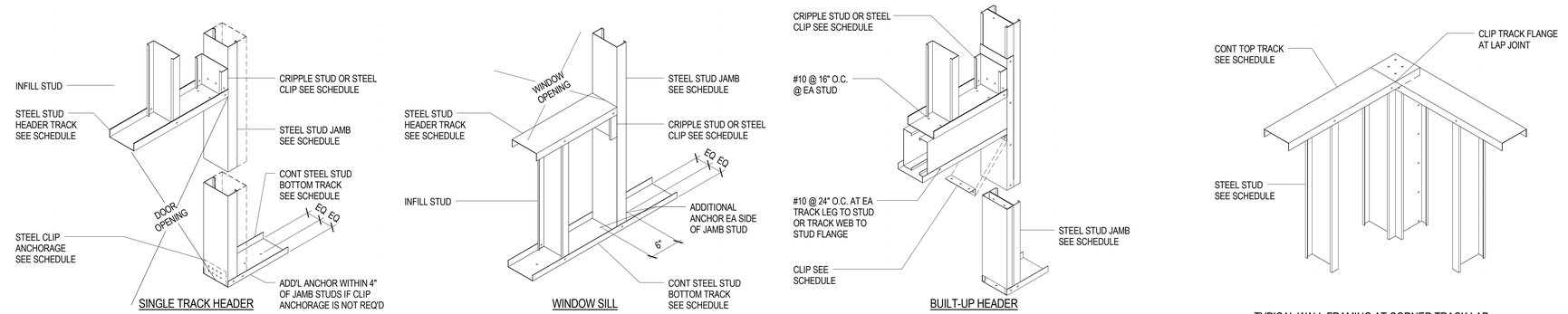
C1 / S604 TYPICAL NON-LOAD BEARING EXTERIOR STEEL STUD FRAMING SCHEDULE
NO SCALE



B1 / S604 TYPICAL BOTTOM TRACK ANCHORAGE
NO SCALE

B3 / S604 TYPICAL STEEL STUD WALL STEEL BRIDGING DETAIL W/ ALTERNATE
NO SCALE

B5 / S604 TYPICAL STEEL STUD WALL DEFLECTION TRACK ASSEMBLY DETAIL - SINGLE & DOUBLE TRACK
NO SCALE



A1 / S604 TYPICAL NON-BEARING STEEL STUD WALL WINDOW & DOOR OPENING
NO SCALE

A5 / S604 TYPICAL WALL FRAMING AT CORNER TRACK LAP CONNECTION
NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4175 S. 500 S. Suite 400
Salt Lake City, Utah 84107
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

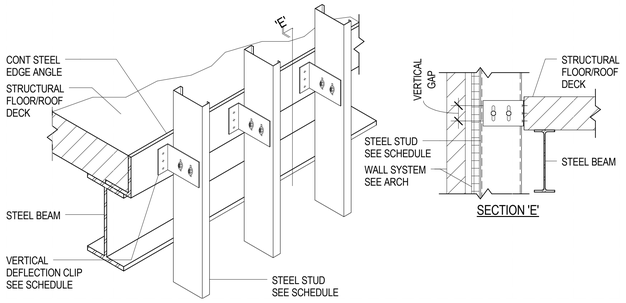
DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

STEEL STUD SCHEDULES & TYPICAL DETAILS

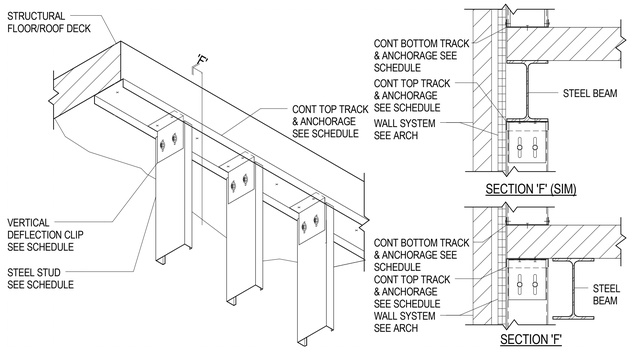
S604

9/7/2012 1:29:40 PM



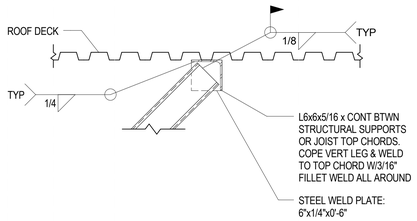
D1 / S605 TYPICAL STEEL STUD WALL BYPASS W/ VERTICAL DEFLECTION

NO SCALE



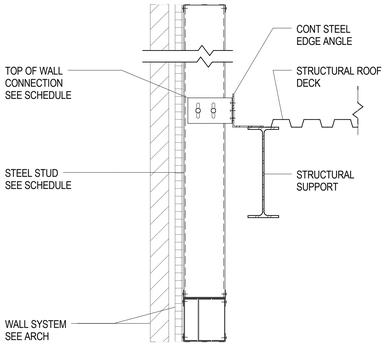
D3 / S605 TYPICAL STEEL STUD WALL HEAD BYPASS W/ VERTICAL DEFLECTION

NO SCALE



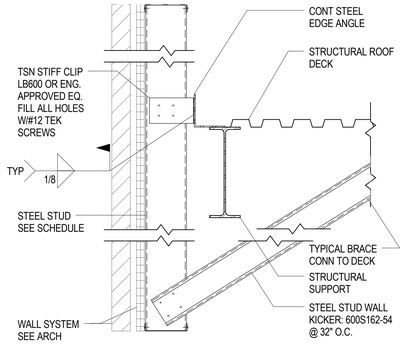
D5 / S605 TYPICAL STEEL STUD BRACE CONNECTION TO ROOF DECK

NO SCALE



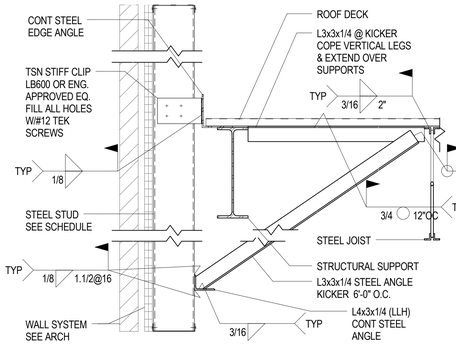
C1 / S605 TYPICAL STEEL STUD WALL BYPASS AT FRAMED OPENING BRACED TO STEEL BEAM

NO SCALE



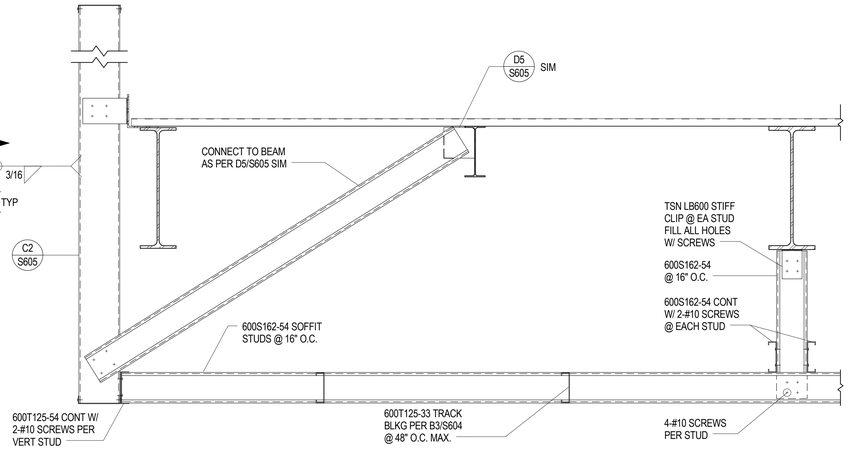
C2 / S605 TYPICAL STEEL STUD WALL BYPASS AT FRAMED OPENING BRACED TO DECK

NO SCALE



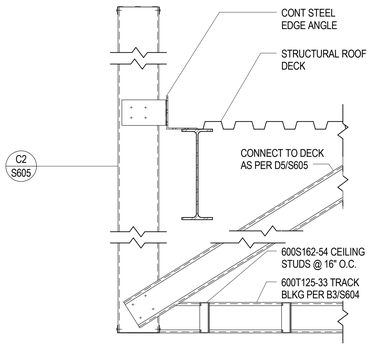
C4 / S605 TYPICAL STEEL STUD WALL BYPASS AT FRAMED OPENING BRACED TO DECK

NO SCALE



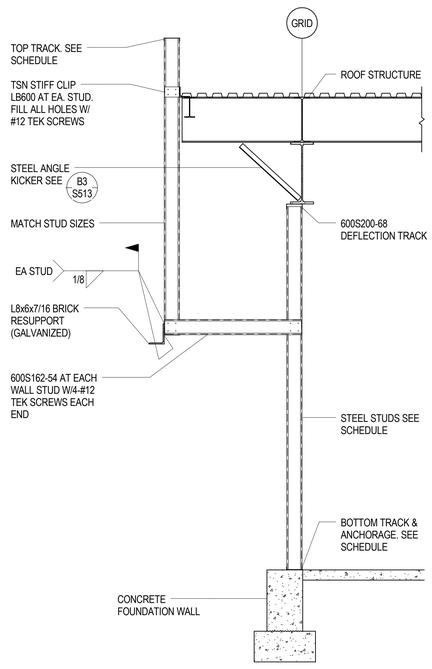
C5 / S605 TYPICAL STEEL STUD FASCIA WALL & SOFFIT FRAMING

NO SCALE



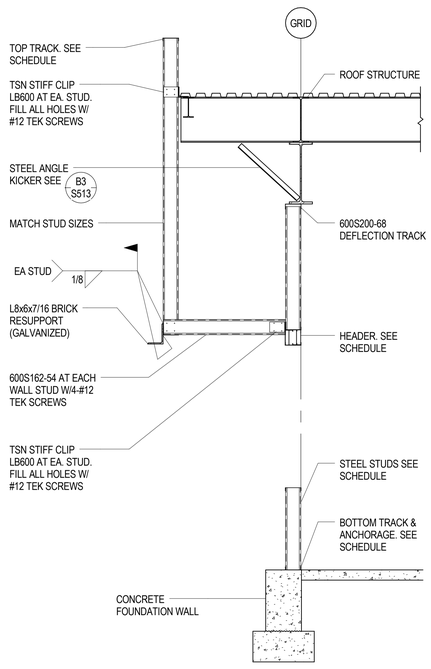
B1 / S605 TYPICAL STEEL STUD FASCIA WALL & SOFFIT FRAMING

NO SCALE



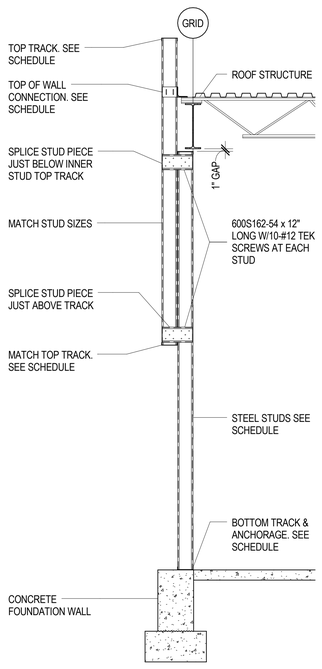
A2 / S605 TYPICAL STEEL STUD WALL SECTION

NO SCALE



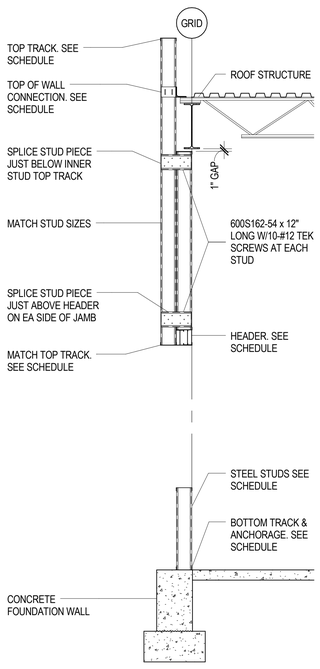
A4 / S605 TYPICAL STEEL STUD WALL SECTION AT WINDOW

NO SCALE



A5 / S605 TYPICAL STEEL STUD WALL SECTION

NO SCALE



A6 / S605 TYPICAL STEEL STUD WALL SECTION AT WINDOW

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REAVELEY ENGINEERS + ASSOCIATES
Consulting Structural Engineers
P 801.466.3883
F 801.485.0911
4175 S. 500 S. Suite 400
Salt Lake City, Utah 84107
www.reaveley.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS 09/12/2012

SEAL

DATE	STATUS
06/29/2012	FINAL REVIEW

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne

STEEL STUD TYPICAL DETAILS

S605

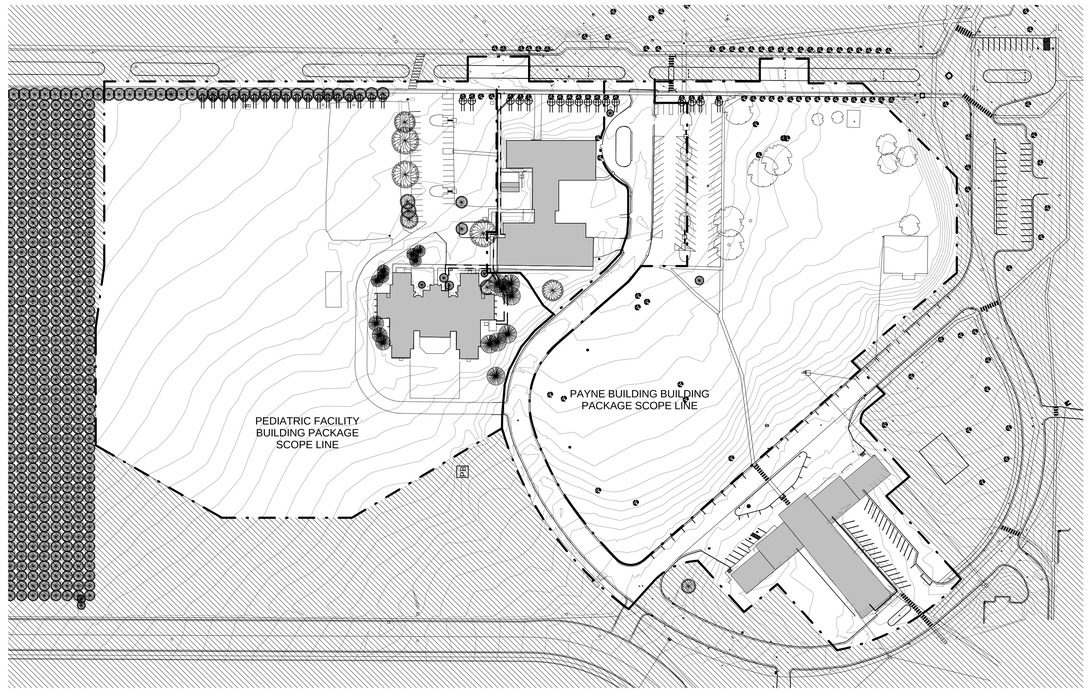
9/7/2012 1:29:42 PM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

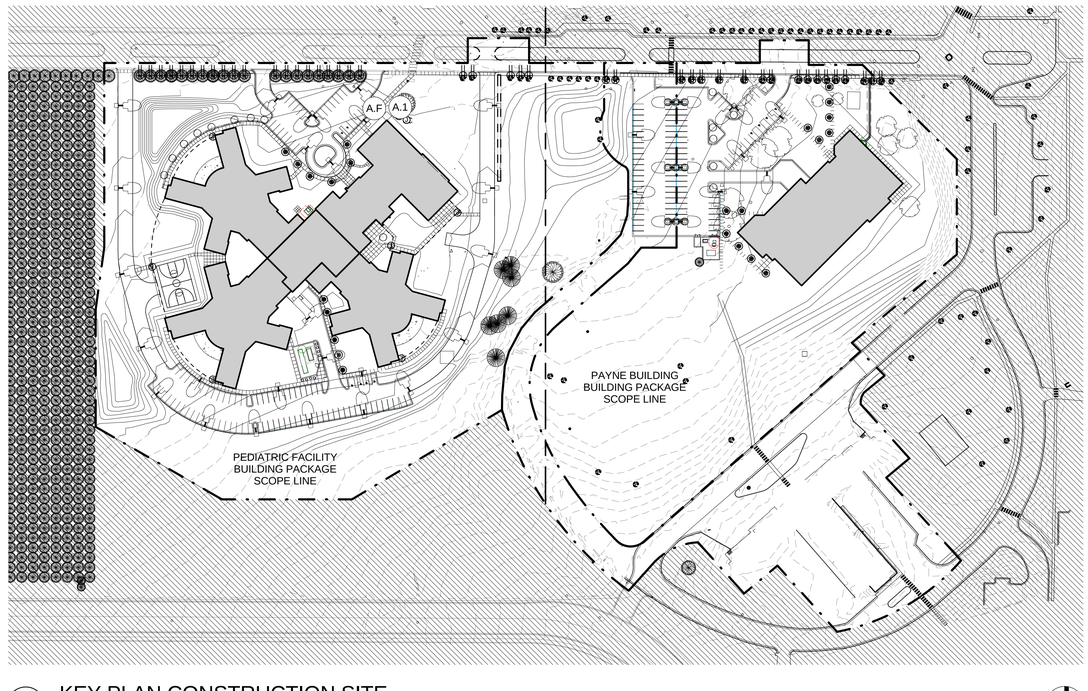
bogue building
730 pacific avenue
salt lake city
Utah 84104

p 801-521-6186
f 801-539-1916
ffkr.com



C3 KEY PLAN EXISTING SITE
SCALE: 1" = 100'-0"

0" 100' 200'



A3 KEY PLAN CONSTRUCTION SITE
SCALE: 1" = 100'-0"

0" 100' 200'

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

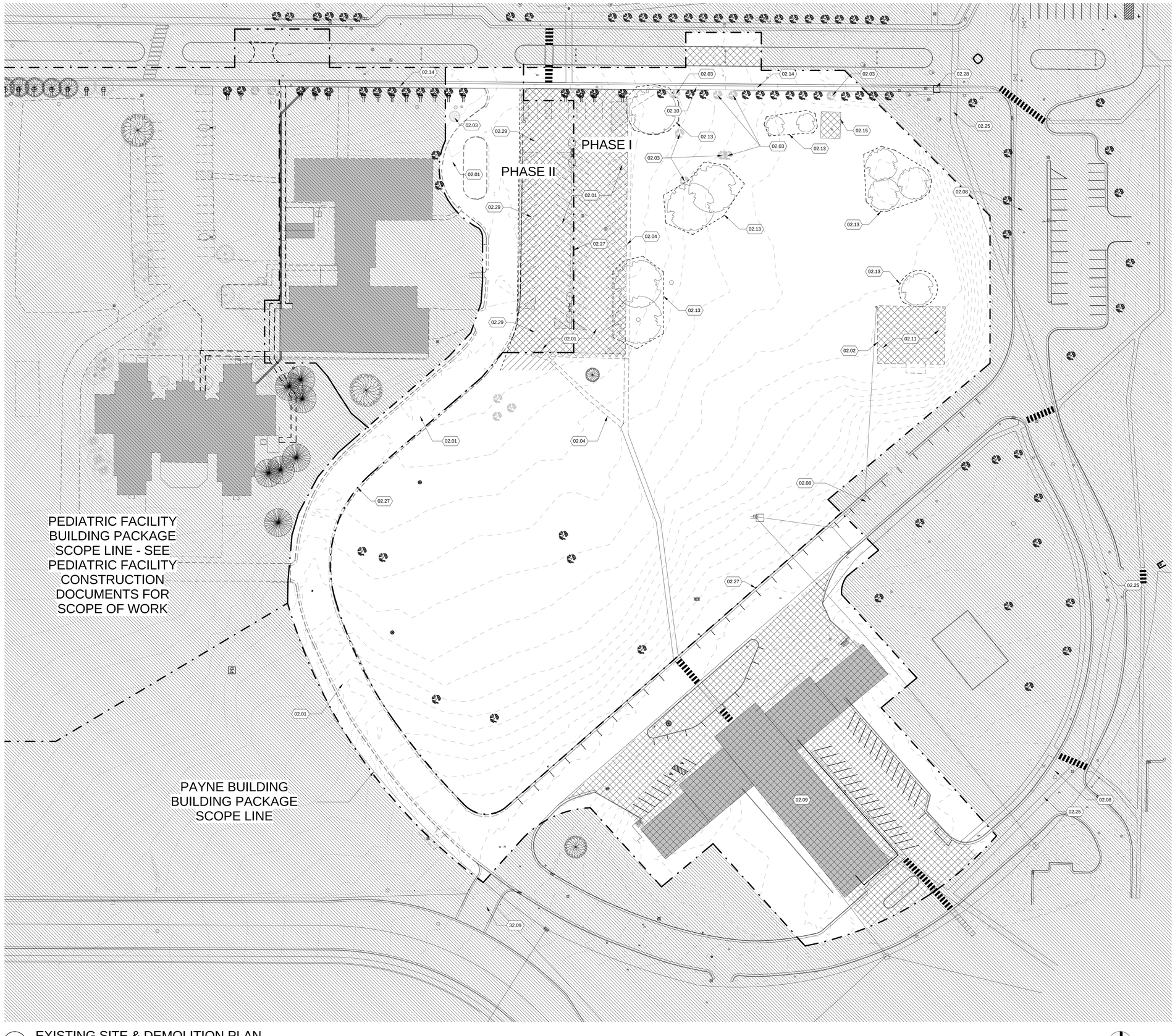
△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

SITE KEY PLANS

AS001

9/10/2012 3:00:57 PM



A1 EXISTING SITE & DEMOLITION PLAN

SCALE: 1" = 40'-0"

0" 100' 200'

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

02.01	REMOVE EXISTING ASPHALT PAVING / CURB AND GUTTER
02.02	REMOVE EXISTING CHAIN LINK FENCE
02.03	REMOVE EXISTING TREES
02.04	REMOVE EXISTING CONCRETE PAVING
02.08	EXISTING ROAD TO REMAIN
02.09	EXISTING BUILDING TO REMAIN IN OPERATION UNTIL COMPLETION OF CONSTRUCTION. BUILDING TO BE DEMOLISHED AFTER CONSTRUCTION IS COMPLETE
02.10	EXISTING UTILITY TUNNEL AND CONCRETE WALK TO REMAIN AND BE PROTECTED DURING CONSTRUCTION
02.11	REMOVE EXISTING SPORT COURT
02.13	PROTECT EXISTING TREES WITH RIGID CONSTRUCTION FENCING AS SHOWN. PROVIDE TEMPORARY IRRIGATION
02.14	EXISTING CONCRETE WALK TO REMAIN
02.15	CONCRETE SLAB ON GRADE TO REMAIN
02.25	EXISTING TUNNEL TO REMAIN
02.27	PHASE ONE DEMO INSIDE THIS LINE PHASE TO DEMO OUTSIDE THIS LINE
02.28	TUNNEL ACCESS
02.29	DEMO ASPHALT CURB & GUTTER IN THIS AREA DURING PHASE TWO
32.09	NEW PROVO CITY ROAD UNDER CONSTRUCTION

GENERAL NOTES

1. ALL EXISTING TREES ALONG CENTER ST. ARE TO REMAIN IN THE FINAL PROJECT, EXCEPT AS NOTED ON THIS SHEET. PROTECT TREES DURING CONSTRUCTION.

- DEMOLITION

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

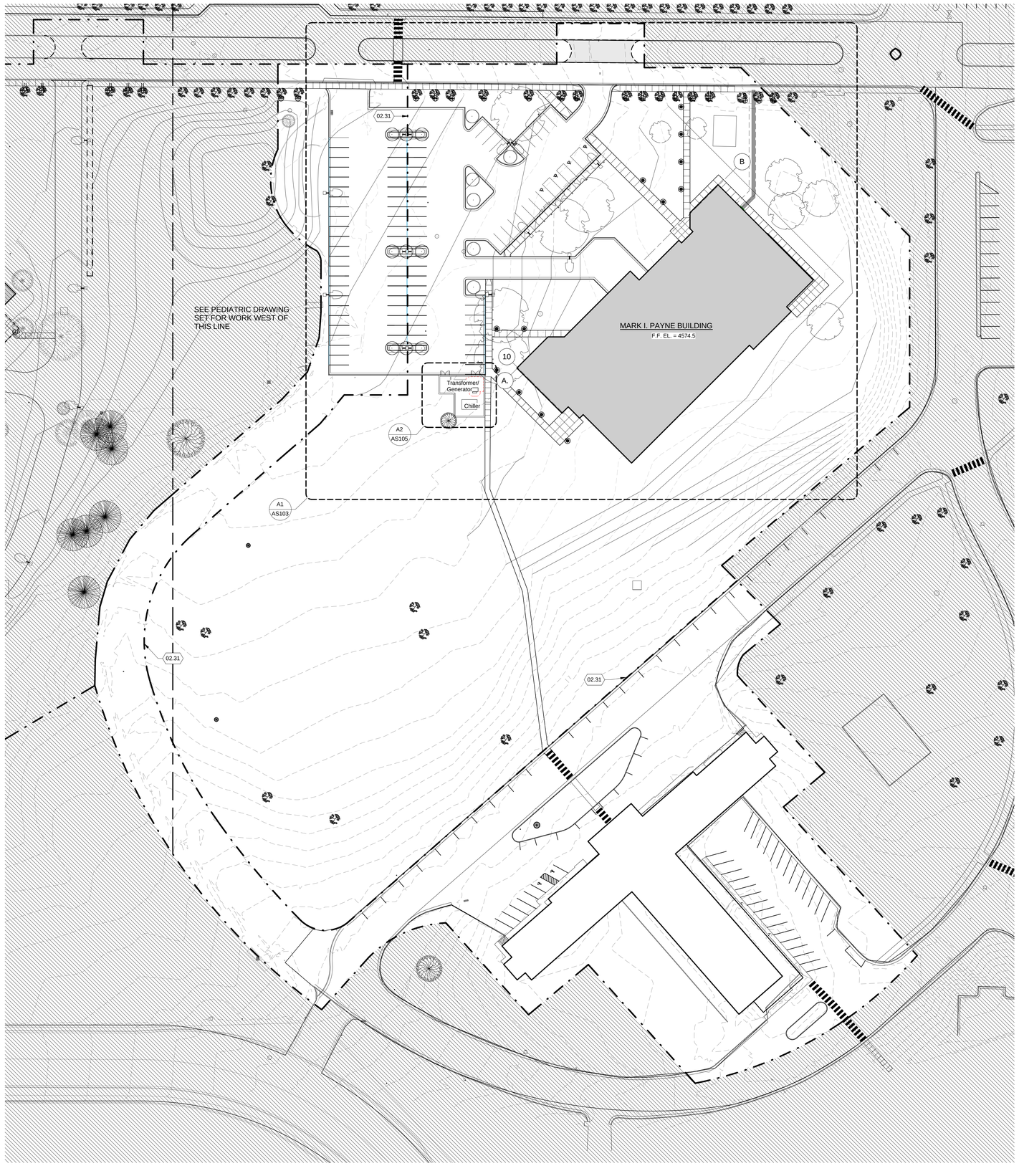
△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

EXISTING SITE & DEMOLITION PLAN

AS101

9/10/2012 3:01:19 PM



A1 PAYNE SITE PLAN

SCALE: 1" = 40'-0"

0" 30' 60'

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

e 801-521-6186
f 801-539-1916
ffkr.com

REFERENCE NOTES

02.31 PHASE ONE CONSTRUCTION INSIDE THIS LINE, PHASE TWO CONSTRUCTION OUTSIDE THIS LINE

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

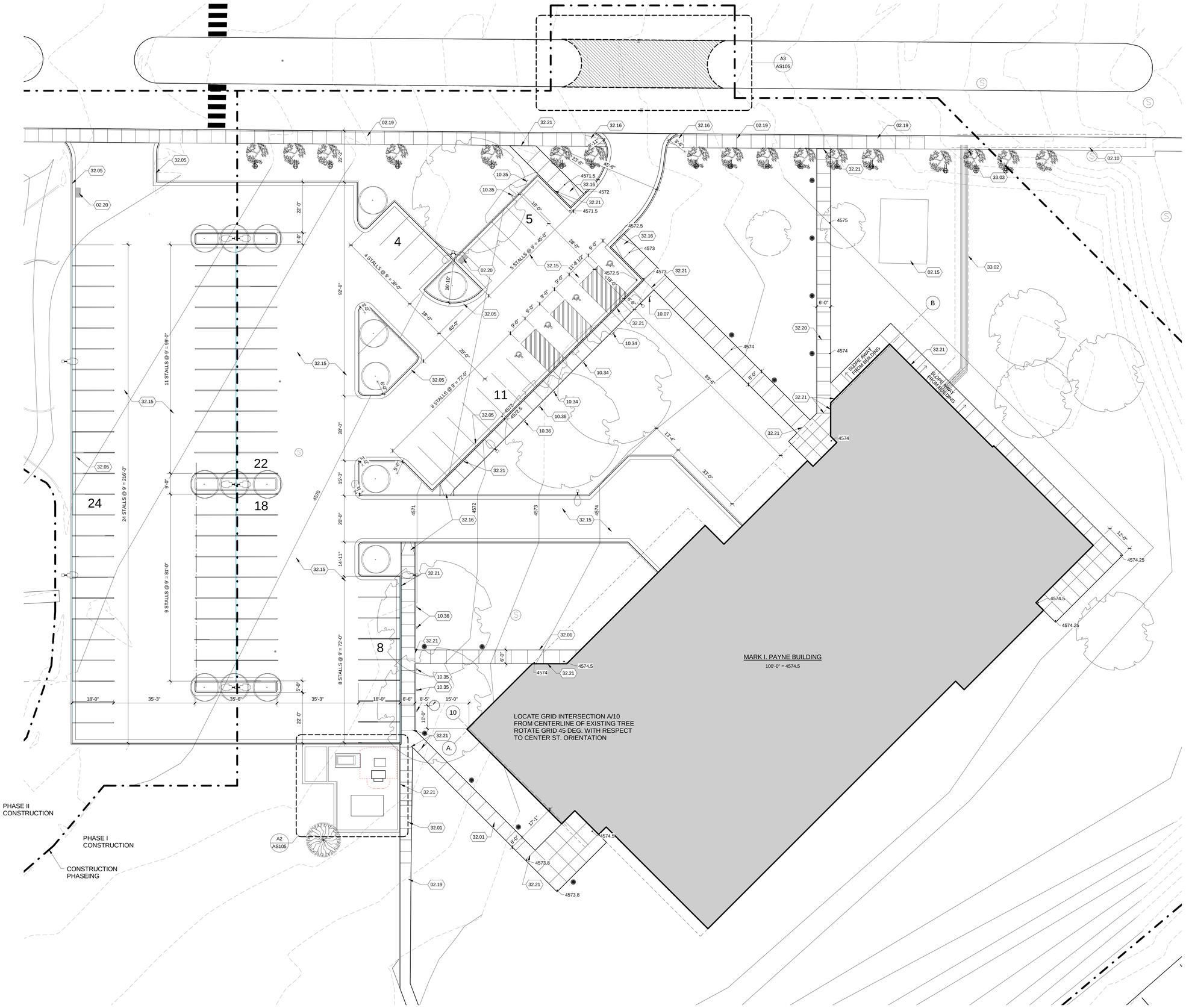
△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

OVERALL SITE PLAN

AS102

9/10/2012 3:01:51 PM



A1 PAYNE BUILDING ENTRANCE

SCALE: 1/16" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

02.10	EXISTING UTILITY TUNNEL AND CONCRETE WALK TO REMAIN AND BE PROTECTED DURING CONSTRUCTION
02.15	CONCRETE SLAB ON GRADE TO REMAIN
02.19	EXISTING CONCRETE WALK
02.20	CATCH BASIN, RE: CIVIL
10.07	VAN ACCESSIBLE PARKING SIGN
10.34	ACCESSIBLE PARKING SIGN
10.35	LOW EMITTING VEHICLE SIGN
10.36	CARPOOL SIGN
32.01	CONCRETE SIDEWALK
32.05	CONCRETE CURB AND GUTTER, RE: DETAIL A5/AS501
32.15	ASPHALT PAVING OVER ROAD BASE
32.16	NEW CURB RAMP, RE: DETAIL C3/AS501
32.20	CONTROL JOINT (TYP.)
32.21	EXPANSION JOINT
33.02	NEW UTILITY TUNNEL
33.03	TIE INTO EXISTING TUNNEL

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

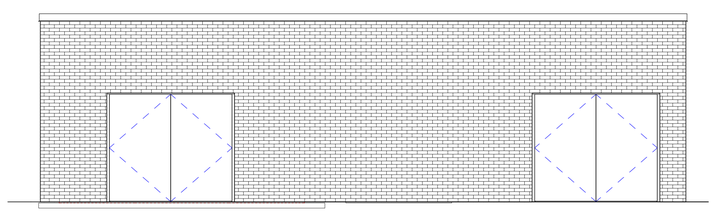
	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

SITE PLAN

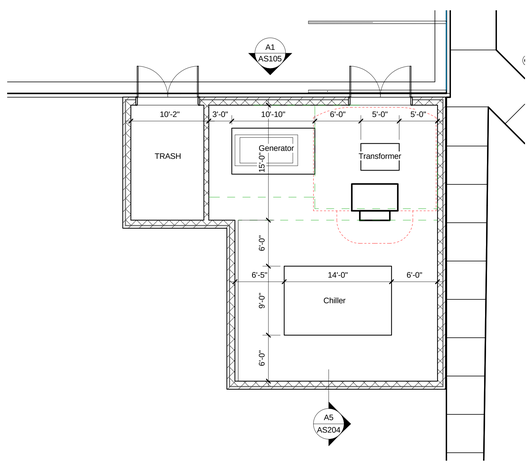
AS103

9/10/2012 3:02:10 PM



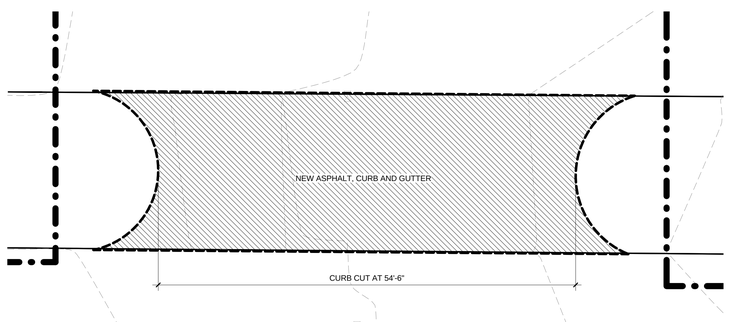
A1 UTILITY ENCLOSURE - ELEVATION

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



A2 UTILITY ENCLOSURE - PLAN

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



A3 PAYNE BUILDING MEDIAN

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

DFCM APPROVAL STAMP

REFERENCE NOTES

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

ENLARGED SITE PLANS

AS105

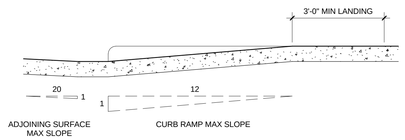
9/10/2012 3:02:21 PM

DFCM APPROVAL STAMP

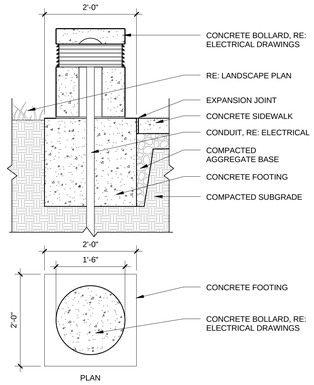
FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

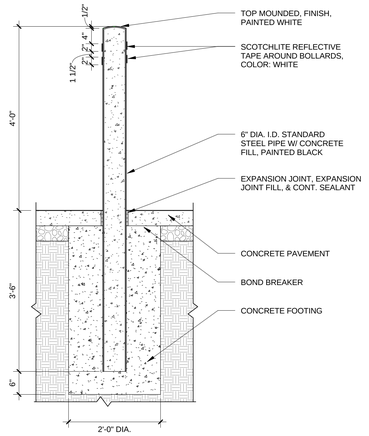
801-521-6186
801-539-1916
ffkr.com



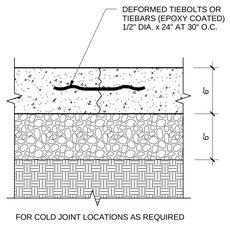
C3 ACCESSIBLE CURB RAMP
SCALE: 1/2" = 1'-0"



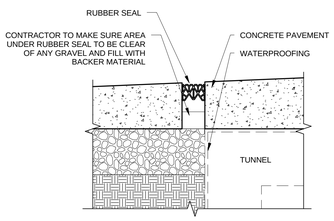
C4 PRECAST CONCRETE LIGHT BOLLARD
SCALE: 3/4" = 1'-0"



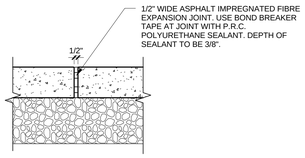
C5 CONCRETE-FILLED STEEL PIPE BOLLARD
SCALE: 3/4" = 1'-0"



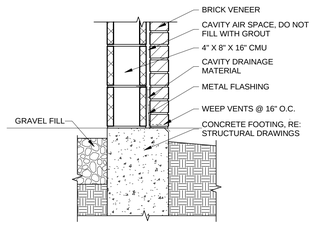
B1 CONSTRUCTION JOINT
SCALE: 1 1/2" = 1'-0"



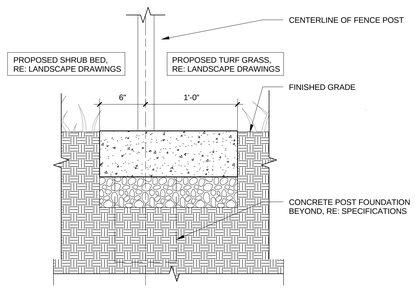
B2 EXPANSION JOINT
SCALE: 1 1/2" = 1'-0"



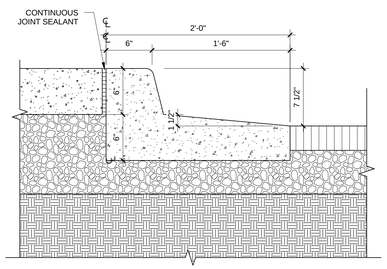
B3 EXPANSION JOINT
SCALE: 1 1/2" = 1'-0"



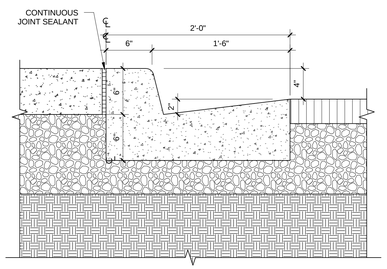
B4 EQUIPMENT ENCLOSURE BASE DETAIL
SCALE: 1" = 1'-0"



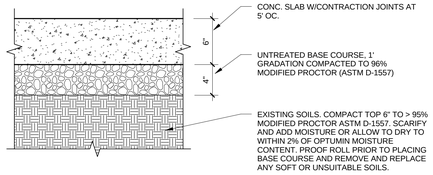
B5 TYP MOW STRIP @ PEDIATRIC FENCE
SCALE: 1 1/2" = 1'-0"



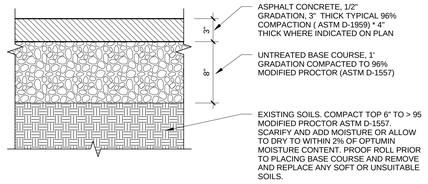
A1 OUTFLOW SLOPE CURB DETAIL
SCALE: 1 1/2" = 1'-0"



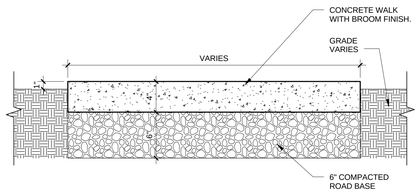
A2 CURB DETAIL
SCALE: 1 1/2" = 1'-0"



A3 CONCRETE PAVEMENT SECTION
SCALE: 1 1/2" = 1'-0"



A4 ASPHALT CONCRETE PAVEMENT SECTION
SCALE: 1 1/2" = 1'-0"



A5 SIDEWALK CROSS SECTION
SCALE: 1 1/2" = 1'-0"

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS
12.SEP.2012	BID DOCS

△	DATE	REVISION

PROJECT NUMBER 11111
FILE USH-SITE

TYPICAL SITE DETAILS

AS501

9/10/2012 3:02:32 PM

REFERENCE NOTES

10.04	FIRE EXTINGUISHER CABINET
10.10	FIRE EXTINGUISHER CABINET - SECURE
10.22	OPERABLE PARTITION
11.03	REFRIGERATOR BY OWNER

GENERAL NOTES:

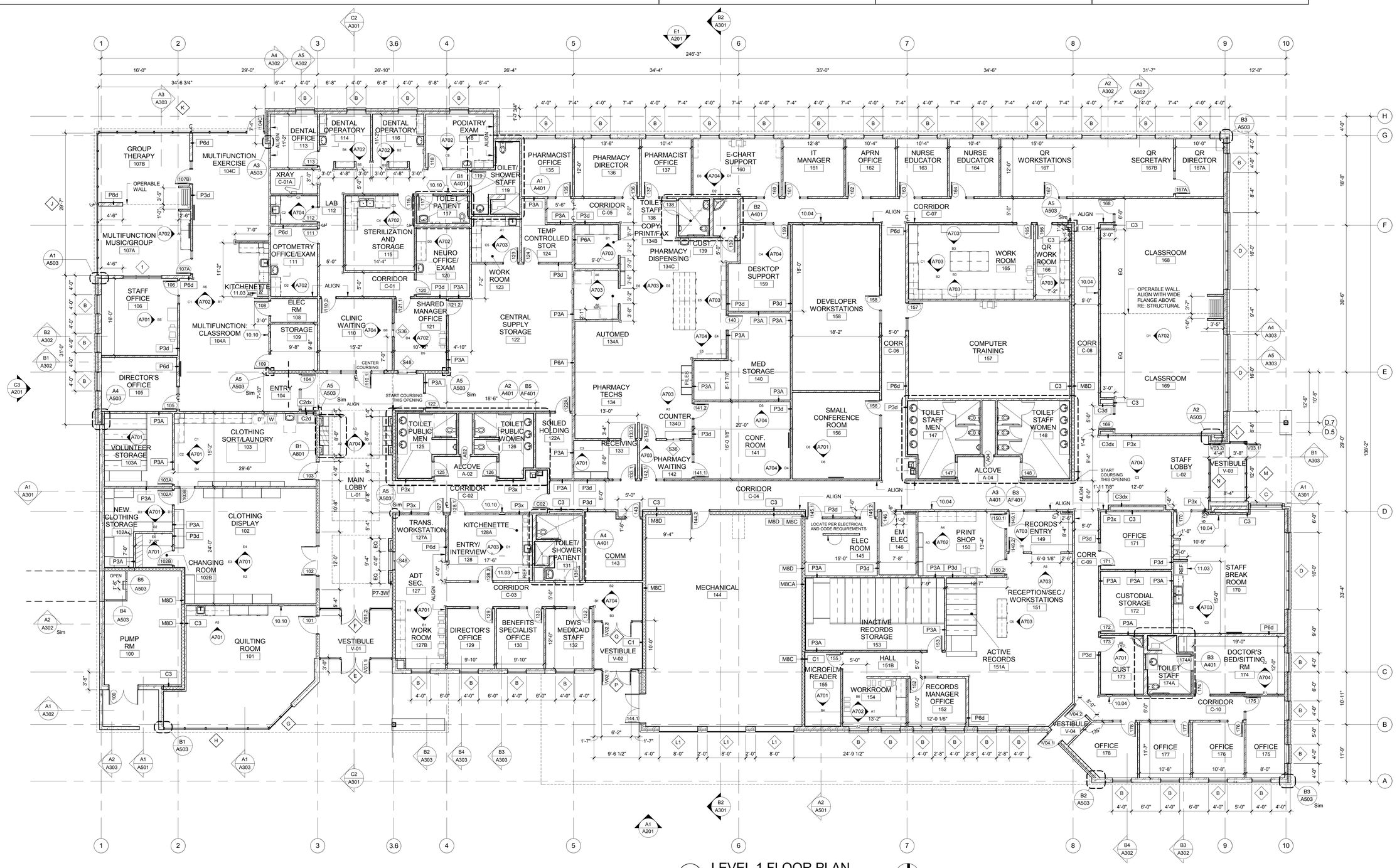
A. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL MILLWORK.
C. GENERAL CONTRACTOR TO COORDINATE ALL OWNER PROVIDED EQUIPMENT WITH OWNER.
D. CONTRACTOR TO PROVIDE BACKING FOR ALL TOILET ACCESSORIES.
E. ALL DOOR JAMBS ARE TO BE 4" CLEAR FROM CORNER OF ROOM, U.N.O.

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com



A1 LEVEL 1 FLOOR PLAN
SCALE: 1/8" = 1'-0"

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION
A	2012 08 15	Code Related Changes

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	FFKR
CHECKED BY	FFKR
SCALE	As indicated

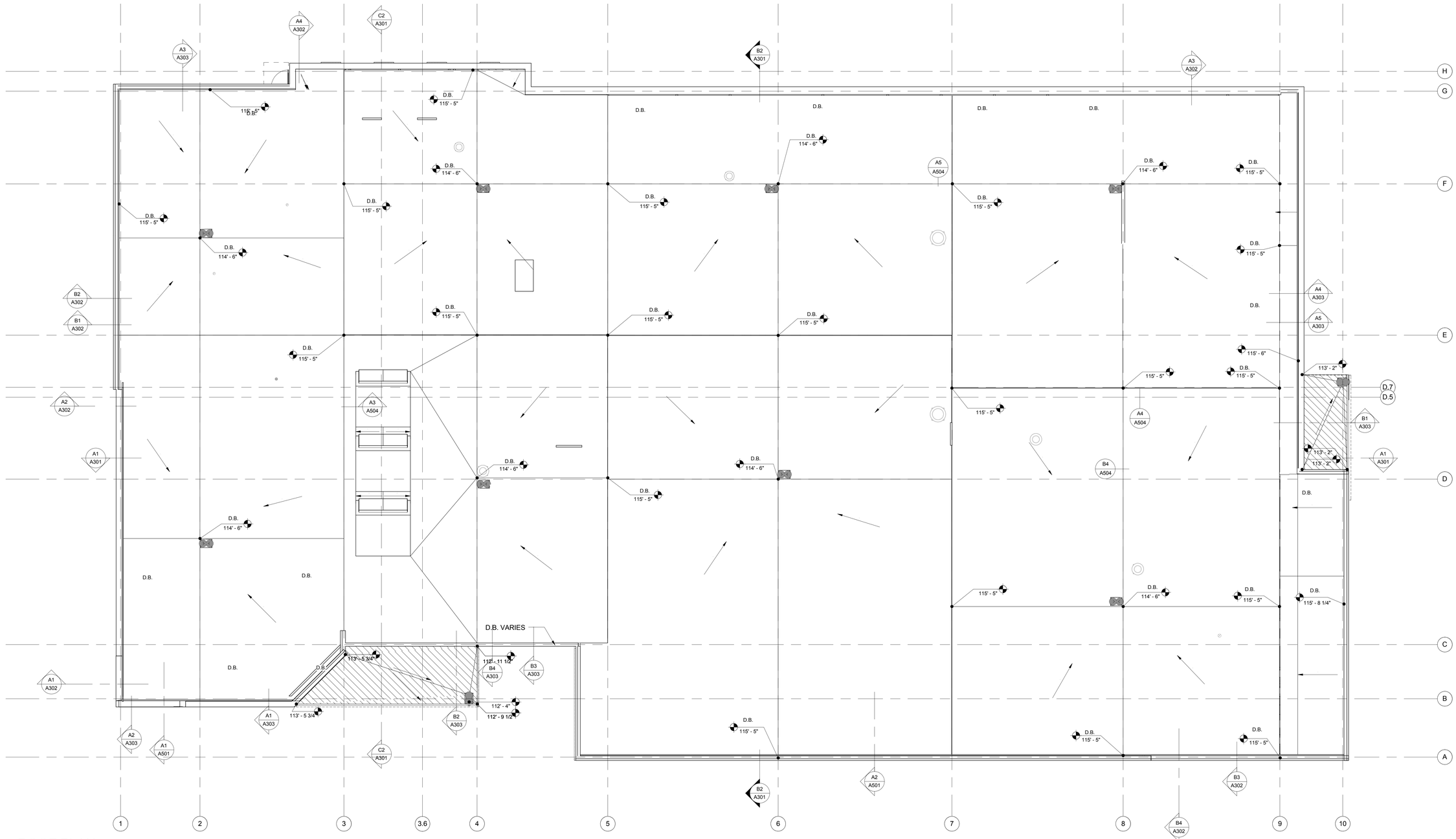
LEVEL 1 FLOOR PLAN

A101

9/11/2012 9:28:41 AM

REFERENCE NOTES

DFCM APPROVAL STAMP



A1 ROOF PLAN

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

9/11/2012 9:28:43 AM

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	1/8" = 1'-0"

ROOF PLAN

A102

REFERENCE NOTES

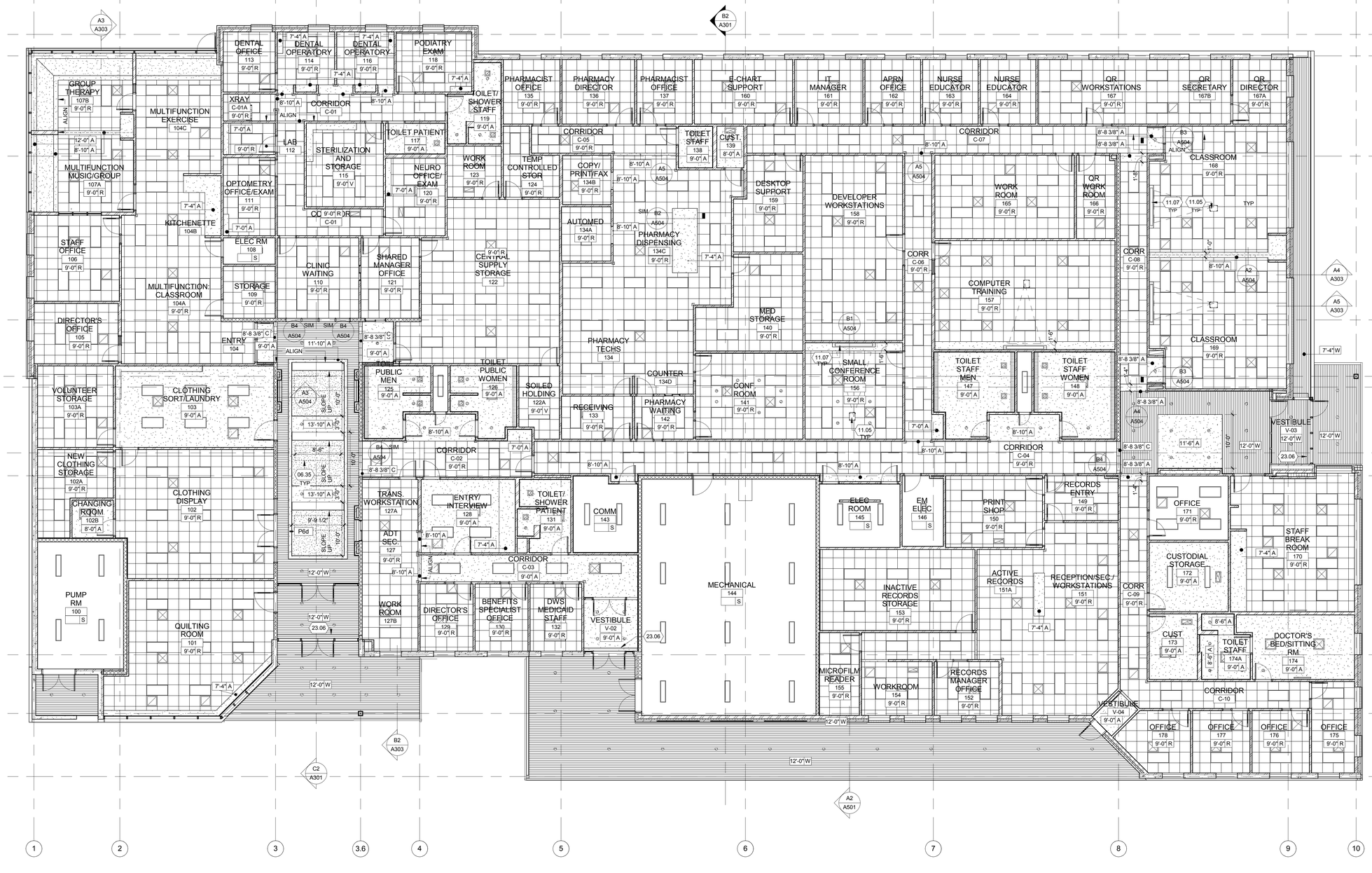
06.35	SUSPENDED TRANSLUCENT PLASTIC PANEL
11.05	CEILING MOUNTED PROJECTOR BY OWNER
11.07	RECESSED MOTORIZED PROJECTION SCREEN
23.06	LINEAR DIFFUSER, RE MECHANICAL DRAWINGS

CEILING LEGEND

HEIGHT ABOVE FINISHED FLOOR — ROOM NAME: RM NO. / HT / C / PNT — C = CEILING TYPE, PNT = CEILING FINISH

CEILING TYPE	
A	GYPSUM BOARD
C	CMU
R	ACOUSTICAL PANEL - REVEAL EDGE
V	ACOUSTICAL PANEL - VINYL LAMINATED
S	OPEN TO STRUCTURE
W	WOOD (TONGUE & GROOVE)

DFCM APPROVAL STAMP



A1 MAIN FLOOR REFLECTED CEILING PLAN

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

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

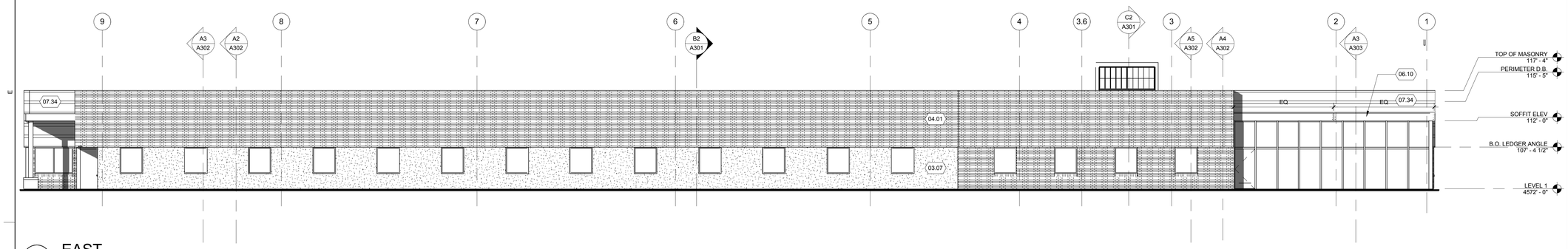
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

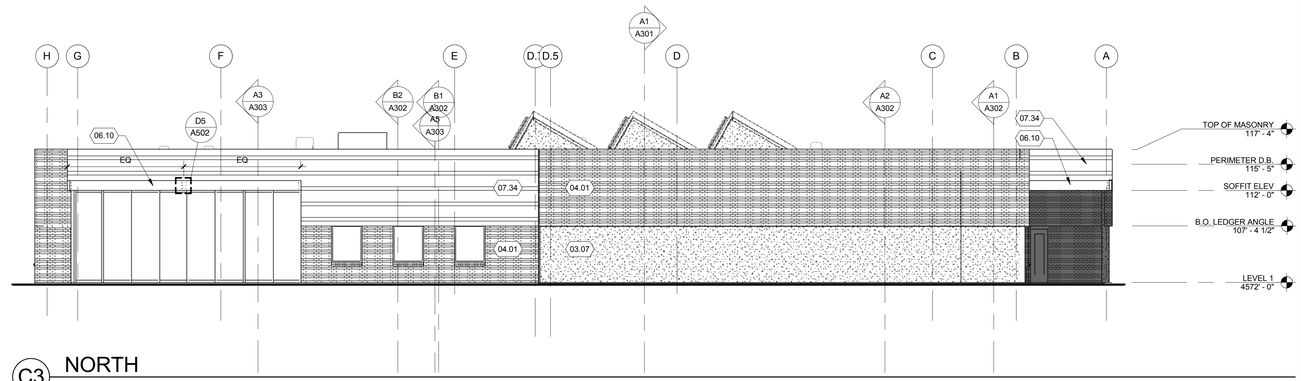
REFLECTED CEILING PLAN

A111

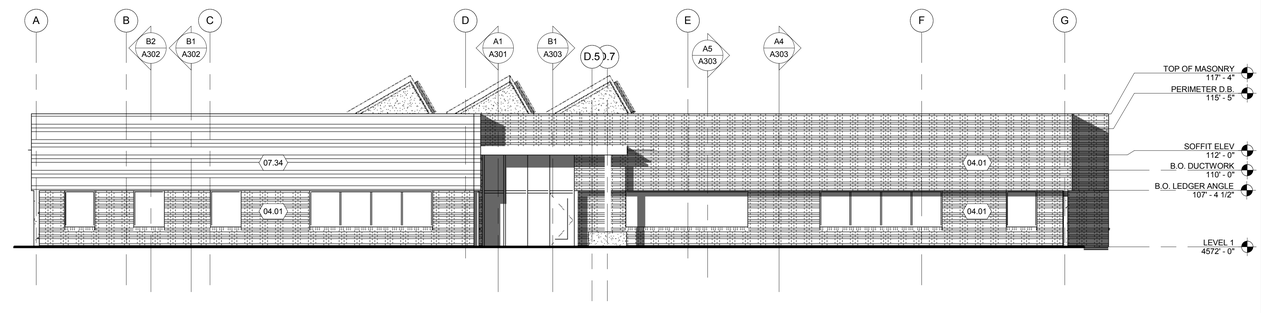
9/11/2012 9:28:46 AM



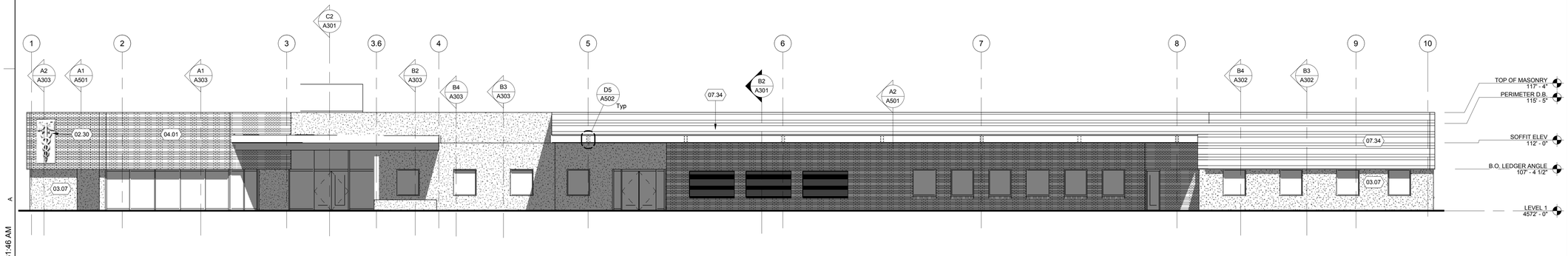
E1 EAST
SCALE: 1/8" = 1'-0"



C3 NORTH
SCALE: 1/8" = 1'-0"



B3 SOUTH
SCALE: 1/8" = 1'-0"



A1 WEST
SCALE: 1/8" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

02.30	PRECAST CONCRETE RELIEF PANEL SALVAGED FROM MS BUILDING
03.07	ARCHITECTURAL CONCRETE
04.01	BRICK VENEER
06.10	4" X 16" HEAVY TIMBER THROUGH-BOLT TO 3/4" PLYWD BACKING.
07.34	METAL PANEL, 4" RIB TO RIB

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	FFKR
CHECKED BY	FFKR
SCALE	1/8" = 1'-0"

EXTERIOR ELEVATIONS

A201

9/11/2012 9:31:46 AM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

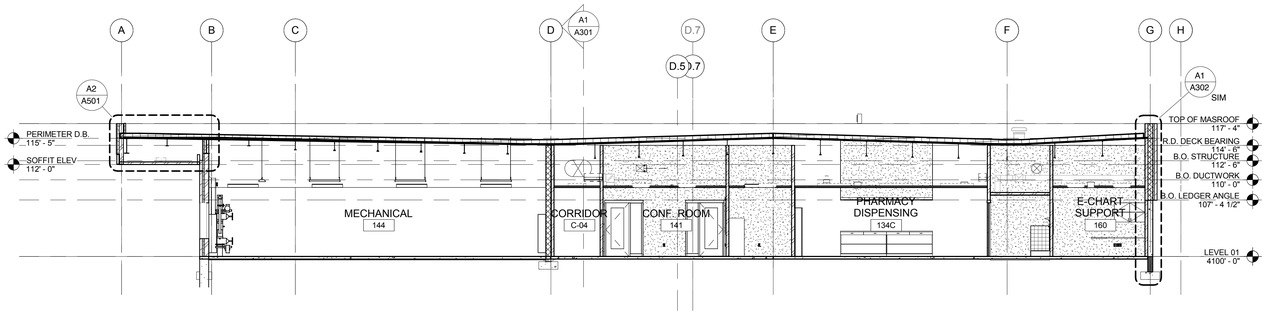
bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

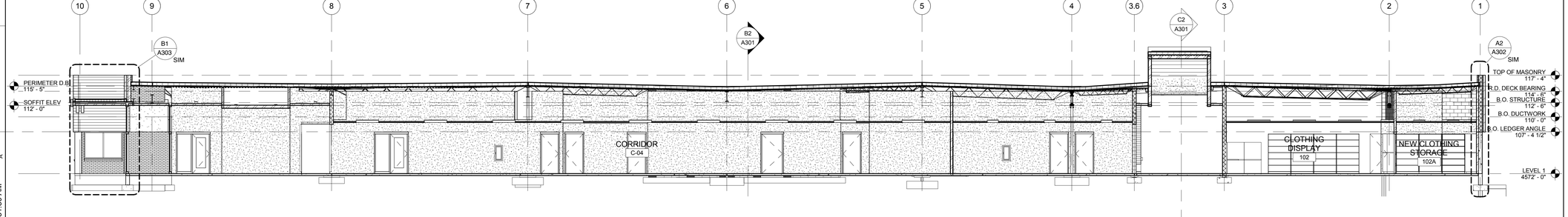
C2 LOBBY SECTION - EAST/WEST

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



B2 CROSS SECTION - EAST/WEST

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



A1 LONGITUDINAL SECTION - NORTH/SOUTH

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

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

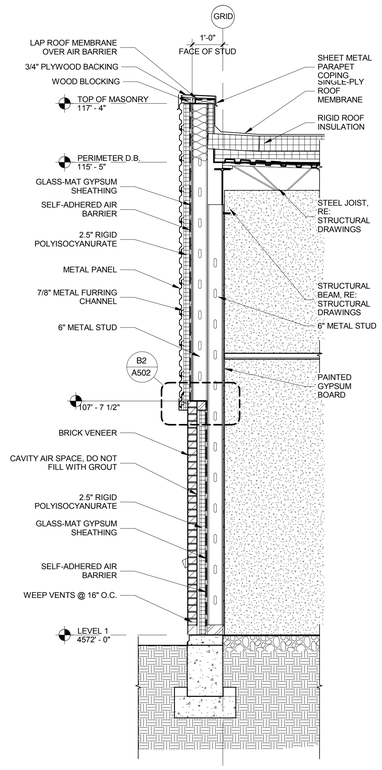
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	FFKR
CHECKED BY	FFKR
SCALE	1/8" = 1'-0"

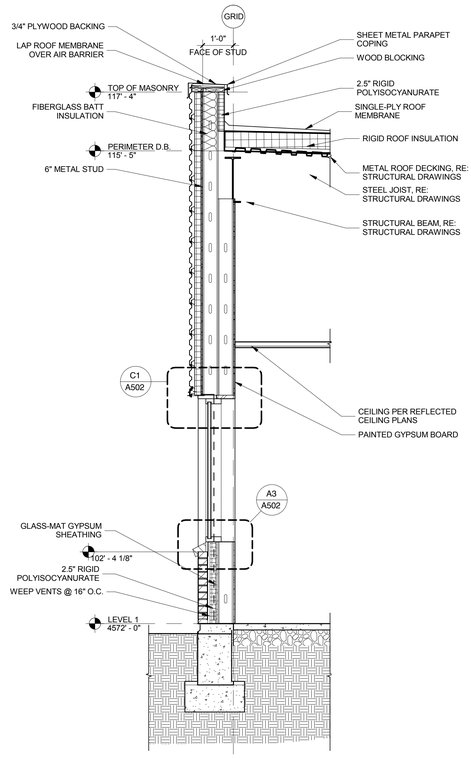
BUILDING SECTIONS

A301

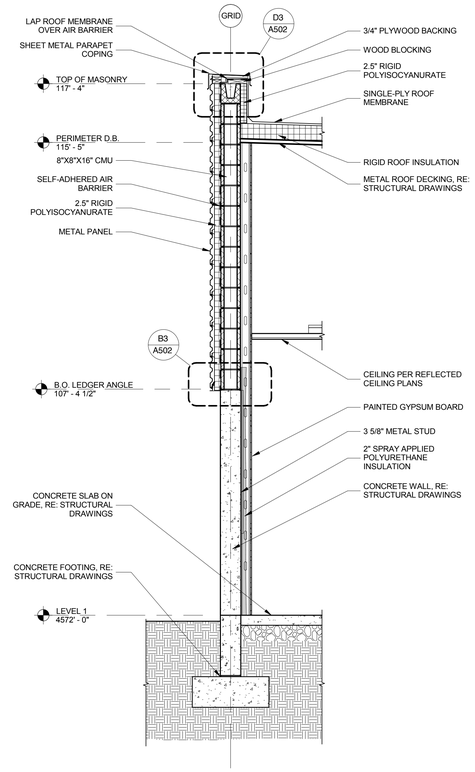
9/11/2012 9:31:50 AM



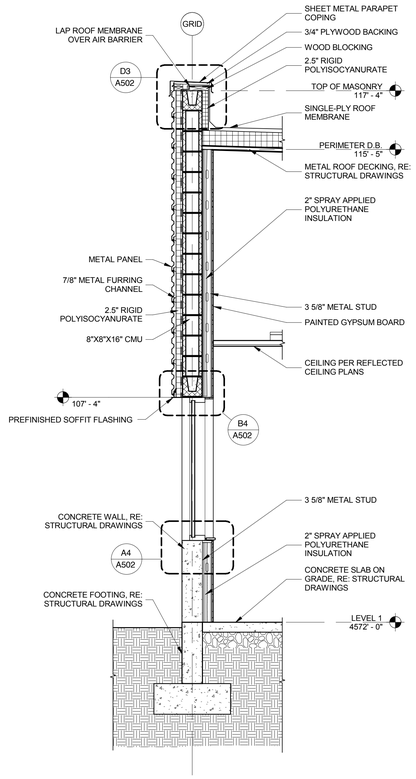
B1 WALL SECTION
SCALE: 1/2" = 1'-0"



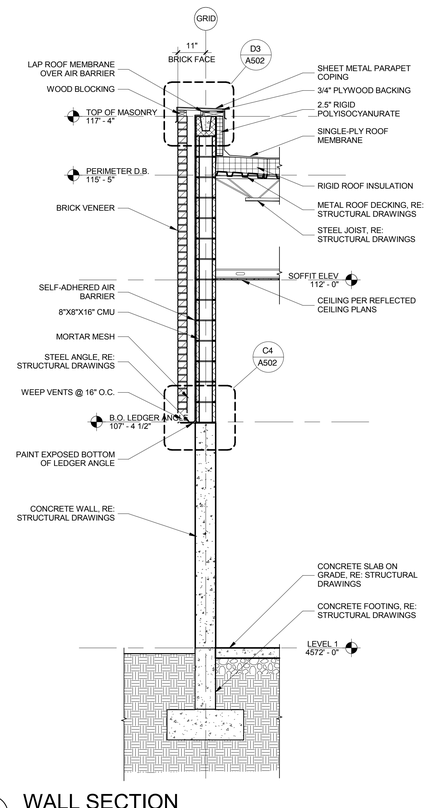
B2 WALL SECTION
SCALE: 1/2" = 1'-0"



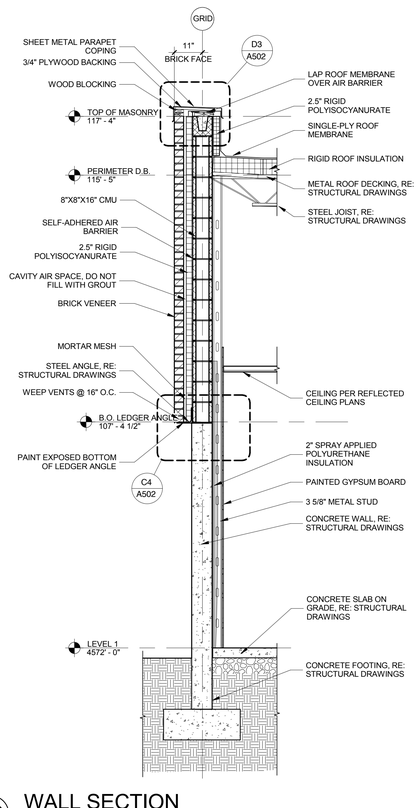
B3 WALL SECTION
SCALE: 1/2" = 1'-0"



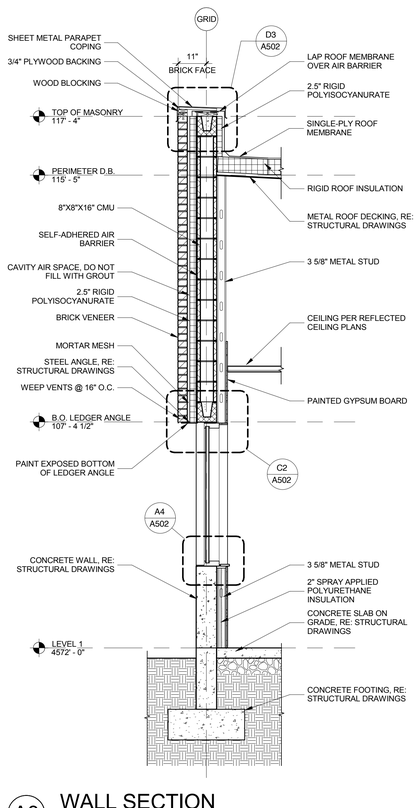
B4 WALL SECTION
SCALE: 1/2" = 1'-0"



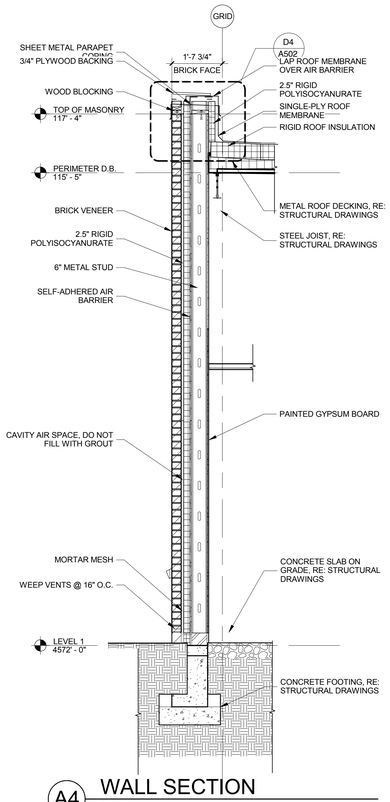
A1 WALL SECTION
SCALE: 1/2" = 1'-0"



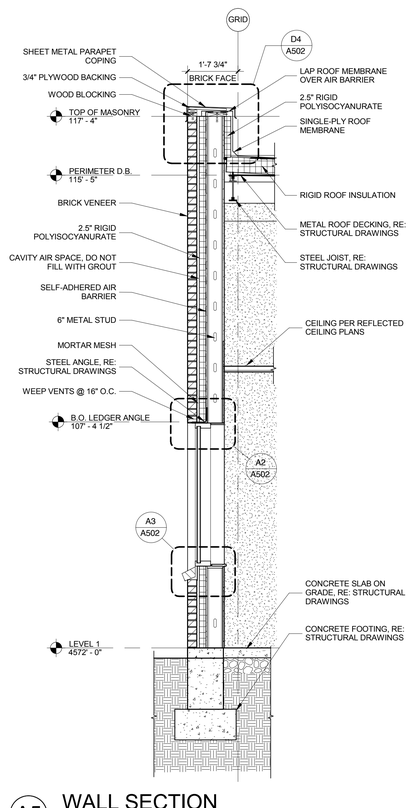
A2 WALL SECTION
SCALE: 1/2" = 1'-0"



A3 WALL SECTION
SCALE: 1/2" = 1'-0"



A4 WALL SECTION
SCALE: 1/2" = 1'-0"



A5 WALL SECTION
SCALE: 1/2" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

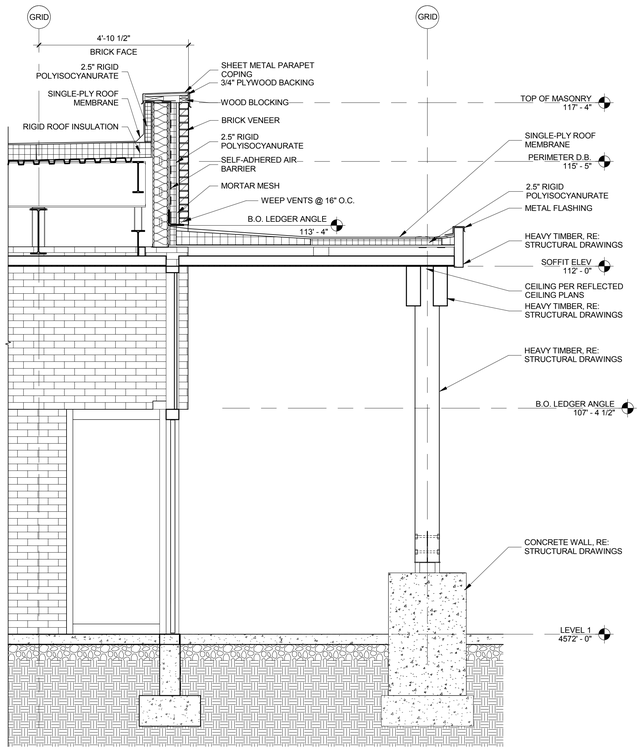
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/2" = 1'-0"

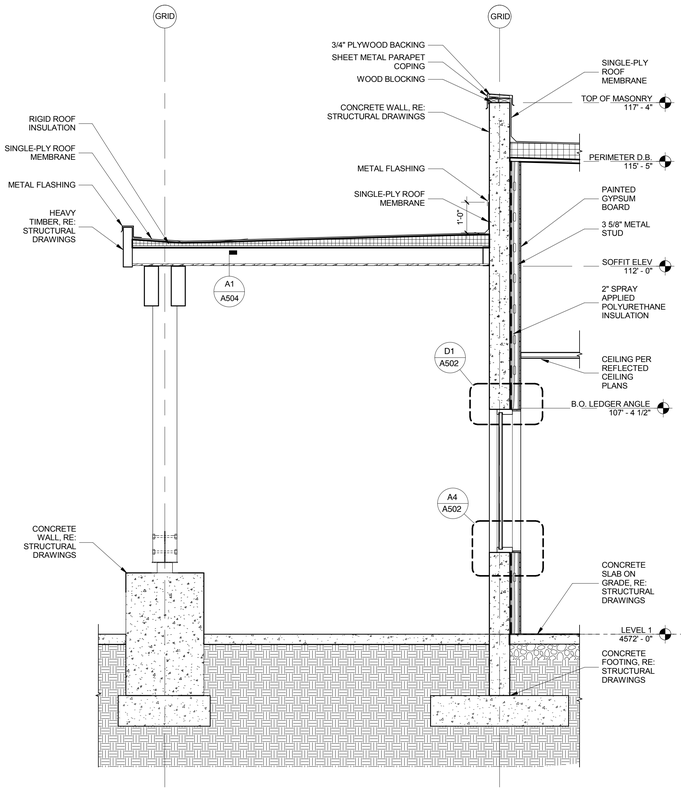
WALL SECTIONS

A302

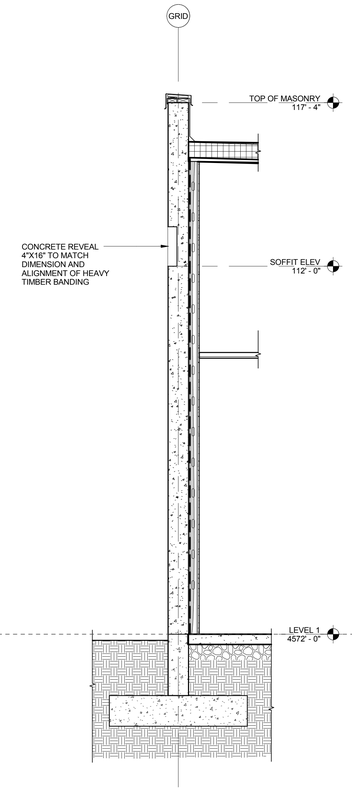
9/11/2012 9:31:54 AM



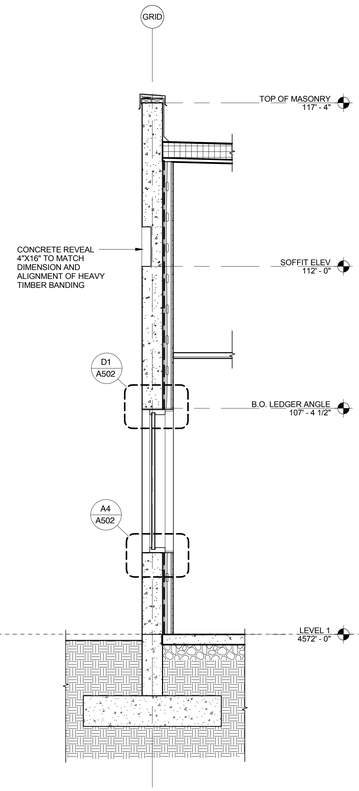
B1 WALL SECTION
SCALE: 1/2" = 1'-0"



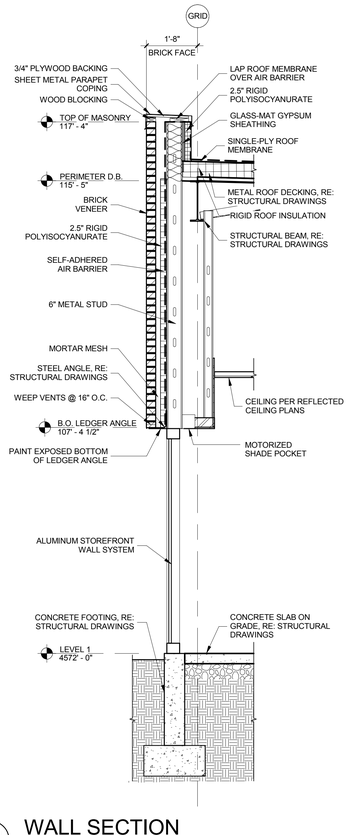
B2 WALL SECTION
SCALE: 1/2" = 1'-0"



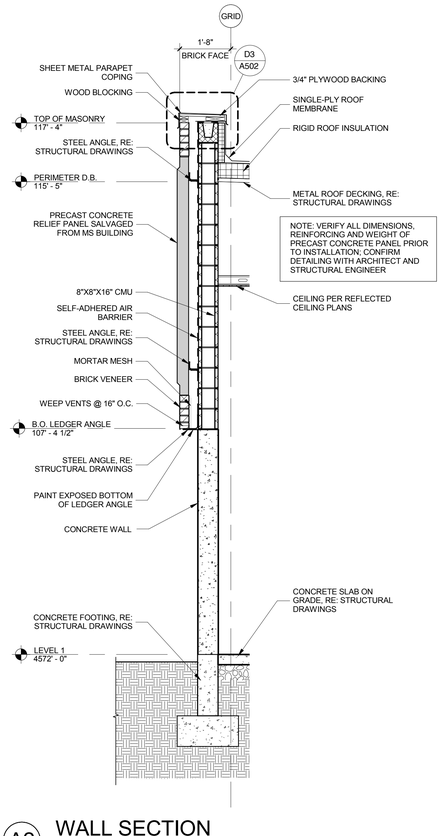
B3 WALL SECTION
SCALE: 1/2" = 1'-0"



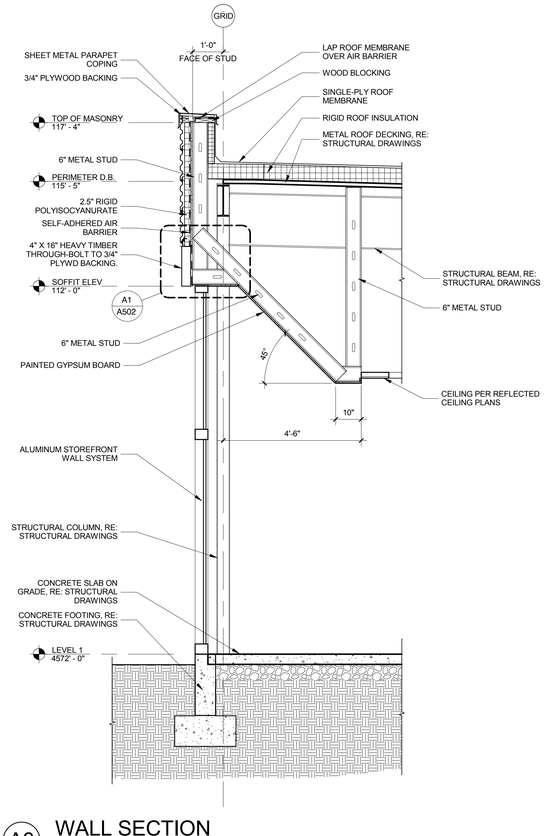
B4 WALL SECTIION
SCALE: 1/2" = 1'-0"



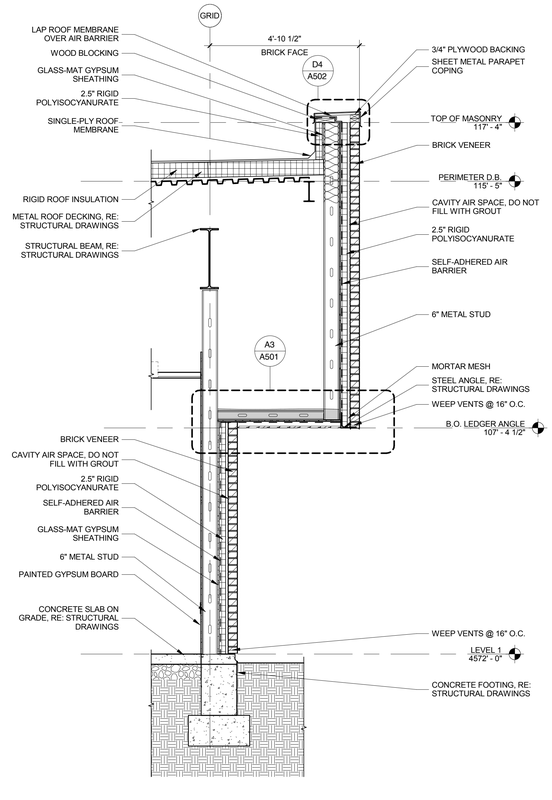
A1 WALL SECTION
SCALE: 1/2" = 1'-0"



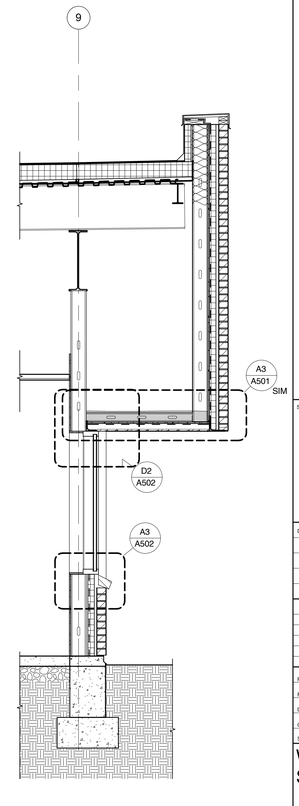
A2 WALL SECTION
SCALE: 1/2" = 1'-0"



A3 WALL SECTION
SCALE: 1/2" = 1'-0"



A4 WALL SECTION
SCALE: 1/2" = 1'-0"



A5 WALL SECTION
SCALE: 1/2" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

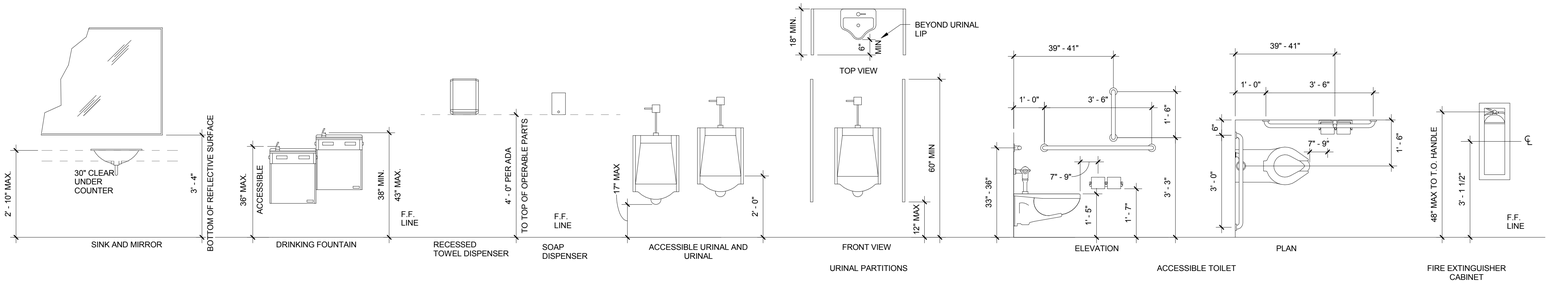
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/2" = 1'-0"

WALL SECTIONS

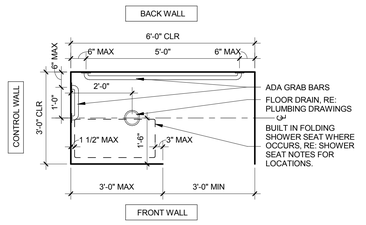
A303

9/11/2012 9:31:59 AM



D1 FIXTURE ELEVATION

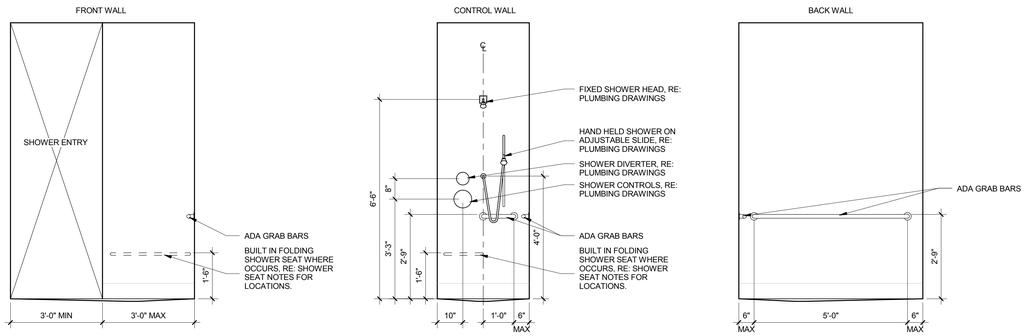
SCALE: N.T.S.



SHOWER NOTES:
1. ALL ACCESSIBLE SHOWERS ARE ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENTS AND ARE TO COMPLY WITH ALL ANSI AND ADAAG REQUIREMENTS.
2. REFERENCE MECHANICAL DRAWINGS FOR ALL PLUMBING FIXTURE TYPES, MOUNTING REQUIREMENTS AND CONFIGURATION.

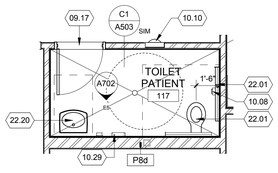
SHOWER SEAT NOTES:
1. PROVIDE BACKING IN METAL STUD WALLS FOR ADA COMPLIANT SHOWER COMPARTMENT SEATS IN ALL ACCESSIBLE SHOWER STALLS.
2. PROVIDE ADA COMPLIANT FOLDING SHOWER COMPARTMENT SEATS IN ACCESSIBLE STAFF SHOWER STALLS 119 AND 174A. PATIENT SHOWER 131 IS AN ACCESSIBLE STALL AND SHALL RECEIVE A PORTABLE SHOWER SEAT PROVIDED BY THE OWNER.
3. INSTALL SHOWER SEATS TO WITHSTAND A DOWNWARD LOAD OF AT LEAST 250 LBF, WHEN TESTED ACCORDING TO ASTM F446.

GRAB BAR NOTES:
1. INSTALL TO WITHSTAND A DOWNWARD LOAD OF AT LEAST 250 LBF, WHEN TESTED ACCORDING TO ASTM F446.



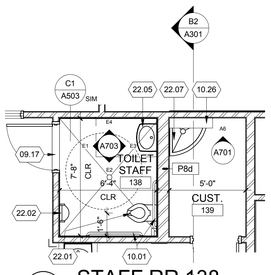
C1 TYPICAL ADA SHOWER DETAIL

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



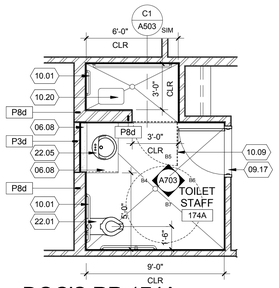
B1 PATIENT TOILET 117

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



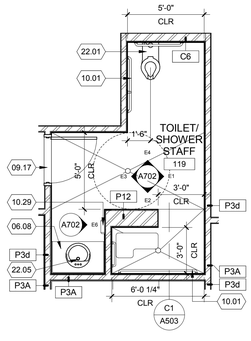
B2 STAFF RR 138

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



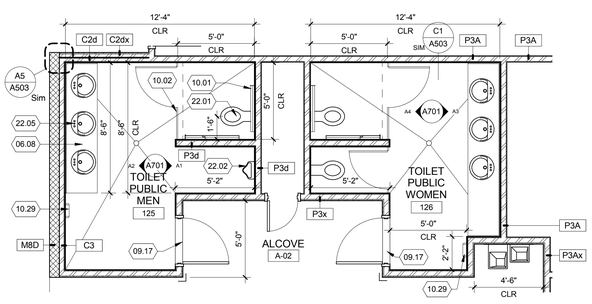
B3 DOC'S RR 174A

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



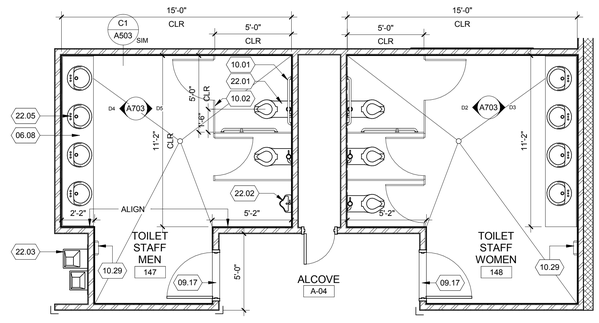
A1 STAFF TOILET/SHOWER 119

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



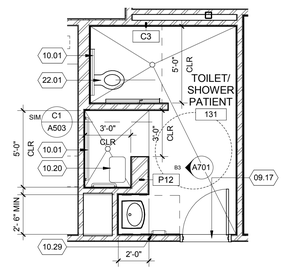
A2 RR 125 & 126

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



A3 MAIN RR 147 & 148

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



A4 PATIENT TOILET/SHOWER 131

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

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

06.08	COUNTERTOP WITH INTEGRAL SINK
09.17	STONE THRESHOLD
10.01	GRAB BARS, RE: FIXTURE ELEVATION
10.02	TOILET PARTITION
10.08	TOILET PAPER DISPENSER BY OWNER
10.09	FRAMELESS GLASS SHOWER DOOR
10.10	FIRE EXTINGUISHER CABINET - SECURE
10.20	ADA SHOWER SEAT
10.26	MOP AND BROOM RACK
10.29	PAPER TOWEL DISPENSER
22.01	WATER CLOSET RE: PLUMBING DRAWINGS
22.02	URINAL RE: PLUMBING DRAWINGS
22.03	DRINKING FOUNTAIN, RE: PLUMBING DRAWINGS
22.05	LAVATORY, RE: PLUMBING DRAWINGS
22.07	MOP SINK, RE: PLUMBING DRAWINGS
22.20	SINK, RE: PLUMBING DRAWINGS

GENERAL NOTES:

A. REFER TO SHEET A-801 FOR MILLWORK DETAILS.
B. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL MILLWORK.
C. ALL CABINET INTERIORS AND SHELVES TO BE FINISHED IN WHITE MELAMINE, TYP.
D. PROVIDE FINISHED END PANEL AT ALL EXPOSED MILLWORK SIDES, TO MATCH ADJACENT MILLWORK FRONT FINISH.
E. GENERAL CONTRACTOR TO COORDINATE ALL OWNER PROVIDED EQUIPMENT WITH OWNER.
F. CONTRACTOR TO PROVIDE BACKING FOR ALL TOILET ACCESSORIES.
G. WIRE MANAGEMENT AND GROMMETS TO BE PROVIDED AT ALL MILLWORK.
H. ACCENT WALL LOCATIONS TO BE DEFINED IN FIELD.
I. SEE DRAWING AF-401 FOR TYPICAL WALL TILE PATTERN AT RESTROOMS 117, 119, 125, 126, 131, 138, 147, AND 148.
J. AT ALL RESTROOMS ALL WALLS ARE TO RECEIVE FULL HEIGHT TILE, FROM FLOOR TO CEILING.
K. ALL WHITEBOARDS TO BE MOUNTED 3'-0" AFF AND CENTERED ON WALL, WHERE APPLICABLE. REFER TO INTERIOR ELEVATION SHEETS A-700'S FOR EXACT LOCATIONS.
L. ALL WALL MOUNTED TELEVISIONS ARE TO HAVE POWER/DATA/AV RECEPTACLES AS PER POWER PLANS. RECEPTABLES TO BE CENTERED ON WALL BEHIND TELEVISION.

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

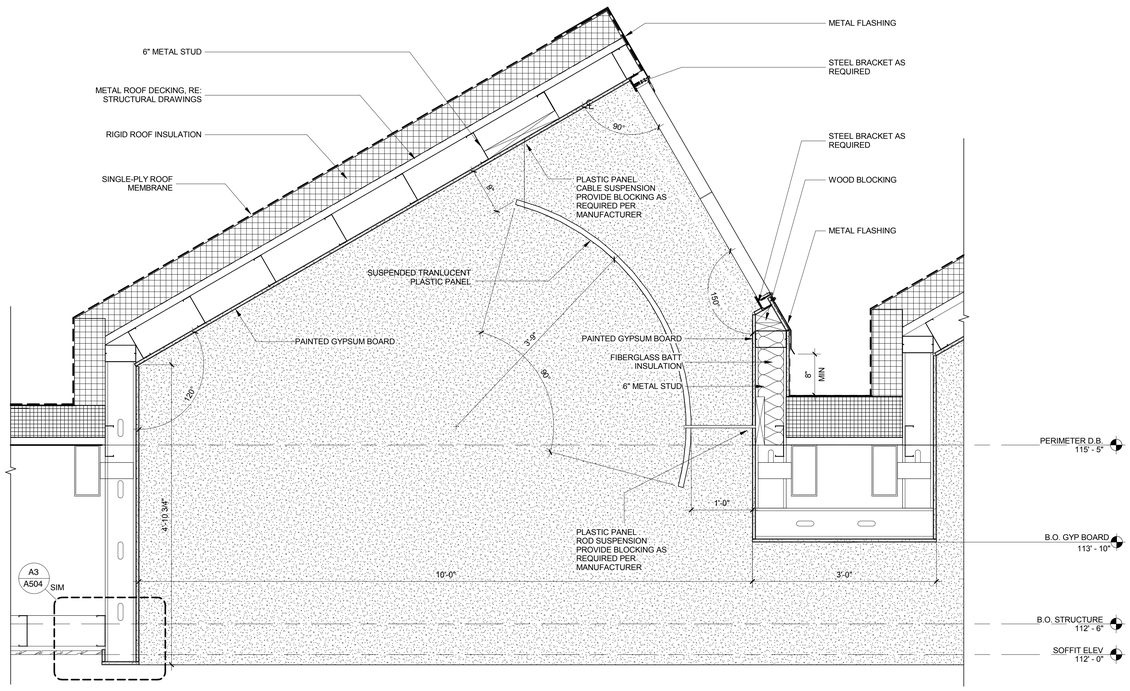
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

ENLARGED FLOOR PLAN

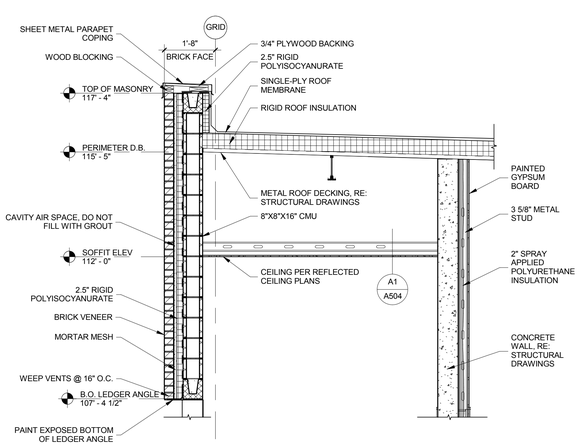
A401

9/11/2012 9:32:00 AM



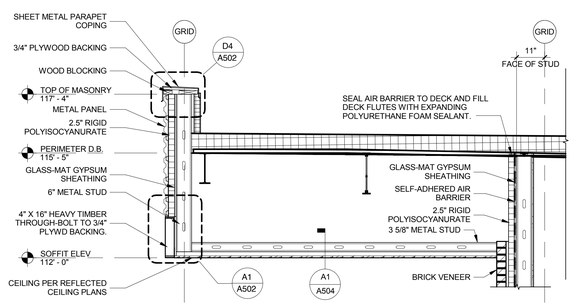
B1 SKYLIGHT SECTION

SCALE: 1" = 1'-0"



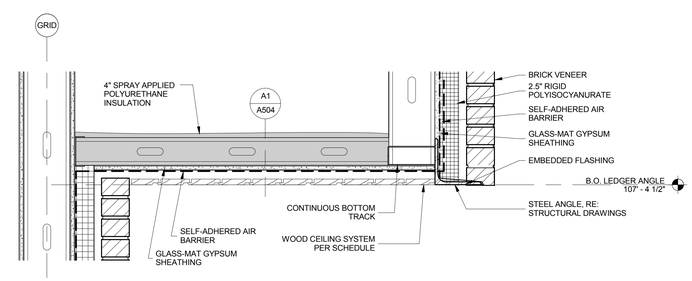
A1 WALL SECTION

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



A2 WEST SOFFIT

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



A3 SOUTH CLASSROOM SOFFIT

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

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

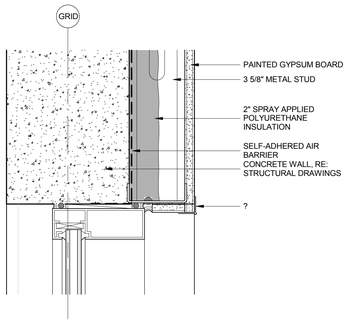
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

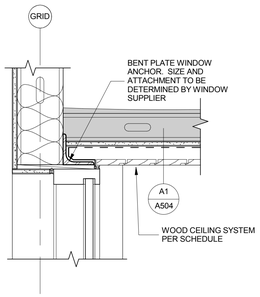
SECTION DETAILS

A501

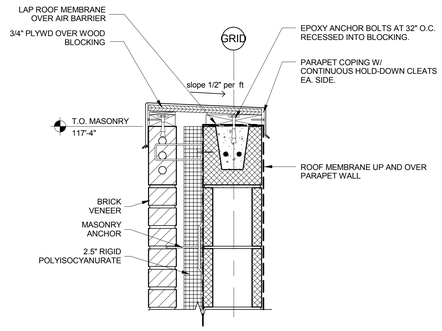
9/11/2012 9:32:02 AM



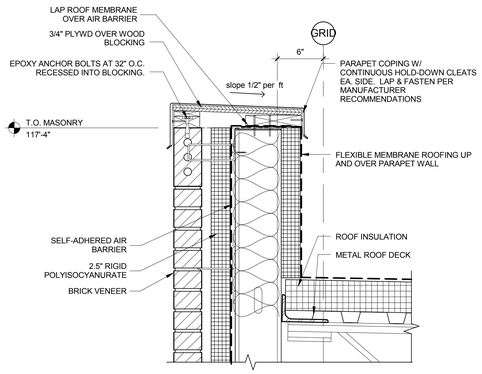
D1 WINDOW HEAD @ CONCRETE
SCALE: 3" = 1'-0"



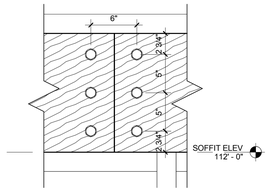
D2 WINDOW HEAD
SCALE: 1 1/2" = 1'-0"



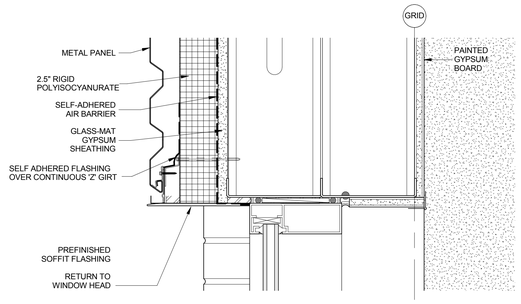
D3 PARAPET-MASONRY
SCALE: 1 1/2" = 1'-0"



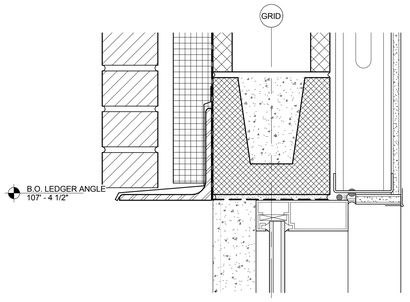
D4 PARAPET- STEEL STUD
SCALE: 1 1/2" = 1'-0"



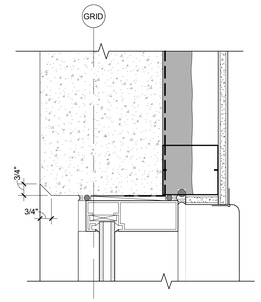
D5 BOLT PATTERN (TYP.)
SCALE: 1 1/2" = 1'-0"



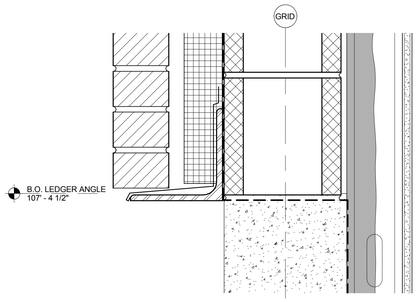
C1 WINDOW HEAD
SCALE: 3" = 1'-0"



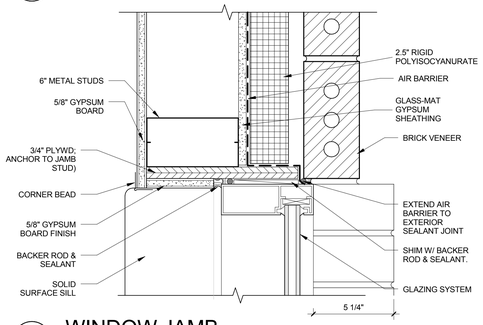
C2 WINDOW HEAD
SCALE: 3" = 1'-0"



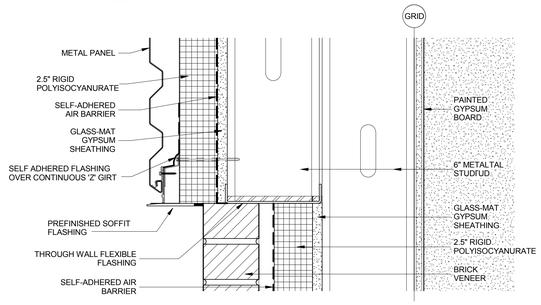
C3 WINDOW JAMB
SCALE: 3" = 1'-0"



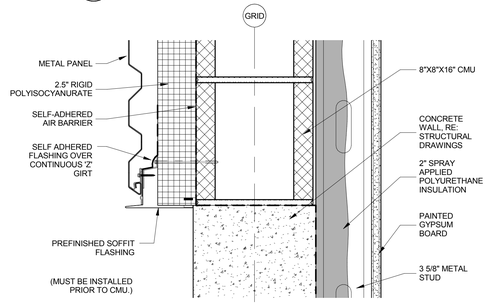
C4 THROUGH WALL FLASHING
SCALE: 3" = 1'-0"



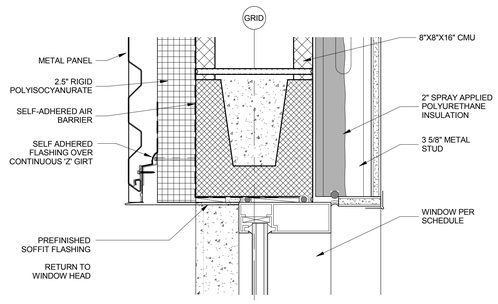
B1 WINDOW JAMB
SCALE: 3" = 1'-0"



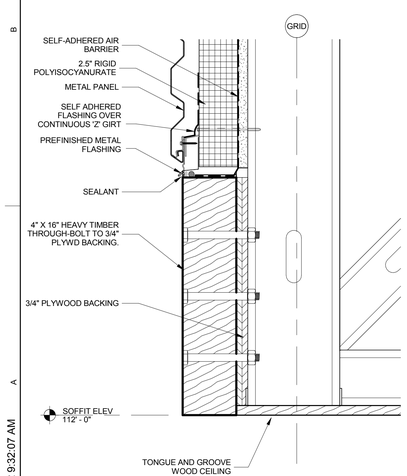
B2 BOTTOM OF METAL PANEL @ BRICK
SCALE: 3" = 1'-0"



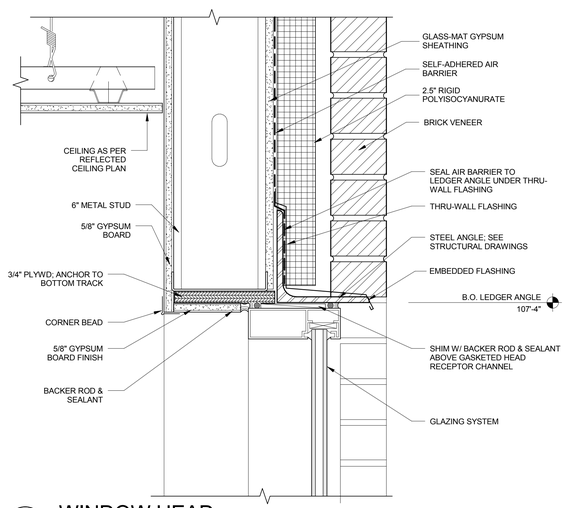
B3 THROUGH WALL FLASHING
SCALE: 3" = 1'-0"



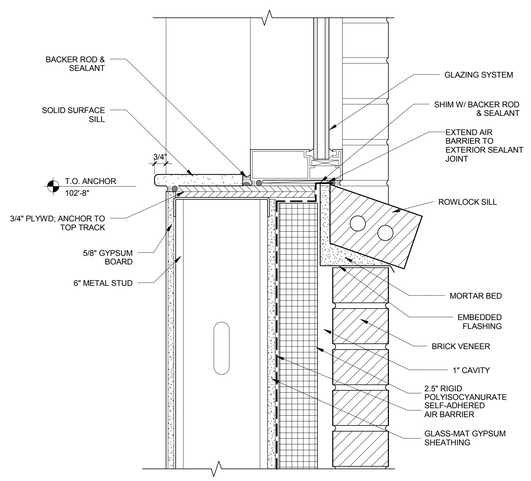
B4 WINDOW HEAD
SCALE: 3" = 1'-0"



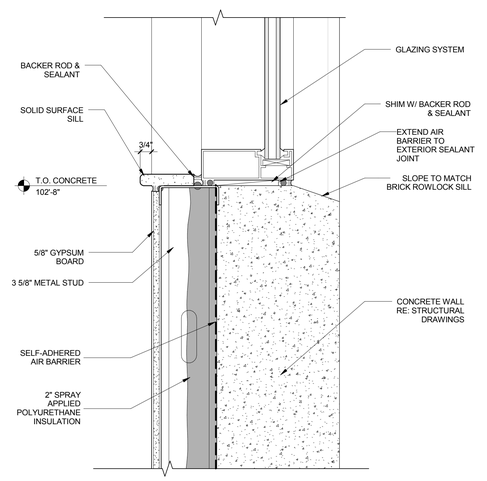
A1 TIMBER SOFFIT EDGE
SCALE: 3" = 1'-0"



A2 WINDOW HEAD
SCALE: 3" = 1'-0"



A3 WINDOW SILL
SCALE: 3" = 1'-0"



A4 WINDOW SILL
SCALE: 3" = 1'-0"

DFCM APPROVAL STAMP

REFERENCE NOTES

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

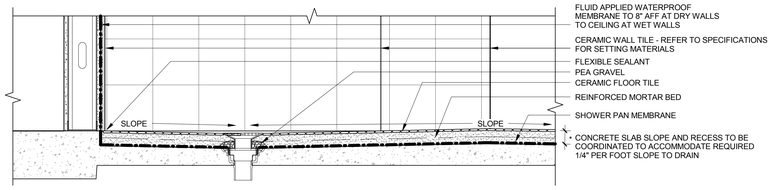
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

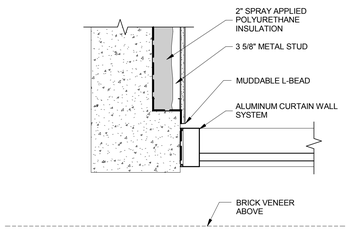
SECTION DETAILS

A502

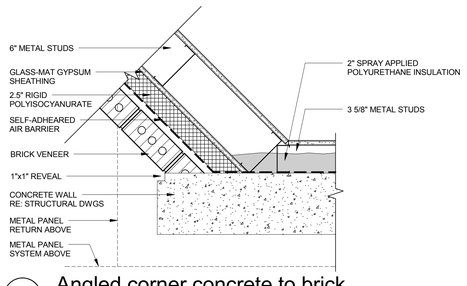
9/11/2012 9:32:07 AM



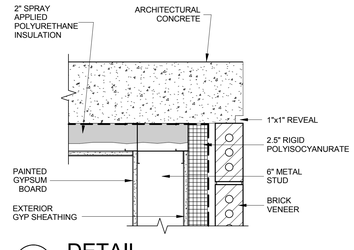
C1 TILE SLOPE
SCALE: 1 1/2" = 1'-0"



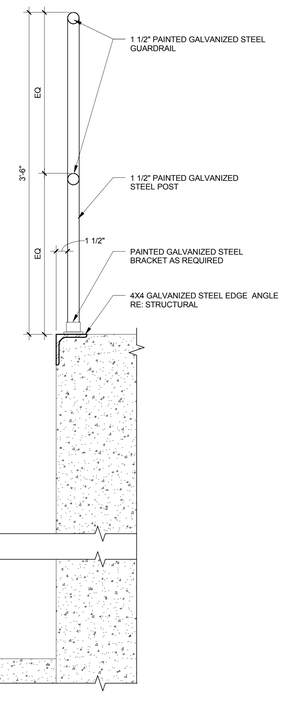
B1 DETAIL
SCALE: 1 1/2" = 1'-0"



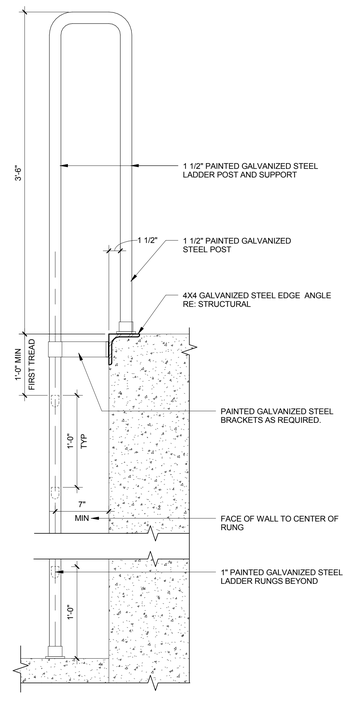
B2 Angled corner concrete to brick
SCALE: 1 1/2" = 1'-0"



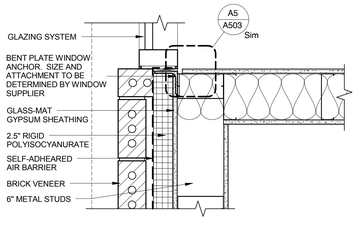
B3 DETAIL
SCALE: 1 1/2" = 1'-0"



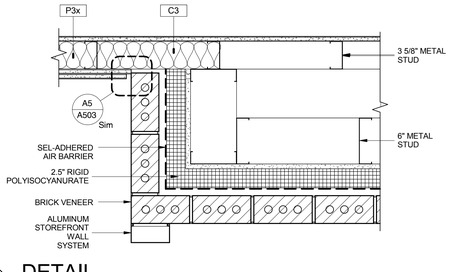
B4 GUARD RAIL - PIT
SCALE: 1 1/2" = 1'-0"



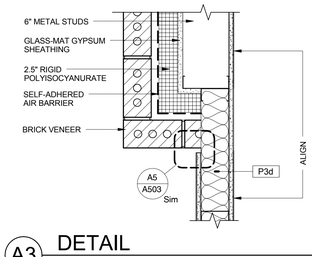
B5 LADDER RAIL - PIT
SCALE: 1 1/2" = 1'-0"



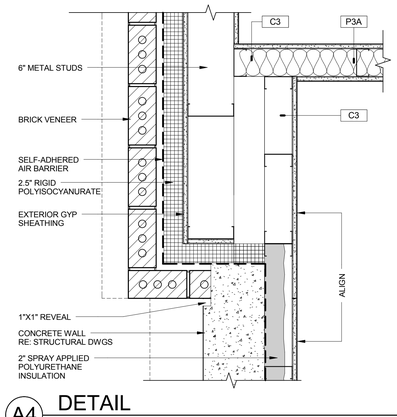
A1 DETAIL
SCALE: 1 1/2" = 1'-0"



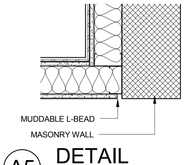
A2 DETAIL
SCALE: 1 1/2" = 1'-0"



A3 DETAIL
SCALE: 1 1/2" = 1'-0"



A4 DETAIL
SCALE: 1 1/2" = 1'-0"



A5 DETAIL
SCALE: 1 1/2" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

REFERENCE NOTES

03.07	ARCHITECTURAL CONCRETE
04.01	BRICK VENEER
05.04	3 5/8" METAL STUD
05.05	6" METAL STUD
05.26	BENT PLATE WINDOW ANCHOR. SIZE AND ATTACHMENT TO BE DETERMINED BY WINDOW SUPPLIER
07.04	2.5" RIGID POLYISOCYANURATE
07.05	2" SPRAY APPLIED POLYURETHANE INSULATION
08.01	ALUMINUM STOREFRONT WALL SYSTEM
08.02	ALUMINUM CURTAIN WALL SYSTEM
09.04	PAINTED GYPSUM BOARD

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

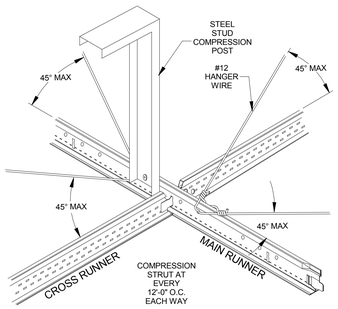
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1 1/2" = 1'-0"

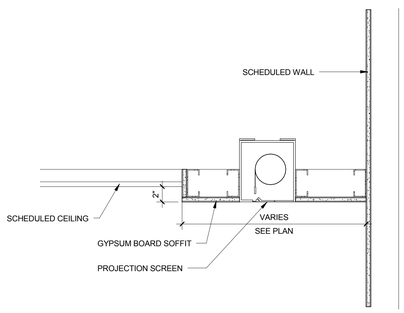
PLAN DETAILS

A503

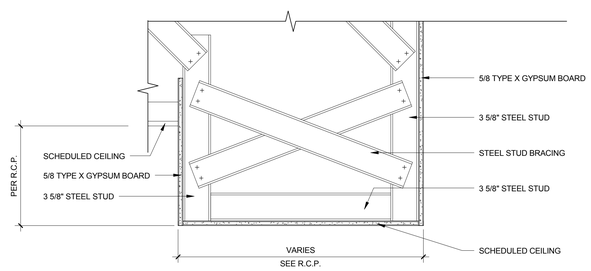
9/11/2012 9:32:10 AM



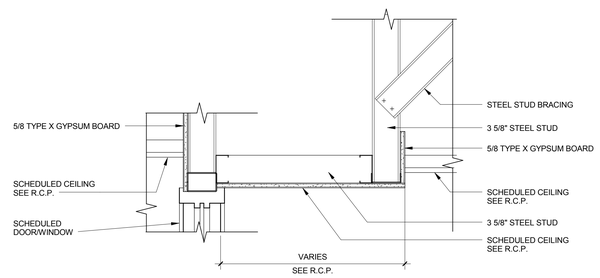
C1 SEISMIC CEILING DETAIL
SCALE: 3" = 1'-0"



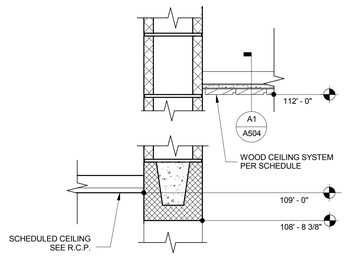
B1 PROJECTION SCREEN
SCALE: 1 1/2" = 1'-0"



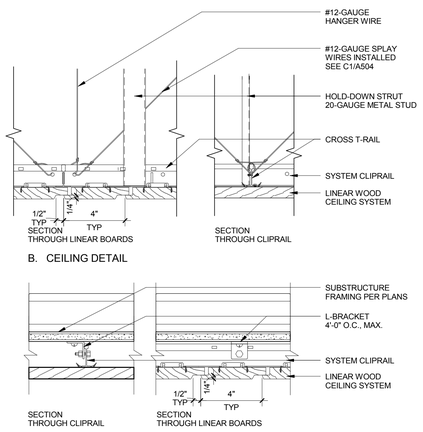
B2 SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



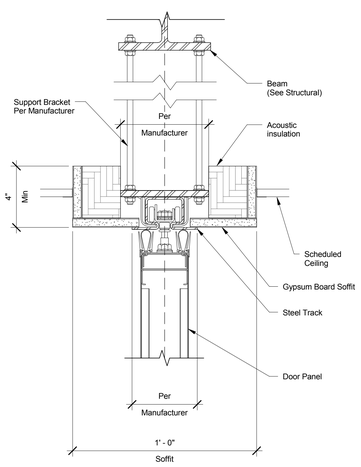
B3 SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



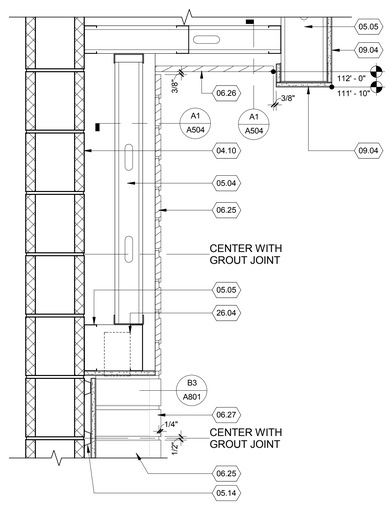
B4 CMU HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



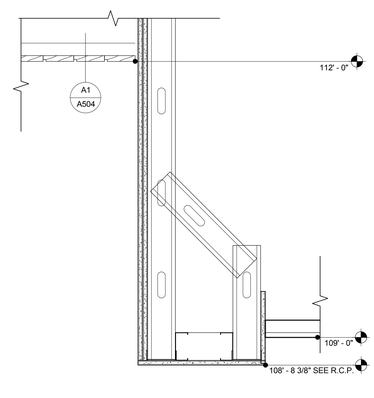
A1 LINEAR WOOD CEILING / WALL
SCALE: 3" = 1'-0"



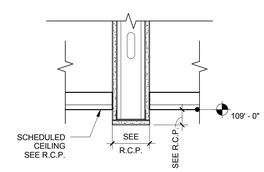
A2 OPERABLE WALL HEAD DETAIL
SCALE: 3" = 1'-0"



A3 DETAIL
SCALE: 1 1/2" = 1'-0"



A4 SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



A5 HEAD DETAIL
SCALE: 1 1/2" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

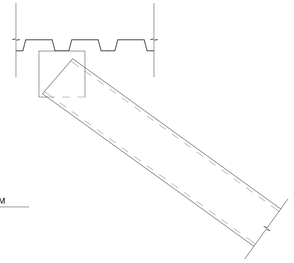
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

CEILING DETAILS

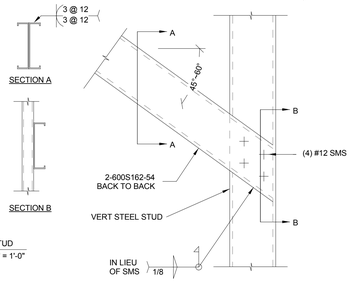
A504

9/11/2012 9:32:12 AM



RE: STRUCTURAL
DETAIL D5 / S605

BRACE TO ROOF DIAPHRAGM
SCALE: 1-1/2" = 1'-0"



BRACE TO STUD
SCALE: 1-1/2" = 1'-0"

C1 WALL BRACING

SCALE: N.T.S.

MAXIMUM OPENING WIDTH	4'-7"	8'-0"	14'-0"
B3 HEADER			
B2 SILL			
B1 JAMB	TYP 2@12" 1/8	TYP 2@12" 1/8	TYP 2@12" 1/8

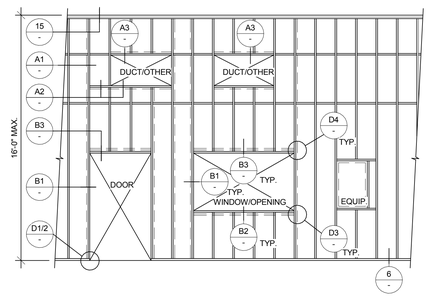
NOTE: ALL FASTENERS TO BE #10 SMS @ 2'-0" O.C. TYP UON

B TYPICAL DOOR/WINDOW OPENING FRAMING

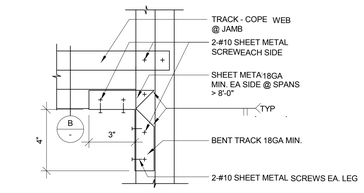
MAXIMUM OPENING WIDTH	4'-7"	8'-0"	14'-0"
A3 HEADER			
A2 SILL			
A1 JAMB			

NOT ALL FASTENERS TO BE #10 SMS @ 2'-0" O.C. TYP UON

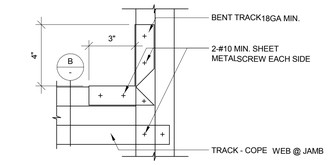
A TYPICAL DUCT OPENING



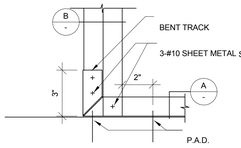
C TYPICAL WALL AND OPENING FRAMING



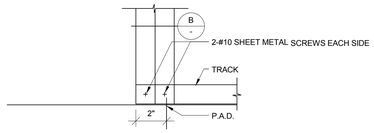
D4 HEAD



D3 SILL



D2 BASE AT SPANS > 8'-0"



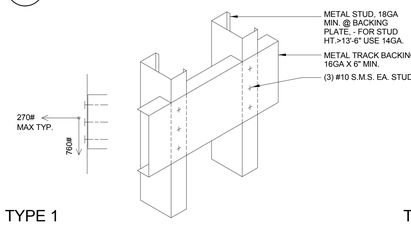
D1 BASE AT SPANS < 8'-0"

D FRAMED OPENING AT JAMB

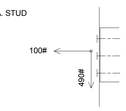
NOTES:
1. SEE STRUCTURAL DRAWINGS FOR EXTERIOR AND LOAD BEARING METAL STUD TYPICAL DETAILS.
2. SEE SPECIFICATIONS FOR STUD GUAGES.

C2 INTERIOR NON-BEARING PARTITION WALL TYPICAL OPENINGS

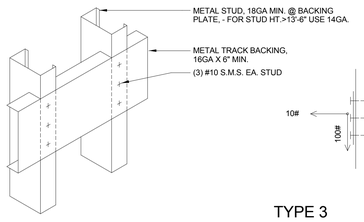
SCALE: 3" = 1'-0"



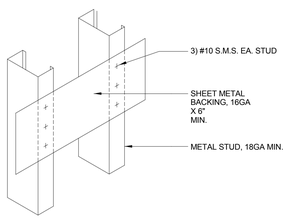
TYPE 1



TYPE 2



TYPE 3

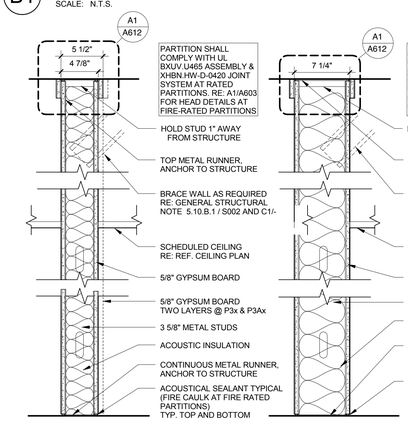


NOTES:

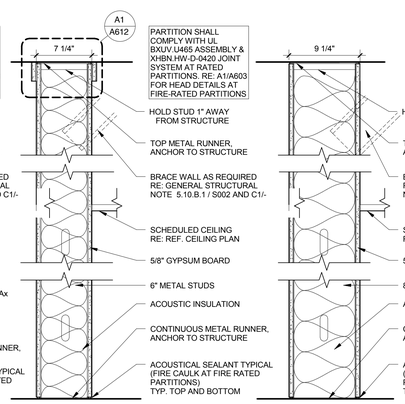
1. EXTEND BACKING PLATE TO NEXT STUD BEYOND SIDE OF FIXTURE OR ACCESSORY.
2. PROVIDE MET. SLEEVES THROUGH WALL FINISH AT FIXTURE AND EQUIPMENT FASTENING.
3. MAX. LOADS SHOWN ARE MAX.ALLOWABLE LOADS FOR THE DIRECTION SHOWN. VERTICAL AND HORIZONTAL LOADS ARE NOT CUMULATIVE. E.I.: MAX. ALLOWABLE LOADS ARE FOR SHEAR-TENSION INTERACTION CALCULATION.
4. AS INDICATED, STUD GAUGES SHOWN ARE MINIMUM. METAL STUDS AND THEIR CONNECTIONS ARE TO BE DESIGNED PER THE PERFORMANCE REQUIREMENTS IN SPECIFICATION SECTION 092216.
5. MAXIMUM SPACING OF METAL STUDS SUPPORTING BACKING IS 16".

B1 BACKING PLATE SCHEDULE

SCALE: N.T.S.

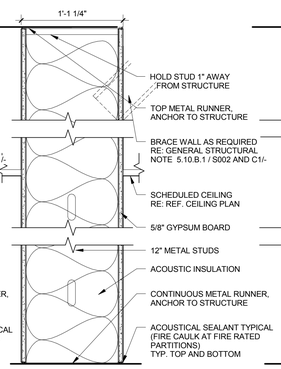


P3
P3d GYPSUM BOARD TO UNDERSIDE OF STRUCTURE
P3x TWO LAYERS GYPSUM BOARD ONE SIDE
P3A 1 HOUR FIRE-RATED
P3Ax 1 HOUR FIRE-RATED TWO LAYERS GYPSUM BOARD ONE SIDE

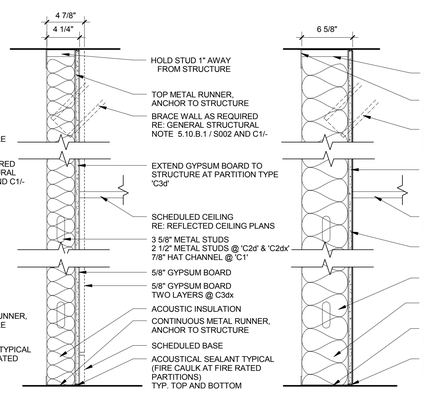


P6
P6d GYPSUM BOARD TO UNDERSIDE OF STRUCTURE
P6A 1 HOUR FIRE-RATED

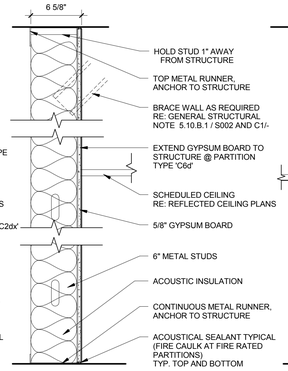
P8



P12



C3 GYPSUM BOARD TO MINIMUM 4" ABOVE CEILING
C3d GYPSUM BOARD TO UNDERSIDE OF STRUCTURE
C3dx TWO LAYERS GYPSUM BOARD TO UNDERSIDE OF STRUCTURE
C2d GYPSUM BOARD TO UNDERSIDE OF STRUCTURE
C2dx TWO LAYERS GYPSUM BOARD TO UNDERSIDE OF STRUCTURE
C1 GYPSUM BOARD TO MINIMUM 4" ABOVE CEILING



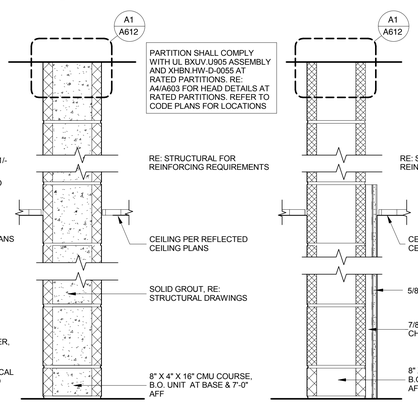
C6 GYPSUM BOARD TO MINIMUM 4" ABOVE CEILING
C6d GYPSUM BOARD TO UNDERSIDE OF STRUCTURE

A1 PARTITION TYPES

SCALE: N.T.S

B2 ELECTRICAL BOX

SCALE: N.T.S.



M8A CMU ONE-HOUR FIRE WALL
M8D CMU TO STRUCTURAL DECK BEARING
M8C CMU TO STRUCTURAL DECK BEARING
M8CA CMU ONE-HOUR FIRE WALL

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

GENERAL NOTES

1. REINFORCEMENT FOR WALL-HUNG CABINETS & DEVICES: PROVIDE 6" HIGH 16 GA CONTINUOUS SHEET METAL BACKING AT LOCATIONS OF ATTACHMENT OF WALL-HUNG CABINETS AT METAL STUD WALLS. RE: INTERIOR ELEVATIONS, COORDINATE WITH CABINET INSTALLER

2. ALL METAL STUD PARTITIONS ARE TO HAVE 3-1/2" ACOUSTIC BATT INSULATION WITHIN THE STUD CAVITY. INSULATION TO MATCH RATING OF ASSEMBLY, WHERE OCCURS.

3. ALL FIRE PARTITIONS, ACOUSTIC PARTITIONS AND THOSE NOTED, SHALL BE CONSTRUCTED TO DECK AND SEALED ACCORDINGLY.

4. SEE SHEETS A611 - A612 FOR UL JOINT SYSTEMS, UL FIRE RESISTIVE RATINGS AND UL THROUGH-PENETRATION FIRE STOP SYSTEMS.

5. SEAL ALL PENETRATIONS IN PARTITIONS AIR-TIGHT. WHERE PARTITION IS FIRE-RATED, USE FIRE-RATED SEALANT.

6. ALL FIRE RATED WALLS, AND PARTITIONS ARE TO BE LABELED PER THE SPECIFICATIONS.

7. SEE STRUCTURAL DRAWINGS FOR STEEL STUD SCHEDULES AND TYPICAL DETAILS INCLUDING HEADER CONDITIONS AND WALL BRACING.

PARTITION LEGEND

A. PARTITION TYPE LEGEND:

FIRST LETTER DESIGNATES PARTITION TYPE:

C	CAVITY WALL (GB ONLY ON ONE SIDE)
F	FURRED WALL
M	MASONRY PARTITION
P	TYPICAL METAL STUD PARTITION

METAL STUD WALLS - SECOND DIGIT DESIGNATES STUD SIZE:

C	7/8" FURRING CHANNEL
2	1 5/8" METAL STUD
3	3 5/8" METAL STUD
6	6" METAL STUD
8	8" METAL STUD
12	12" METAL STUD

MASONRY WALLS - SECOND DIGIT DESIGNATES MASONRY SIZE:

8	7 5/8" CMU

CODE/FIRE RATING IS DESIGNATED BY:

A	ONE-HOUR FIRE RATED

SOLID GROUT IS DESIGNATED BY:

g	SOLID GROUT

PARTITION TO UNDERSIDE OF STRUCTURE:

d	CMU/GYPSUM BOARD TO UNDERSIDE OF STRUCTURE

PARTITION TO STRUCTURAL DECK BEARING:

D	CMU TO STRUCTURAL DECK BEARING

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

PARTITION TYPES

A610

9/11/2012 9:32:14 AM

ONLINE CERTIFICATIONS DIRECTORY

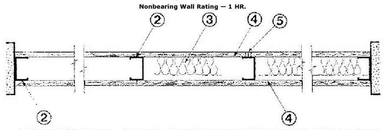
BXUV.U465
Fire Resistance Ratings - ANSI/UL 263
Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. U465
April 27, 2010
Nonbearing Wall Rating — 1 HR.



1. **Floor and Ceiling Runners —** (not shown) — Channel shaped runners, 3-5/8 in. deep (min), 1-1/4 in. legs, formed from min No. 25 MSG galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runners —** (Not shown) — As an alternate to Item 1 - Channel shaped, min 3-5/8 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System
CONSOLIDATED FABRICATORS CORP,
BUILDING PRODUCTS DIV — Type SUPREME Framing System
QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System
SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System
STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

1B. **Framing Members* - Floor and Ceiling Runners —** Not shown - In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CRACO MFG INC — SmarterTrack20™, SmartTrack20™
MARINO\WARE A DIV OF WARE INDUSTRIES
INC — Viper20S™ Track, Viper20D™ Track

1C. **Floor and Ceiling Runners —** (Not shown)—For use with Item 2C- Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1D. **Framing Members* — Floor and Ceiling Runners —** Not shown - In lieu of Items 1 through 1C — For use with Item 2D and 4G only, proprietary channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 0.015 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CLARKWESTERN BUILDING SYSTEMS INC — CW ProTRAK
DIETRICH INDUSTRIES INC — DIETRICH ProTRAK
DMFCWBS L L C — ProTRAK

2. **Steel Studs —** Channel shaped, 3-5/8 in. deep (min), formed from min No. 25 MSG galv steel spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height.

2A. **Framing Members* — Steel Studs —** As an alternate to Item 2 - Channel shaped studs, min 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System
CONSOLIDATED FABRICATORS CORP,
BUILDING PRODUCTS DIV — Type SUPREME Framing System
QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System
SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System
STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

2B. **Framing Members* - Steel Studs —** Not shown - In lieu of Item 2 — For use with Item 1B, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.

CRACO MFG INC — SmarterStud20™, SmartStud20™
MARINO\WARE A DIV OF WARE INDUSTRIES
INC — Viper20S™, Viper20D™

2C. **Steel Studs —** (As an alternate to Item 2, For use with Item 4E) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2D. **Framing Members* — Steel Studs —** As an alternate to Items 2 through 2C- For use with Item 1D and 4G only, channel shaped studs, min 2-1/2 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.

CLARKWESTERN BUILDING SYSTEMS INC — CW ProSTUD
DIETRICH INDUSTRIES INC — DIETRICH ProSTUD
DMFCWBS L L C — ProSTUD

3. **Batts and Blankets* —** (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity.

See **Batts and Blankets** (BZJZ) category for names of Classified companies.

3A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft^3. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft^3.

U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

3B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 3) and Item 3A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

3C. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 3) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

4. **Gypsum Board* —** 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly. When attached to item 6 (resilient channels) or 6A (furring channels), gypsum board is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC.

AMERICAN GYPSUM CO — Types AG-C, AGX-1
BEIJING NEW BUILDING MATERIALS PUBLIC
LTD CO — Type DBX-1.
CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
CERTAINTEED GYPSUM INC — Types 1, EGRG, GlasRoc, ProRoc Type X, ProRoc Type C.
CERTAINTEED GYPSUM CANADA INC — ProRoc Type C, ProRoc Type X or ProRoc Type Abuse-Resistant.
GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPF56.
LAFARGE NORTH AMERICA INC — Types LGFC2, LGFC2A, LGFC6, LGFC6A, LGFC-C, LGFC-C/A, LGFC-WD.
NATIONAL GYPSUM CO — Types FSK, FSK-C, FSK-G, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6.
PABCO BUILDING PRODUCTS L L C, DBA
PABCO GYPSUM — Type PG-C, PG-11 or PG-9.
PANEL REY S A — Type PRX.
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1
TEMPLE-INLAND — Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C, GreenGlass Type X, Type X ComfortGuard Sound Deadening Gypsum Board.
UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, USGX (Joint tape and compound, Item 5, optional for use with Type USGX).
USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4A. **Gypsum Board* —** (As alternate to Item 4) - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. When used in widths other than 48 in., gypsum panels to be installed horizontally.

CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
CERTAINTEED GYPSUM INC — ProRoc Type X, ProRoc Type C.
CERTAINTEED GYPSUM CANADA INC — ProRoc Type X, ProRoc Type C.
GEORGIA-PACIFIC GYPSUM L L C — Types DAP, DAPC, DGG, DS.
LAFARGE NORTH AMERICA INC — Type LGFC6A, LGFC-C/A
UNITED STATES GYPSUM CO — T ype AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, , USGX (Joint tape and compound, Item 5, optional for use with Type USGX).
USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4B. **Gypsum Board* —** (As an alternate to Items 4 or 4A) — Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in.

CANADIAN GYPSUM COMPANY — Types AR, IP-AR.
UNITED STATES GYPSUM CO — Types AR, IP-AR.
USG MEXICO S A DE C V — Types AR, IP-AR.

4C. **Gypsum Board* —** As an alternate to Items 4, 4A, and 4B - Nom. 5/8 in. thick gypsum panels, with square edges, applied horizontally. Gypsum panels fastened to framing with 1 in. long bugle head steel screws spaced a max 8 in. OC, with last 2 screws 3/4 in. and 4 in. from each edge of board. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs on interior walls need not be staggered or backed by steel framing.

TEMPLE-INLAND — GreenGlass Type X.

4D. **Gypsum Board* —** As an alternate to Items 4, 4A, 4B, and 4C - Nom. 5/8 in. thick gypsum panels applied horizontally. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Gypsum panels fastened to framing with 1 in. long Type S steel screws 1-1/2 in. from board edges, 3 in. from board edge and every 8 in. OC in the field. Screws spaced a max 12 in. along the top and bottom edges of the wall.

NATIONAL GYPSUM CO — Types FSK, FSK-C, FSK-G, FSW-C, FSW-G, FSW.

4E. **Gypsum Board* —** (As an alternate to Items 4 through 4D) - Installed as described in Item 4. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 1 in. long, Type S steel screws spaced, 8 in. OC. Not to be used with item 6.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

4F. **Gypsum Board* —** (Not Shown) - (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C) - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

RAY-BAR ENGINEERING CORP — Type RB-LBG

4G. **Gypsum Board* —** (As an alternate to Items 4 through 4F) — For use with Items 1C and 2C only, 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly.

NATIONAL GYPSUM CO — Types FSW
UNITED STATES GYPSUM CO — Type SCX

4H. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 4 through 4G) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

QUIET SOLUTION INC — Types QuietRock ES, QuietRock 527.

5. **Joint Tape and Compound —** Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

6. **Resilient Channel —** (Optional-Not Shown) — 25 MSG galv steel resilient channels spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1/2 in. long type S-12 pan head steel screws. May not be used with Item 4F.

6A. **Steel Framing Members (Not Shown)* —** As an alternate to Item 3, furring channels and resilient sound isolation clip as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.

b. **Framing Members* —** Used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with 1-5/8 in. wafer or hex head Type S steel screw through the center grommet. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC — Type RSIC-1.

6B. **Framing Members* —** Optional - Not Shown - Used as an alternate method to attach resilient channels (Item 6). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the stud with min. 1 in. long Type S-12 pan head steel screws through the center hole of the clip and the resilient channel flange.

KEENE BUILDING PRODUCTS CO INC — Type RC Assurance.

7. **Wall and Partition Facings and Accessories* —** (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the steel framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

QUIET SOLUTION INC — Type QuietRock QR-510.

8. **Lead Batten Strips —** (Not Shown, For Use With Item 4E) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum board (Item 4E) and optional at remaining stud locations. Required behind vertical joints.

9. **Lead Discs or Tabs —** (Not Shown, For Use With Item 4E) - Used in lieu of or in addition to the lead batten strips (Item 8) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4E) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

*Bearing the UL Classification Mark

Last Updated on 2010-04-27

Copyright © 2010 Underwriters Laboratories Inc.®

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from Underwriters Laboratories Inc." must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "Copyright © 2010 Underwriters Laboratories Inc.®"

A1 BXUV.U465
SCALE: N.T.S.

ONLINE CERTIFICATIONS DIRECTORY

Design No. U905
BXUV.U905
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

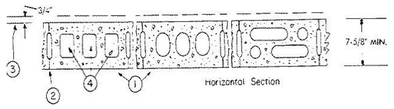
Design No. U905

September 30, 2010

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR

Load Restricted for Canadian Applications — See Guide BXUV7



1. **Concrete Blocks* —** Various designs. Classification D-2 (2 hr).

See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —** Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —** (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
THE DOW CHEMICAL CO — Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax IN Insulation, Thermax Plus Liner Panel and Thermax Heavy Duty Plus (HDP)

*Bearing the UL Classification Mark

Last Updated on 2010-09-30

© 2012 UL LLC

When the UL Leaf Mark is on the product, or when the word "Environment" is included in the UL Mark, please search the UL Environment database for additional information regarding this product's certification.

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2012 UL LLC".

A2 BXUV.U905
SCALE: N.T.S.

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

REFERENCE NOTES

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE N.T.S.

PARTITION FIRE RESISTIVE RATINGS

A611

9/11/2012 9:32:15 AM

ONLINE CERTIFICATIONS DIRECTORY

System No. HW-D-0420
XHBN.HW-D-0420
Joint Systems

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

Joint Systems

See General Information for Joint Systems

System No. HW-D-0420

April 20, 2010

Assembly Rating — 1 and 2 Hr (See Item 2)

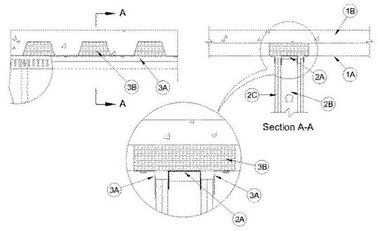
Nominal Joint Width — 1/2 in. and 1 in. (See Item 3)

L Rating at Ambient - Less Than 1 CFM/Lin ft.

L Rating at 400° F - Less Than 1 CFM/Lin ft.

Nominal Joint Width - 1/2 in. and 1 in. (See Item 3)

Class II and III Movement Capabilities - 100% Compression & Extension



1. **Floor Assembly —** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor And Floor Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) reinforced concrete, as measured from the top plane of the floor units.

C. **Spray-Applied Fire Resistive Material* —** (Optional, Not Shown) - After the installation of ceiling runners or deflection channels (Items 2A-2A4), all surfaces of the steel floor units to be sprayed with the thickness of material specified in the individual D700 Series Design. When spray-applied material is used, the fill material (Item 1A) shall be installed over the spray-applied material and attached to the steel deck without compressing the spray-applied material below the min thickness of the material described in the individual D700 series design.

ISOLATEK INTERNATIONAL — Type 300

W R GRACE & CO - CONN — Type MK-6/HY

1A. **Roof Assembly — (Not Shown) —** As an alternate to the floor assembly, a fire-rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 or P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck.

B. **Roof Insulation —** Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the roof deck.

C. **Spray-Applied Fire Resistive Material* —** (Optional, Not Shown) - After the installation of ceiling runners or deflection channel (Item 2A-2A4), all surfaces of the steel floor units to be sprayed with the thickness of material specified in the individual P700 Series Design. When spray-applied material is used, the fill material (Item 1A) shall be installed over the spray-applied material and attached to the steel deck without compressing the spray-applied material below the min thickness of the material described in the individual P700 series design.

ISOLATEK INTERNATIONAL — Type 300

W R GRACE & CO - CONN — Type MK-6/HY

2. **Wall Assembly —** The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners —** Floor and ceiling runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with min 1-1/4 in. (32 mm) or 2-1/4 in. (57 mm) flanges for nom 1/2 in. (13 mm) and 1 in. (25 mm) joints, respectively. When U-shaped deflection channel is used, ceiling runner is installed within the U-shaped deflection channel (Item 2A1) with 1 in. (25 mm) gap maintained between the top of ceiling runner and top of deflection channel. When deflection channel is not used, ceiling runner installed perpendicular to direction of the fluted steel deck and secured to steel deck valleys with steel fasteners spaced a max 24 in. (610 mm) OC.

A1. **Deflection Channel —** (Optional) - U-shaped channel formed from min 25 gauge galv steel sized to accommodate ceiling runner and provided with 3 in. (76 mm) flanges. Deflection channel installed perpendicular to direction of the fluted steel deck and secured to the steel deck valleys with steel fasteners spaced max 24 in. (610 mm) OC. The ceiling runner (Item 2A) is installed within the deflection channel to maintain a 1 in. (25 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

A2. **Light Gauge Framing* - Slotted Ceiling Runner —** As an alternate to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel with slotted flanges, sized to accommodate steel studs (Item 2B). Slotted ceiling runner installed perpendicular to direction of fluted steel deck and secured to steel deck valleys with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel shall not be used.

BRADY CONSTRUCTION INNOVATIONS INC,

DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

METAL-LITE INC — The System

SCAFCO STEEL STUD MANUFACTURING CO — Slotted Track

TELLING INDUSTRIES L L C — True-Action Deflection Track

A3. **Light Gauge Framing* — Clipped Ceiling Runner —** As an alternate to the ceiling runner in Item 2A, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 3 in. (76 mm). Clipped ceiling runner installed perpendicular to direction of fluted steel deck and secured to steel deck valleys with steel fasteners spaced max 24 in. (610 mm) OC. When clipped ceiling runner is used, deflection channel shall not be used.

TOTAL STEEL SOLUTIONS L L C — Snap Trak

A4. **Light Gauge Framing* — Vertical Deflection Ceiling Runner —** As an alternate to the ceiling runner in Items 2A, vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips, provided with step bushings, for permanent fastening of steel studs. Track sized to accommodate steel studs (Item 2B). Vertical deflection ceiling runner installed perpendicular to direction of fluted steel floor or roof deck and secured to valleys with steel fasteners spaced max 24 in. OC. When slotted ceiling runner is used, deflection channel shall not be used.

THE STEEL NETWORK INC — VertiTrack VTD362, VTD400, VTD600 and VTD800

B. **Studs —** Steel studs to be min 2-1/2 in. (64 mm) wide. Studs cut 1/2 in. to 1-1/4 in. (13 to 32 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When slotted ceiling runner (Item 2A2) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 (13 mm) long wafer head steel screws at mid-height of slot on each side of wall. When

deflection channel is not used, studs to nest in ceiling runner without attachment.

C. **Gypsum Board* —** Gypsum board sheets installed to a min total 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory except that a max 1/2 in. (13 mm) or max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom of the floor or roof assembly or the bottom of the spray-applied material (if used). The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 to 3-1/2 in. (25 to 89 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System — Max separation between bottom of floor and top of wall (at time of installation of joint system) is 1/2 in. (13 mm) or 1 in. (25 mm). The joint system is designed to accommodate a max 100 percent compression or extension from its installed width.**

A. **Fill, Void or Cavity Material* —** For nom 1/2 in. (13 mm) joints, a nom 20 gauge steel angle provided with a nom 1 in. (25 mm) wide intumescent strip on one leg. Angle to be secured to valleys of steel deck with steel masonry anchors spaced a max 24 in. (610 mm) OC with the intumescent strip against the outer face of gypsum board on both sides of wall.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Firestik FS1

A1. **Fill, Void or Cavity Material* —** For nom 1 in. (25 mm) joints, a nom 20 gauge steel angle provided with a nom 2 in. (51 mm) wide intumescent strip on one leg. Angle to be secured to valleys of steel deck with steel masonry anchors spaced a max 24 in. (610 mm) OC with the intumescent strip against the outer face of gypsum board on both sides of wall.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Firestik FS2

B. **Packing Material —** Min 4 pcf (64 kg/m^3) mineral wool batt insulation cut to the shape of the fluted deck, approx 33 percent larger than the area of the flutes and compressed into the fluted area of the steel floor or roof deck above the ceiling channel. The forming material shall be installed to extend approx 1-1/2 in. (38 mm) beyond both surfaces of the wall, flush with the outer edge of the Firestik.

*Bearing the UL Classification Mark

Last Updated on 2010-04-20

© 2012 UL LLC

When the UL Leaf Mark is on the product, or when the word "Environment" is included in the UL Mark, please search the UL Environment database for additional information regarding this product's certification.

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2012 UL LLC".

A1 HW-D-0420
SCALE: N.T.S.

ONLINE CERTIFICATIONS DIRECTORY

System No. HW-D-0055
XHBN.HW-D-0055
Joint Systems

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

Joint Systems

See General Information for Joint Systems

System No. HW-D-0055

May 21, 2008

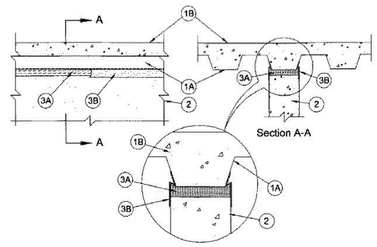
Assembly Rating — 2 Hr

Nominal Joint Width — 1 In.

L Rating At Ambient — Less Than 1 CFM/Lin Ft

L Rating At 400°F — Less Than 1 CFM/Lin Ft

Class II Movement Capabilities — 18.75% Compression or Extension



1. **Floor Assembly —** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor And Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units having a min valley width of 4-3/4 in. (121 mm).

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown) — As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. (76 mm) deep galv steel fluted roof deck having a min valley width of 4-3/4 in. (121 mm).

B. **Roof Insulation —** Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.

C. **Roof Covering* —** Hot-mopped or cold-application materials compatible with insulating concrete.

2. **Wall Assembly —** Min 6-1/8 in. (156 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Wall assembly to be centered under and parallel with valley of fluted steel floor unit.

See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

3. **Joint System — Max separation between bottom of floor or roof deck and top of wall (at time of installation of joint system) is 1 in. (25 mm). The joint system is designed to accommodate a max 18.75 percent compression or extension from it's installed width.** The joint system shall consist of forming material and a fill material, as follows:

A. **Forming Material* —** Min 6-1/8 in. (156 mm) wide sections of min 4 pcf (64 kg/m^3) density mineral wool batt insulation compressed 50 percent in thickness and installed cut edge first into gap between top of wall and bottom of steel floor or roof deck.

IIG MINWOOL L L C — MinWool 1200 Safing

ROCK WOOL MANUFACTURING CO — Delta Board

ROCKWOOL MALAYSIA SDN BHD — SAFE

ROXUL INC — SAFE

THERMAFIBER INC — Type SAF

B. **Fill, Void or Cavity Material* — Sealant —** Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material sprayed or brushed on each side of the wall between the top of the wall and the bottom of the steel floor or roof deck to completely cover mineral wool and overlap a min 1/2 in. (13 mm) onto wall and steel deck on both sides of wall.

SPECIFIED TECHNOLOGIES INC — SpecSeal AS200 Elastomeric Spray

*Bearing the UL Classification Mark

Last Updated on 2008-05-21

A2 HD-D-0055
SCALE: N.T.S.

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

REFERENCE NOTES

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

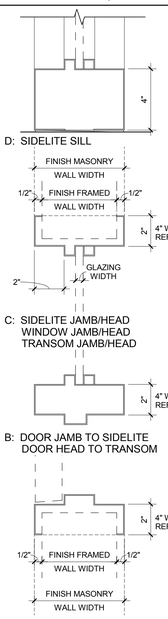
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE N.T.S.

PARTITION JOINT SYSTEMS

A612

9/11/2012 9:32:15 AM



D1 HM PROFILES

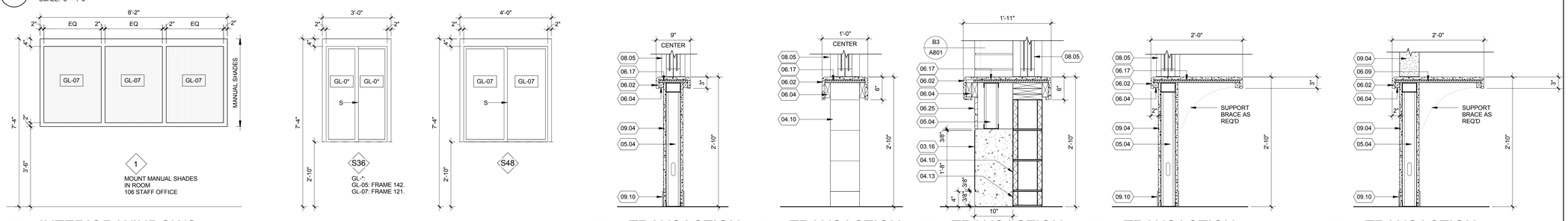
SCALE: 3" = 1'-0"

DOOR AND FRAME SCHEDULE

DOOR NUMBER	HWS	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICK	DOOR LEAF 1 TYPE	DOOR LEAF 2 TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	RATING	GLAZING	NOTES
100	02	6' - 0"	7' - 0"	1 3/4"	P00	P00	HM	F00	HM	0	-	
101	22	3' - 8"	7' - 0"	1 3/4"	P30		WD	F10	HM	0	GL-07	
102	20	6' - 0"	7' - 0"	1 3/4"	P30	P30	WD	F30	HM	0	GL-07	
102A	07.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
102B	27	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
103	22	3' - 8"	7' - 0"	1 3/4"	P30		WD	F10	HM	0	GL-07A	
103A	15.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
103B	21	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
104	06	3' - 0"	7' - 0"	1 3/4"	P30		WD	F31-B	HM	0	GL-07	
104C	AL-07	3' - 6"	7' - 0"	1 3/4"	P30		AL-01		AL-01	0	GL-02	
105	17.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-07A	
106	17.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-07A	
107A	17	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-07A	
107B	17	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-07A	
108	10	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
109	18	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
110.1	12	3' - 0"	7' - 0"	1 3/4"	P30		WD	F34	HM	0	GL-07	
110.2	19	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
111	17.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
112	17	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
113	17.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F00	HM	0	GL-07A	
115	17	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
117	25	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
118	17.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
119	28	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
120	17.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
121.1	17.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F00	HM	0	GL-07A	
121.2	24	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
122	07.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
122A	15.2	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
123	29	3' - 0"	7' - 0"	1 3/4"	P30		WD	F00	HM	0	GL-05	
124	13	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
125	30	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
126	30	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
127	21	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
128.1	21	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
128.2	17	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	
129	17.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
130	17.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
131	26	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
132	17.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
133.1	07	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	
133.2	07	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
135	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
136	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
137	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
138	26	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
139	11	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
140	15.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
141.1	17	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	
141.2	09	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	
142.1	19	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	

DOOR AND FRAME SCHEDULE

DOOR NUMBER	HWS	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICK	DOOR LEAF 1 TYPE	DOOR LEAF 2 TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	RATING	GLAZING	NOTES
142.2	07	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
143	09	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
144.1	01	6' - 0"	7' - 0"	1 3/4"	P00	P00	HM	F00	HM	0	-	
144.2	15	3' - 8"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	STC 44
145.1	04	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
145.2	05	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
146	14	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
147	31	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
148	31	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
149.1	07	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21-A	HM	0	GL-05	
149.2	09	3' - 0"	7' - 0"	1 3/4"	P30		WD	F00	HM	0	GL-05	
150.1	17	3' - 0"	7' - 0"	1 3/4"	P30		WD	F00	HM	0	GL-05	
150.2	17	3' - 0"	7' - 0"	1 3/4"	P30		WD	F00	HM	0	GL-05	
152	23.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21-A	HM	0	GL-05A	
153	15.1	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
155	17	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
156	19	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21-A	HM	0	GL-05	
157	19	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21-A	HM	0	GL-05	
158	17	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21-A	HM	0	GL-05	
159	19	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	
160	23.1	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	
161	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
162	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
163	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
164	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
165	17	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
166	17	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
167	19	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05	
167A	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
168	06	3' - 0"	7' - 0"	1 3/4"	P00		WD	F31-A	HM	0	-	
169	06	3' - 0"	7' - 0"	1 3/4"	P00		WD	F31-A	HM	0	-	
170	19	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21-A	HM	0	GL-05	
171	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
172	16	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	45	-	
173	14	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
174	08	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
174A	26	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
175	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F31-C	HM	0	GL-05A	
176	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
177	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
178	23	3' - 0"	7' - 0"	1 3/4"	P30		WD	F21	HM	0	GL-05A	
A02	11	2' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
A04	11	2' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
C02	03	3' - 0"	7' - 0"	1 3/4"	P00		WD	F00	HM	0	-	
V01.1	AL-01	6' - 0"	7' - 0"	1/4"	AL01	AL01	AL-01		AL-01	0	GL-01	
V01.2	AL-02	6' - 0"	7' - 0"	1/4"	AL01	AL01	AL-01		AL-01	0	GL-05	
V02.1	AL-05	6' - 0"	7' - 0"	1/4"	AL01	AL01	AL-01		AL-01	0	GL-02	
V02.2	AL-06	6' - 0"	7' - 0"	1/4"	AL01	AL01	AL-01		AL-01	0	GL-05	
V03.1	AL-03	3' - 0"	7' - 0"	1 3/4"	AL01		AL-01		AL-01	0	GL-01	
V03.2	AL-04	3' - 0"	7' - 0"	1 3/4"	AL01		AL-01		AL-01	0	GL-05	
V04.1	AL-03	3' - 0"	7' - 0"	1 3/4"	P30		AL-01	F00	AL-01	0	GL-01	
V04.2	AL-04	3' - 0"	7' - 0"	1 3/4"	P30		AL-01	F00	AL-01	0	GL-05	



C1 INTERIOR WINDOWS

SCALE: N. T. S.

C2 TRANSACTION

SCALE: 1" = 1'-0"

C3 TRANSACTION

SCALE: 1" = 1'-0"

C4 TRANSACTION

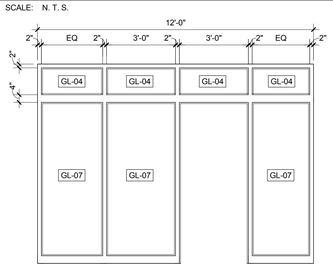
SCALE: 1" = 1'-0"

C5 TRANSACTION

SCALE: 1" = 1'-0"

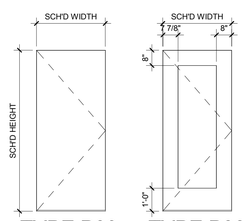
C6 TRANSACTION

SCALE: 1" = 1'-0"



TYPE F34

HM FRAME W/ DOUBLE/SINGLE SIDELITE & TRANSOM

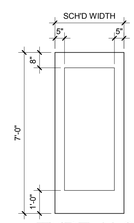


TYPE P00

SOILD SLAB

TYPE P30

FULL GLASS



TYPE AL01

FULL GLASS

B1 HM DOOR FRAME TYPES - CONTINUED

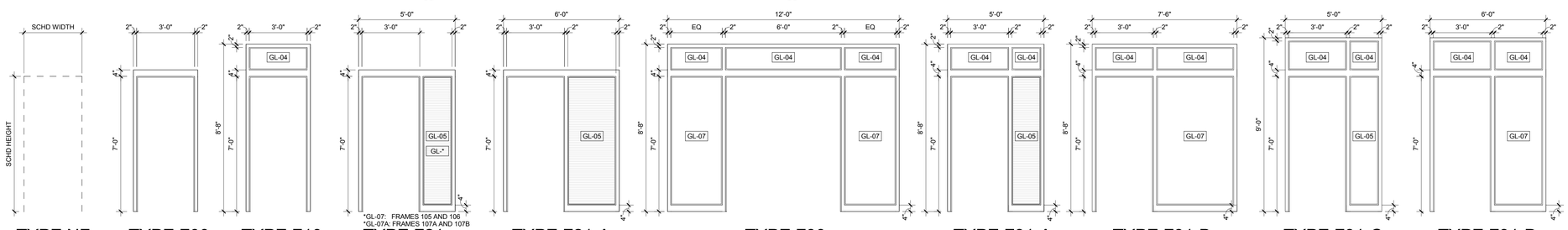
SCALE: 3/8" = 1'-0"

B2 DOOR TYPES - WOOD AND HM

SCALE: N.T.S.

B3 DOOR TYPES - ALUMINUM

SCALE: N.T.S.



*GL-07: FRAMES 105 AND 106
*GL-07A: FRAMES 107A AND 107B

TYPE NF

NO FRAME

TYPE F00

HM FRAME

TYPE F10

HM FRAME W/ TRANSOM

TYPE F21

HM FRAME W/ SINGLE SIDELITE

MINI-BLIND AT INTERIOR SIDELITE: FRAME 105, 106, 129, 130, 132, 135, 136, 137, 161, 162, 163, 164, 167A, 171, 176, 177, AND 178

TYPE F21-A

HM FRAME W/ SINGLE SIDELITE

MINI-BLIND AT INTERIOR SIDELITE: FRAME 152

TYPE F30

HM FRAME W/ DOUBLE SIDELITE & TRANSOM

TYPE F31-A

HM FRAME W/ SINGLE SIDELITE & TRANSOM

MINI-BLIND AT INTERIOR SIDELITE: FRAME 175

TYPE F31-B

HM FRAME W/ SINGLE SIDELITE & TRANSOM

TYPE F31-C

HM FRAME W/ SINGLE SIDELITE & TRANSOM

TYPE F31-D

HM FRAME W/ SINGLE SIDELITE & TRANSOM

A1 HM DOOR FRAME TYPES

SCALE: N.T.S.

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

REFERENCE NOTES

03.16	ARCHITECTURAL PRECAST CONCRETE
04.10	8"X8"X16" CMU
04.13	4" X 8" X 16" CMU
05.04	3 5/8" METAL STUD
06.02	TRANSACTION TOP
06.04	WOOD BLOCKING
06.09	3/4" PLYWOOD BACKING
06.17	3/4" PLYWOOD
06.25	WOOD WALL SYSTEM PER SCHEDULE
08.05	WINDOW PER SCHEDULE
09.04	PAINTED GYPSUM BOARD
09.10	WALL BASE PER FINISH SCHEDULE

GLAZING SCHEDULE

GL-01	LOW-E-COATED, TINTED, HEAT-STRENGTHENED INSULATING GLASS
GL-02	LOW-E-COATED, TINTED, TEMPERED INSULATING GLASS
GL-03	NOT USED
GL-04	CLEAR FLOAT GLASS
GL-04A	FROSTED FLOAT GLASS
GL-05	CLEAR FULLY TEMPERED FLOAT GLASS
GL-05A	FROSTED FULLY TEMPERED FLOAT GLASS
GL-06	NOT USED
GL-07	CLEAR LAMINATED GLASS
GL-07A	FROSTED LAMINATED GLASS

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

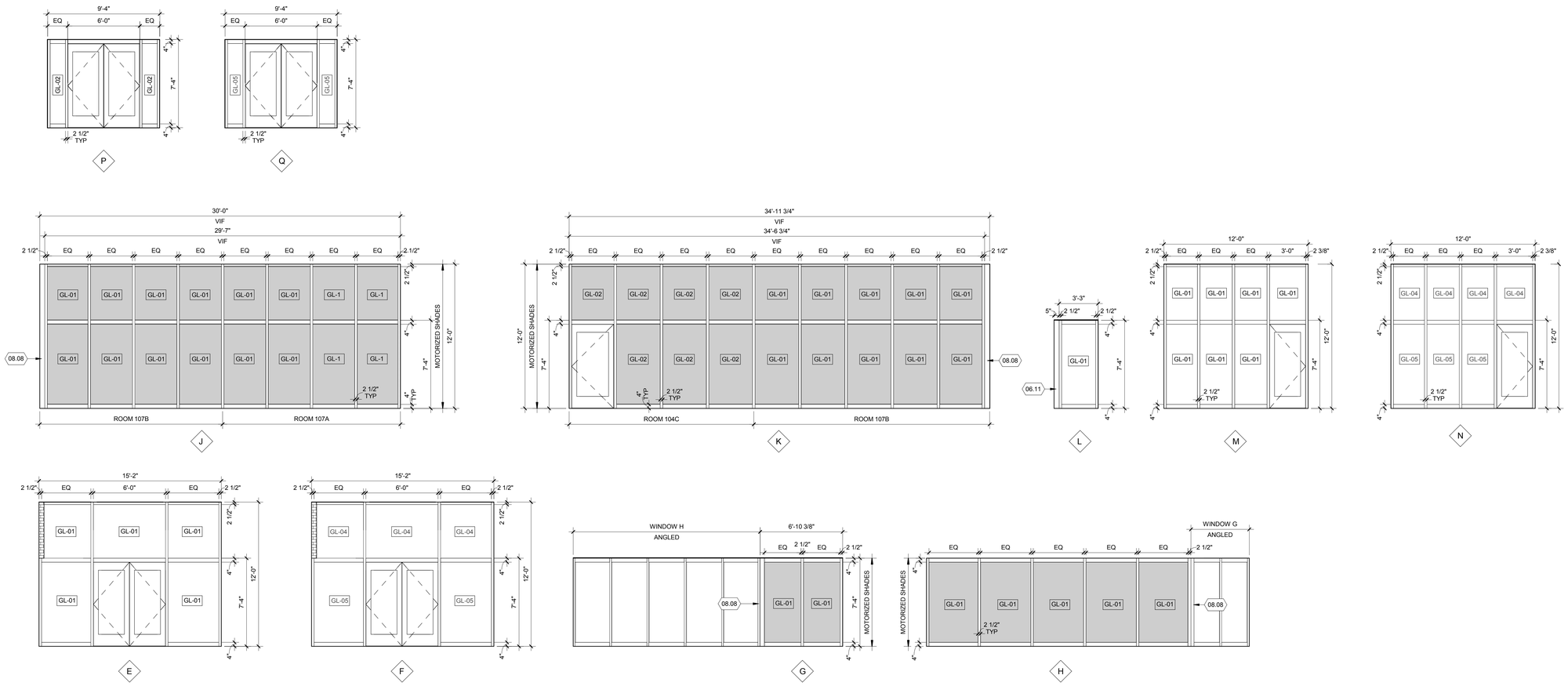
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

HM FRAME AND DOOR / WINDOW SCHEDULE

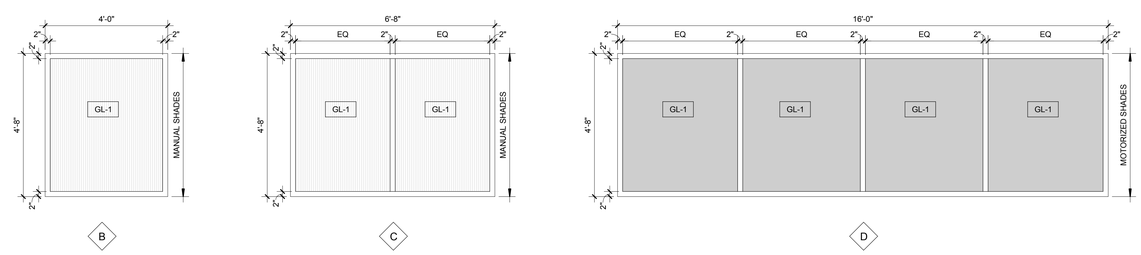
A620

9/11/2012 9:32:18 AM



B1 EXTERIOR STOREFRONT SYSTEMS

SCALE: N. T. S.



A1 EXTERIOR PUNCHED OPENINGS

SCALE: N. T. S.

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

GLAZING SCHEDULE

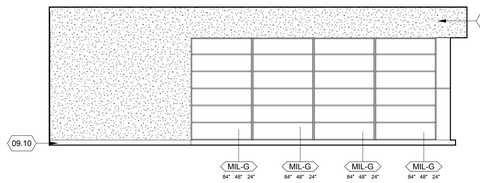
GL-01	LOW-E-COATED, TINTED, HEAT-STRENGTHENED INSULATING GLASS
GL-02	LOW-E-COATED, TINTED, TEMPERED INSULATING GLASS
GL-03	NOT USED
GL-04	CLEAR FLOAT GLASS
GL-04A	FROSTED FLOAT GLASS
GL-05	CLEAR FULLY TEMPERED FLOAT GLASS
GL-05A	FROSTED FULLY TEMPERED FLOAT GLASS
GL-06	NOT USED
GL-07	CLEAR LAMINATED GLASS
GL-07A	FROSTED LAMINATED GLASS

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

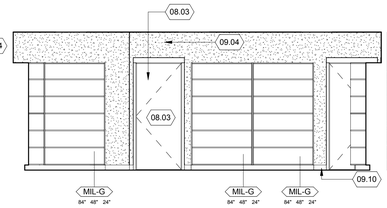
ALUMINUM DOOR AND WINDOW SCHEDULE

A621

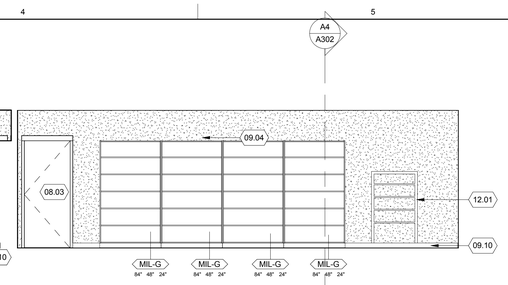
9/11/2012 9:32:23 AM



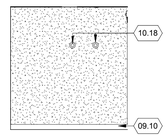
E2 CLOTHING DISPLAY 102 WEST
SCALE: 1/4" = 1'-0"



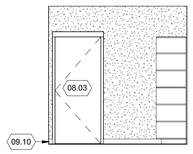
E3 CLOTHING DISPLAY 102 NORTH
SCALE: 1/4" = 1'-0"



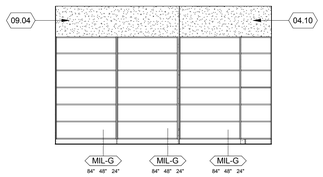
E4 CLOTHING DISPLAY 102 EAST
SCALE: 1/4" = 1'-0"



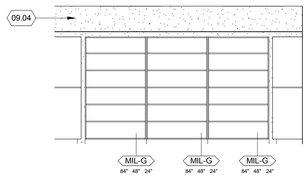
E6 CHANGING ROOM 102B NORTH
SCALE: 1/4" = 1'-0"



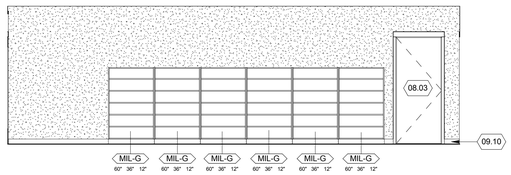
D1 CLOTHING 102A SOUTH
SCALE: 1/4" = 1'-0"



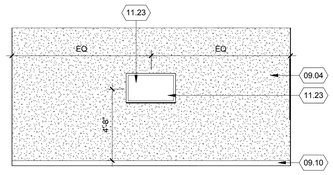
D2 CLOTHING 102A WEST
SCALE: 1/4" = 1'-0"



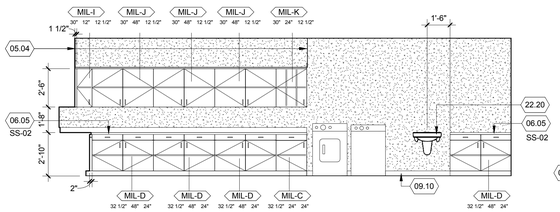
D3 CLOTHING 102A NORTH
SCALE: 1/4" = 1'-0"



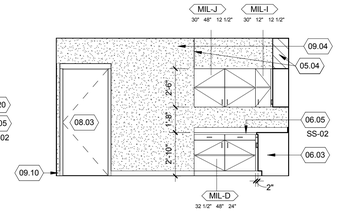
D4 CLOTHING SORT / LAUNDRY 103 WEST
SCALE: 1/4" = 1'-0"



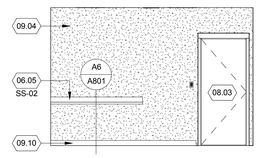
D6 SMALL CONF. ROOM 156 WEST
SCALE: 1/4" = 1'-0"



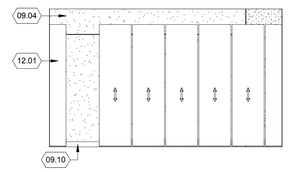
C1 CLOTHING SORT / LAUNDRY 103 EAST
SCALE: 1/4" = 1'-0"



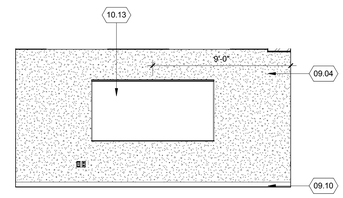
C2 SORT / LAUNDRY 103 NORTH
SCALE: 1/4" = 1'-0"



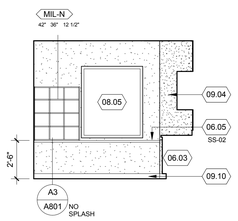
C3 RECEIVING 133 EAST
SCALE: 1/4" = 1'-0"



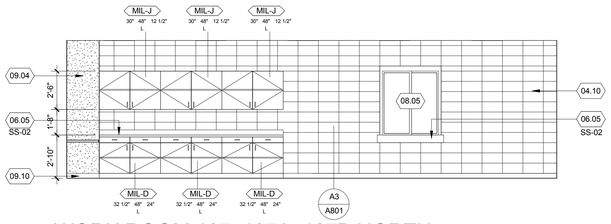
1 VOLUNTEER STORAGE 103A NORTH
SCALE: 1/4" = 1'-0"



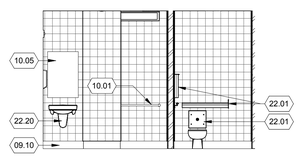
C6 SMALL CONF 158 NORTH
SCALE: 1/4" = 1'-0"



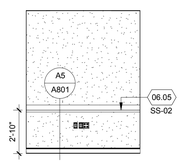
B1 WORK ROOM 127B WEST
SCALE: 1/4" = 1'-0"



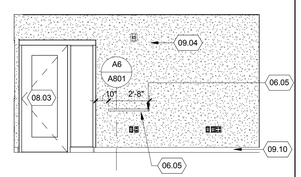
B2 WORK ROOM 127, 127A, 127B NORTH
SCALE: 1/4" = 1'-0"



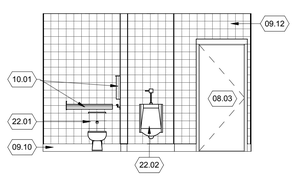
B3 PATIENT TOILET 131 NORTH
SCALE: 1/4" = 1'-0"



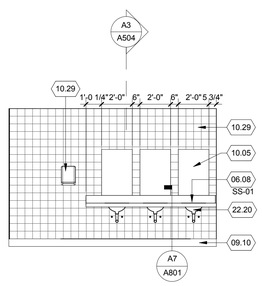
B4 MICROFILM READER WEST
SCALE: 1/4" = 1'-0"



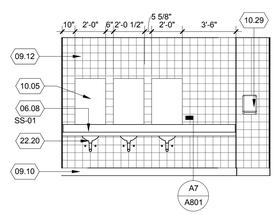
B5 STAFF OFFICE SOUTH
SCALE: 1/4" = 1'-0"



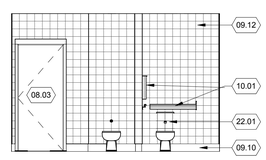
A1 MENS RR 125 SOUTH
SCALE: 1/4" = 1'-0"



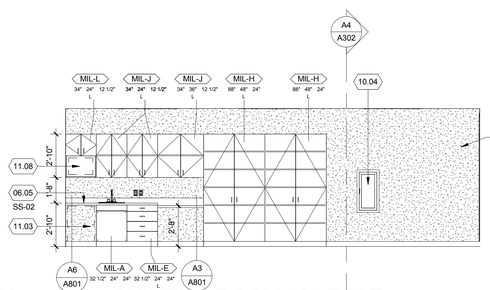
A2 MENS RR 125 NORTH
SCALE: 1/4" = 1'-0"



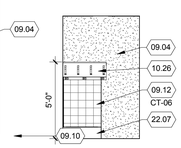
A3 WOMENS RR 126 SOUTH
SCALE: 1/4" = 1'-0"



A4 WOMENS RR 126 NORTH
SCALE: 1/4" = 1'-0"



A5 QUILTING ROOM 101 EAST
SCALE: 1/4" = 1'-0"



A6 CUST. 139 WEST
SCALE: 1/4" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

04.10	8"X8"X16" CMU
05.04	3 5/8" METAL STUD
06.03	MILLWORK
06.05	COUNTERTOP
06.08	COUNTERTOP WITH INTEGRAL SINK
08.03	DOOR, RE: DOOR SCHEDULE
08.05	WINDOW PER SCHEDULE
09.04	PAINTED GYPSUM BOARD
09.10	WALL BASE PER FINISH SCHEDULE
09.12	CERAMIC WALL TILE
10.01	GRAB BARS, RE: FIXTURE ELEVATION
10.04	FIRE EXTINGUISHER CABINET
10.05	MIRROR
10.13	WHITEBOARD
10.18	HOOK, RE: DETAIL
10.26	MOP AND BROOM RACK
10.29	PAPER TOWEL DISPENSER
11.03	REFRIGERATOR BY OWNER
11.08	MICROWAVE BY OWNER
11.23	TELEVISION/MONITOR BY OWNER, PROVIDE BACKING.
12.01	FURNITURE BY OWNER
22.01	WATER CLOSET RE: PLUMBING DRAWINGS
22.02	URINAL RE: PLUMBING DRAWINGS
22.07	MOP SINK, RE: PLUMBING DRAWINGS
22.20	SINK, RE: PLUMBING DRAWINGS

GENERAL NOTES:

A. REFER TO SHEET A-801 FOR MILLWORK DETAILS.
B. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL MILLWORK.
C. ALL CABINET INTERIORS AND SHELVES TO BE FINISHED IN WHITE MELAMINE, TYP.
D. PROVIDE FINISHED END PANEL AT ALL EXPOSED MILLWORK SIDES, TO MATCH ADJACENT MILLWORK FRONT FINISH.
E. GENERAL CONTRACTOR TO COORDINATE ALL OWNER PROVIDED EQUIPMENT WITH OWNER.
F. CONTRACTOR TO PROVIDE BACKING FOR ALL TOILET ACCESSORIES.
G. WIRE MANAGEMENT AND GROMMETS TO BE PROVIDED AT ALL MILLWORK.
H. ACCENT WALL LOCATIONS TO BE DEFINED IN FIELD.
I. SEE DRAWING AF-401 FOR TYPICAL WALL TILE PATTERN AT RESTROOMS 117, 119, 125, 126, 131, 138, 147, AND 148.
J. AT ALL RESTROOMS ALL WALLS ARE TO RECEIVE FULL HEIGHT TILE, FROM FLOOR TO CEILING.
K. ALL WHITEBOARDS TO BE MOUNTED 3'-0" AFF AND CENTERED ON WALL, WHERE APPLICABLE. REFER TO INTERIOR ELEVATION SHEETS A-700'S FOR EXACT LOCATIONS.
L. ALL WALL MOUNTED TELEVISIONS ARE TO HAVE POWER/DATA/AV RECEPTACLES AS PER POWER PLANS. RECEPTABLES TO BE CENTERED ON WALL BEHIND TELEVISION.

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

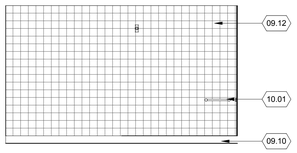
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

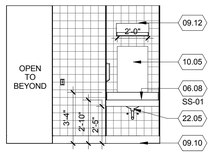
INTERIOR ELEVATIONS

A701

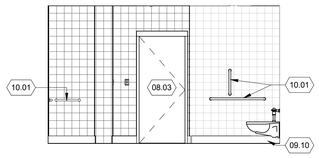
9/11/2012 9:32:33 AM



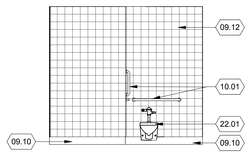
E1 STAFF TOILET 119 SOUTH
SCALE: 1/4" = 1'-0"



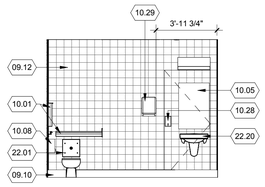
E2 STAFF TOILET 119 WEST
SCALE: 1/4" = 1'-0"



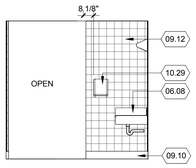
E3 STAFF TOILET 119 NORTH
SCALE: 1/4" = 1'-0"



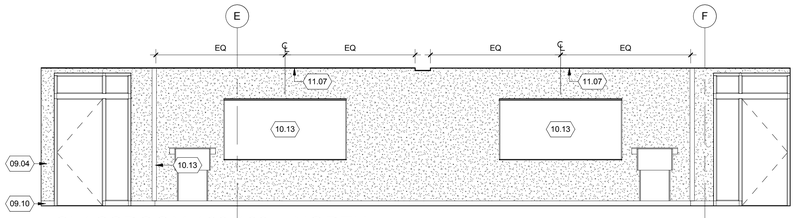
E4 STAFF TOILET 119 EAST
SCALE: 1/4" = 1'-0"



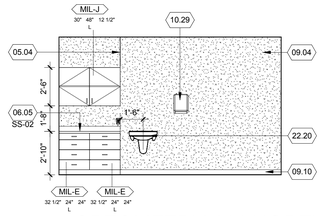
E5 PATIENT TOILET 117 WEST
SCALE: 1/4" = 1'-0"



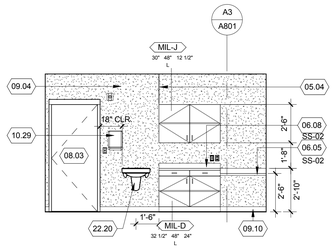
E6 STAFF TOILET/SHOWER 119 SOUTH
SCALE: 1/4" = 1'-0"



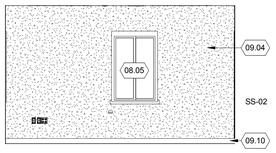
D1 CLASSROOM 168 169 - NORTH
SCALE: 1/4" = 1'-0"



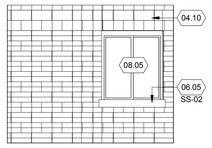
D2 OPTOMETRY 111 NORTH
SCALE: 1/4" = 1'-0"



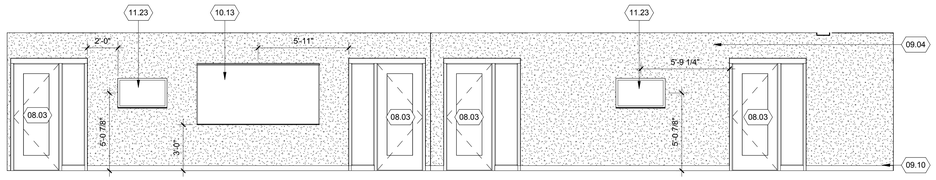
D3 OFFICE/EXAM 120 NORTH
SCALE: 1/4" = 1'-0"



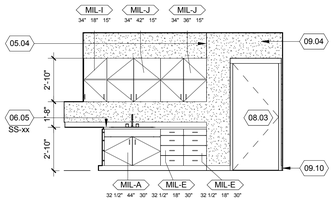
D4 MANAGER 121 NORTH
SCALE: 1/4" = 1'-0"



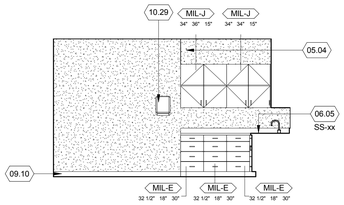
D5 MANAGER 121 WEST
SCALE: 1/4" = 1'-0"



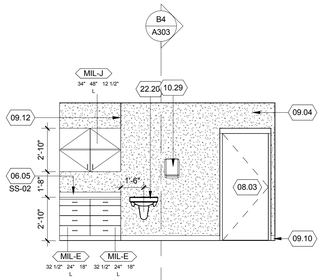
C1 CLASSROOM 104A NORTH / EXERCISE 104C NORTH
SCALE: 1/4" = 1'-0"



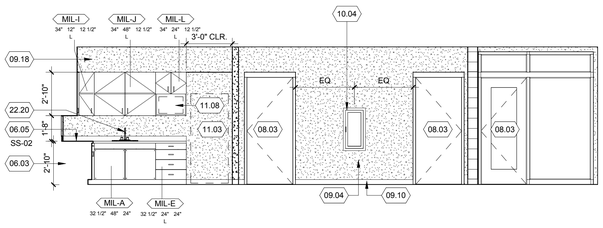
C3 STERILIZATION 115 EAST
SCALE: 1/4" = 1'-0"



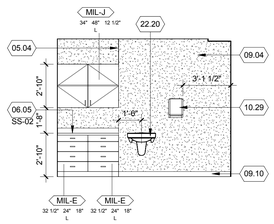
C4 STERILIZATION 115 NORTH
SCALE: 1/4" = 1'-0"



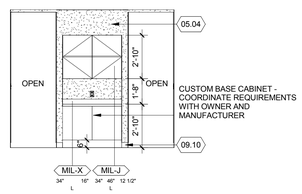
C6 PODIATRY EXAM 118 WEST
SCALE: 1/4" = 1'-0"



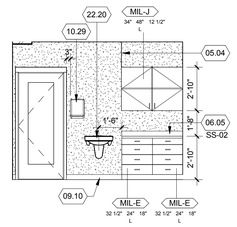
B1 KITCHENETTE 104D SOUTH
SCALE: 1/4" = 1'-0"



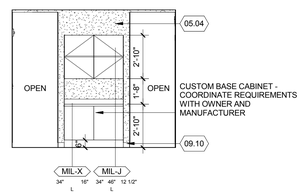
B2 DENTAL 116 SOUTH
SCALE: 1/4" = 1'-0"



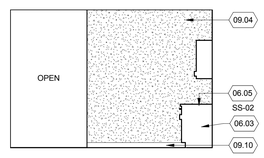
B3 116 WEST
SCALE: 1/4" = 1'-0"



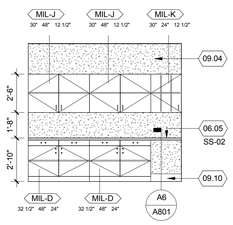
B4 DENTAL 114 NORTH
SCALE: 1/4" = 1'-0"



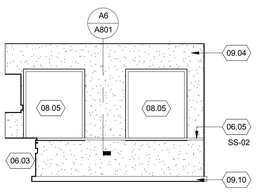
B5 114 WEST
SCALE: 1/4" = 1'-0"



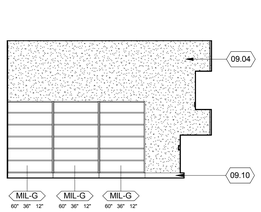
B6 WORK 154 EAST
SCALE: 1/4" = 1'-0"



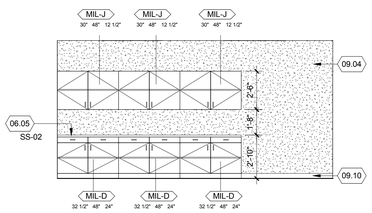
A1 WORK ROOM 154 S
SCALE: 1/4" = 1'-0"



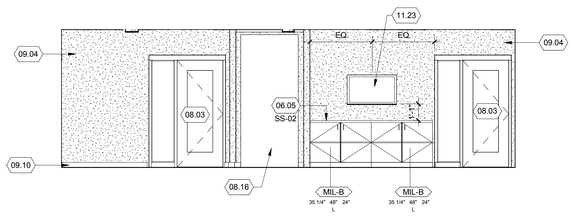
A2 WORK ROOM 154 W
SCALE: 1/4" = 1'-0"



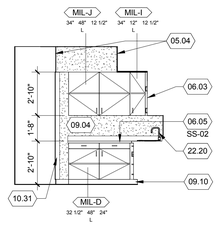
A3 PRINT SHOP 150 N
SCALE: 1/4" = 1'-0"



A4 PRINT SHOP 150 EAST
SCALE: 1/4" = 1'-0"



A5 MUSIC FUNCTION MUSIC / GROUP 107A SOUTH
SCALE: 1/4" = 1'-0"



A6 104D EAST
SCALE: 1/4" = 1'-0"

REFERENCE NOTES

04.10	8"X8"X16" CMU
05.04	3 5/8" METAL STUD
06.03	MILLWORK
06.05	COUNTERTOP
06.08	COUNTERTOP WITH INTEGRAL SINK
08.03	DOOR, RE: DOOR SCHEDULE
08.05	WINDOW PER SCHEDULE
08.16	OPERABLE WALL
09.04	PAINTED GYPSUM BOARD
09.10	WALL BASE PER FINISH SCHEDULE
09.12	CERAMIC WALL TILE
09.18	GYPSUM BOARD SOFFIT
10.01	GRAB BARS, RE: FIXTURE ELEVATION
10.04	FIRE EXTINGUISHER CABINET
10.05	MIRROR
10.08	TOILET PAPER DISPENSER BY OWNER
10.13	WHITEBOARD
10.28	SOAP DISPENSER BY OWNER
10.29	PAPER TOWEL DISPENSER
10.31	CORNER GUARD - STAINLESS STEEL
11.03	REFRIGERATOR BY OWNER
11.07	RECESSED MOTORIZED PROJECTION SCREEN
11.08	MICROWAVE BY OWNER
11.23	TELEVISION/MONITOR BY OWNER, PROVIDE BACKING.
22.01	WATER CLOSET RE: PLUMBING DRAWINGS
22.05	LAVATORY, RE: PLUMBING DRAWINGS
22.20	SINK, RE: PLUMBING DRAWINGS
DIVISION 01	GENERAL REQUIREMENTS

GENERAL NOTES:

A. REFER TO SHEET A-801 FOR MILLWORK DETAILS.
B. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL MILLWORK.
C. ALL CABINET INTERIORS AND SHELVES TO BE FINISHED IN WHITE MELAMINE, TYP.
D. PROVIDE FINISHED END PANEL AT ALL EXPOSED MILLWORK SIDES, TO MATCH ADJACENT MILLWORK FRONT FINISH.
E. GENERAL CONTRACTOR TO COORDINATE ALL OWNER PROVIDED EQUIPMENT WITH OWNER.
F. CONTRACTOR TO PROVIDE BACKING FOR ALL TOILET ACCESSORIES.
G. WIRE MANAGEMENT AND GROMMETS TO BE PROVIDED AT ALL MILLWORK.
H. ACCENT WALL LOCATIONS TO BE DEFINED IN FIELD.
I. SEE DRAWING AF-401 FOR TYPICAL WALL TILE PATTERN AT RESTROOMS 117, 119, 125, 126, 131, 138, 147, AND 148.
J. AT ALL RESTROOMS ALL WALLS ARE TO RECEIVE FULL HEIGHT TILE, FROM FLOOR TO CEILING.
K. ALL WHITEBOARDS TO BE MOUNTED 3'-0" AFF AND CENTERED ON WALL, WHERE APPLICABLE. REFER TO INTERIOR ELEVATION SHEETS A-700'S FOR EXACT LOCATIONS.
L. ALL WALL MOUNTED TELEVISIONS ARE TO HAVE POWER/DATA/AV RECEPTACLES AS PER POWER PLANS. RECEPTABLES TO BE CENTERED ON WALL BEHIND TELEVISION.

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

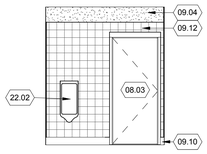
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

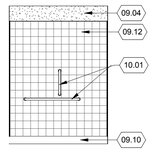
INTERIOR ELEVATIONS

A702

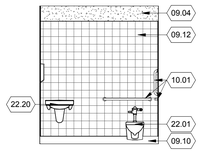
9/11/2012 9:32:44 AM



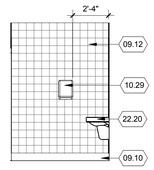
E1 STAFF RR 138 NORTH
SCALE: 1/4" = 1'-0"



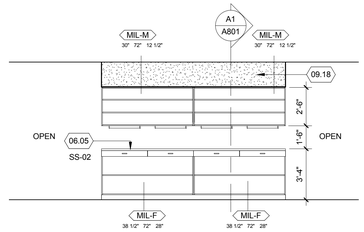
E2 STAFF RR 138 WEST
SCALE: 1/4" = 1'-0"



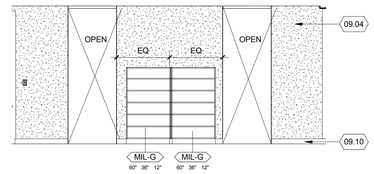
E3 STAFF RR 138 SOUTH
SCALE: 1/4" = 1'-0"



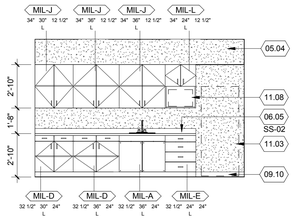
E4 STAFF RR 138 EAST
SCALE: 1/4" = 1'-0"



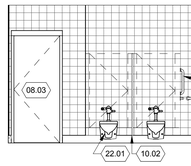
E5 PHARMACY DISPENSING SIM.
SCALE: 1/4" = 1'-0"



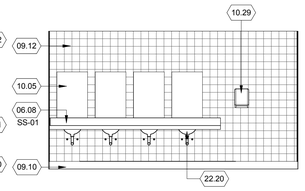
E6 PHARMACY DISPENSING NORTH
SCALE: 1/4" = 1'-0"



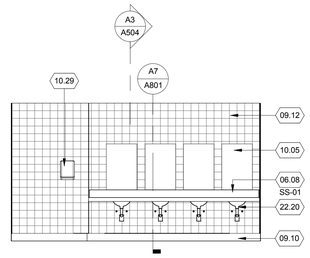
D1 KITCHENETTE A107 SOUTH
SCALE: 1/4" = 1'-0"



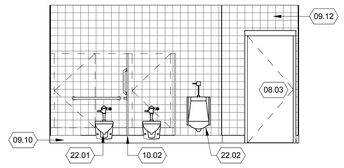
D2 RR WOMENS 148 NORTH
SCALE: 1/4" = 1'-0"



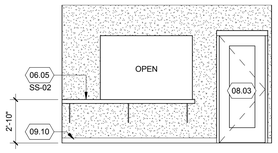
D3 RR WOMENS 148 SOUTH
SCALE: 1/4" = 1'-0"



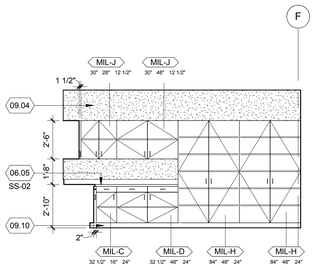
D4 RR MENS 147 NORTH
SCALE: 1/4" = 1'-0"



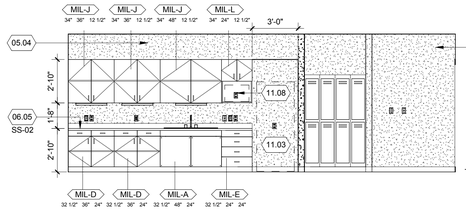
D5 RR MENS 147 SOUTH
SCALE: 1/4" = 1'-0"



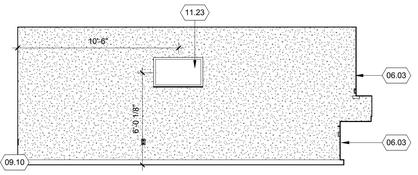
D6 RECORDS ENTRY 149 WEST
SCALE: 1/4" = 1'-0"



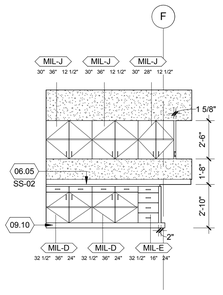
C1 WORK RM / STORAGE 165 NORTH
SCALE: 1/4" = 1'-0"



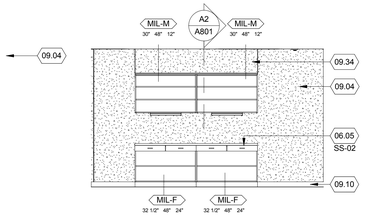
C2 STAFF BREAK ROOM 170 NORTH
SCALE: 1/4" = 1'-0"



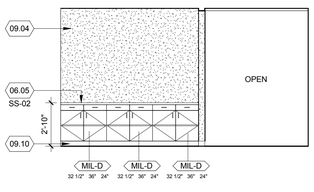
C3 STAFF BREAK ROOM 170 EAST
SCALE: 1/4" = 1'-0"



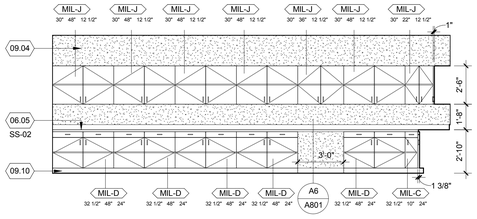
C5 WORK ROOM 123 WEST
SCALE: 1/4" = 1'-0"



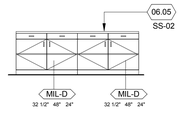
C6 MOBILE STORAGE 151A NORTH
SCALE: 1/4" = 1'-0"



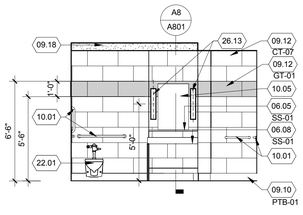
B1 COPY/ PRINT/ FAX 134A SIM
SCALE: 1/4" = 1'-0"



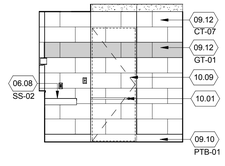
B2 WORK RM / STOARGE 165 WEST
SCALE: 1/4" = 1'-0"



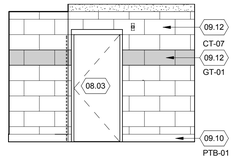
B3 WORK RM/ 165 ISLAND
SCALE: 1/4" = 1'-0"



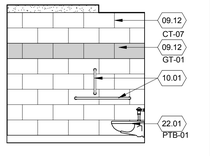
B4 DOC'S RR 174A N
SCALE: 1/4" = 1'-0"



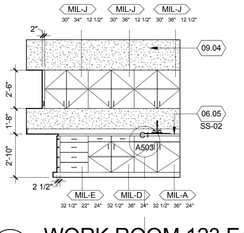
B5 DOC'S RR 174A E
SCALE: 1/4" = 1'-0"



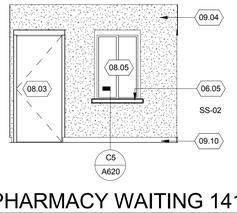
B6 DOC'S RR 174A S
SCALE: 1/4" = 1'-0"



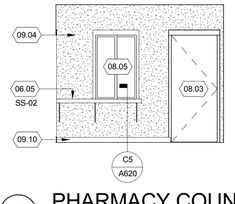
B7 DOC'S RR174A W
SCALE: 1/4" = 1'-0"



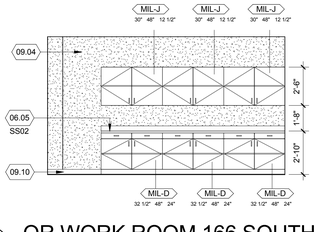
A1 WORK ROOM 123 EAST
SCALE: 1/4" = 1'-0"



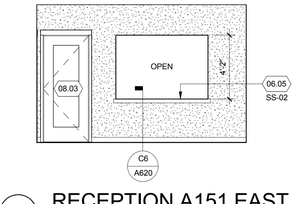
A2 PHARMACY WAITING 141 EAST
SCALE: 1/4" = 1'-0"



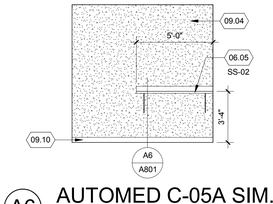
A3 PHARMACY COUNTER 134C WEST
SCALE: 1/4" = 1'-0"



A4 QR WORK ROOM 166 SOUTH
SCALE: 1/4" = 1'-0"



A5 RECEPTION A151 EAST
SCALE: 1/4" = 1'-0"



A6 AUTOMED C-05A SIM.
SCALE: 1/4" = 1'-0"

REFERENCE NOTES

05.04	3 5/8" METAL STUD
06.03	MILLWORK
06.05	COUNTERTOP
06.08	COUNTERTOP WITH INTEGRAL SINK
08.03	DOOR, RE: DOOR SCHEDULE
08.05	WINDOW PER SCHEDULE
09.04	PAINTED GYPSUM BOARD
09.10	WALL BASE PER FINISH SCHEDULE
09.12	CERAMIC WALL TILE
09.18	GYPSUM BOARD SOFFIT
09.34	VINYL WALL COVERING
10.01	GRAB BARS, RE: FIXTURE ELEVATION
10.02	TOILET PARTITION
10.05	MIRROR
10.09	FRAMELESS GLASS SHOWER DOOR
10.29	PAPER TOWEL DISPENSER
11.03	REFRIGERATOR BY OWNER
11.08	MICROWAVE BY OWNER
11.23	TELEVISION/MONITOR BY OWNER, PROVIDE BACKING.
22.01	WATER CLOSET RE: PLUMBING DRAWINGS
22.02	URINAL RE: PLUMBING DRAWINGS
22.20	SINK, RE: PLUMBING DRAWINGS
26.13	ELECTRICAL LIGHT FIXTURE RE: ELECTRICAL DRAWINGS

GENERAL NOTES:

A. REFER TO SHEET A-801 FOR MILLWORK DETAILS.
B. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL MILLWORK.
C. ALL CABINET INTERIORS AND SHELVES TO BE FINISHED IN WHITE MELAMINE, TYP.
D. PROVIDE FINISHED END PANEL AT ALL EXPOSED MILLWORK SIDES, TO MATCH ADJACENT MILLWORK FRONT FINISH.
E. GENERAL CONTRACTOR TO COORDINATE ALL OWNER PROVIDED EQUIPMENT WITH OWNER.
F. CONTRACTOR TO PROVIDE BACKING FOR ALL TOILET ACCESSORIES.
G. WIRE MANAGEMENT AND GROMMETS TO BE PROVIDED AT ALL MILLWORK.
H. ACCENT WALL LOCATIONS TO BE DEFINED IN FIELD.
I. SEE DRAWING AF-401 FOR TYPICAL WALL TILE PATTERN AT RESTROOMS 117, 119, 125, 126, 131, 138, 147, AND 148.
J. AT ALL RESTROOMS ALL WALLS ARE TO RECEIVE FULL HEIGHT TILE, FROM FLOOR TO CEILING.
K. ALL WHITEBOARDS TO BE MOUNTED 3'-0" AFF AND CENTERED ON WALL, WHERE APPLICABLE. REFER TO INTERIOR ELEVATION SHEETS A-700'S FOR EXACT LOCATIONS.
L. ALL WALL MOUNTED TELEVISIONS ARE TO HAVE POWER/DATA/AV RECEPTACLES AS PER POWER PLANS. RECEPTABLES TO BE CENTERED ON WALL BEHIND TELEVISION.

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

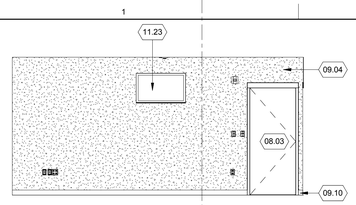
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

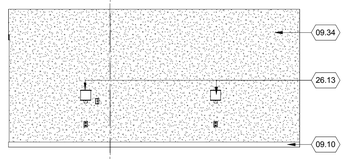
INTERIOR ELEVATIONS

A703

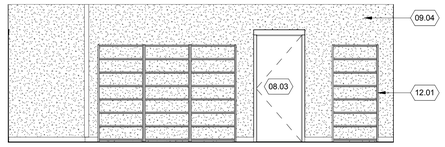
9/11/2012 9:32:55 AM



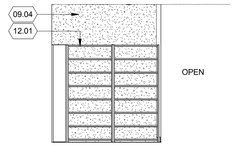
E1 DOC BEDROOM 170 WEST
SCALE: 1/4" = 1'-0"



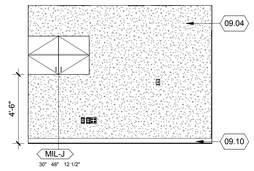
E2 DOC BEDROOM 170 EAST
SCALE: 1/4" = 1'-0"



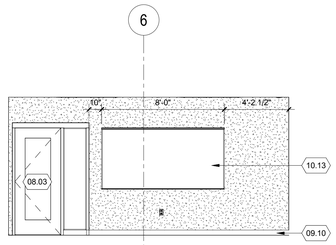
E4 PHARMACY DISPENSING 134C SOUTH
SCALE: 1/4" = 1'-0"



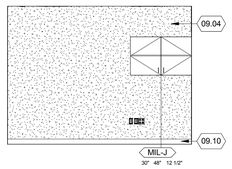
E5 PHARMACY DISPENSING 134 C WEST
SCALE: 1/4" = 1'-0"



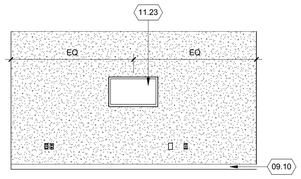
D1 E-CHART SUPPORT 160 SOUTH
SCALE: 1/4" = 1'-0"



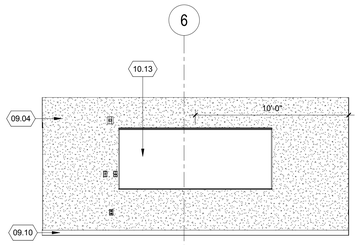
D2 E-CHART SUPPORT 160 WEST
SCALE: 1/4" = 1'-0"



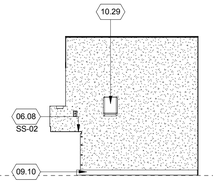
D3 E-CHART SUPPORT 160 NORTH
SCALE: 1/4" = 1'-0"



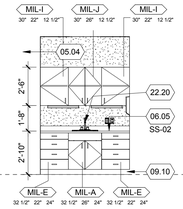
D4 CONFERENCE 141 SOUTH
SCALE: 1/4" = 1'-0"



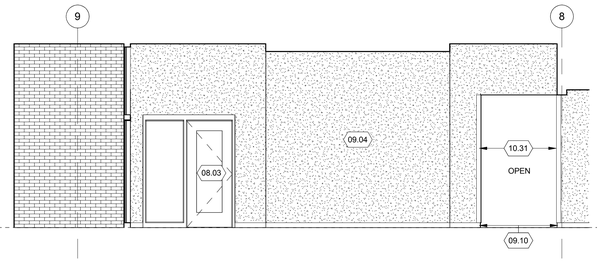
D5 CONF ROOM 141 EAST
SCALE: 1/4" = 1'-0"



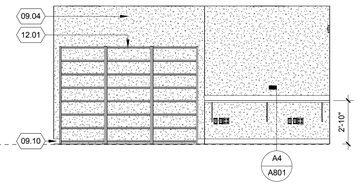
C1 LAB 112 EAST
SCALE: 1/4" = 1'-0"



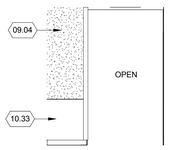
C2 LAB 112 NORTH
SCALE: 1/4" = 1'-0"



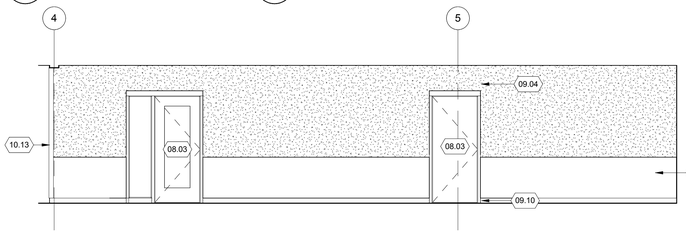
C3 STAFF LOBBY L-02 WEST
SCALE: 1/4" = 1'-0"



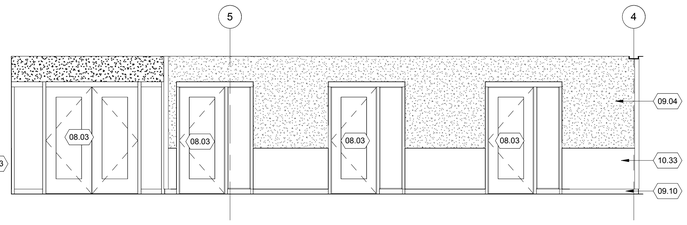
C4 DESKTOP SUPPORT 159 NORTH
SCALE: 1/4" = 1'-0"



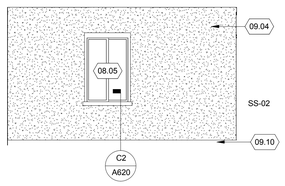
B1 CORRIDOR 03 SOUTH
SCALE: 1/4" = 1'-0"



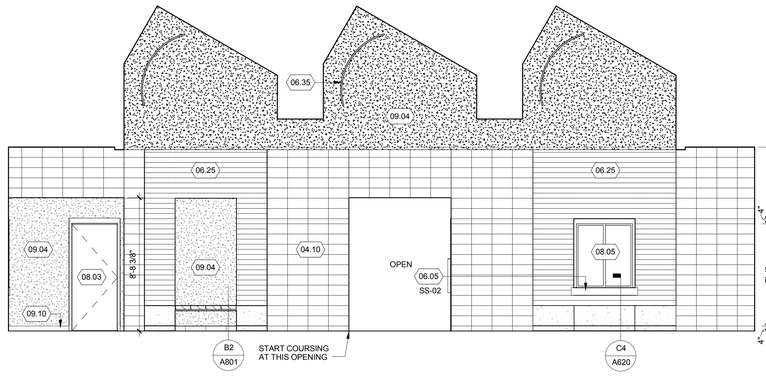
B2 CORRIDOR 03 EAST
SCALE: 1/4" = 1'-0"



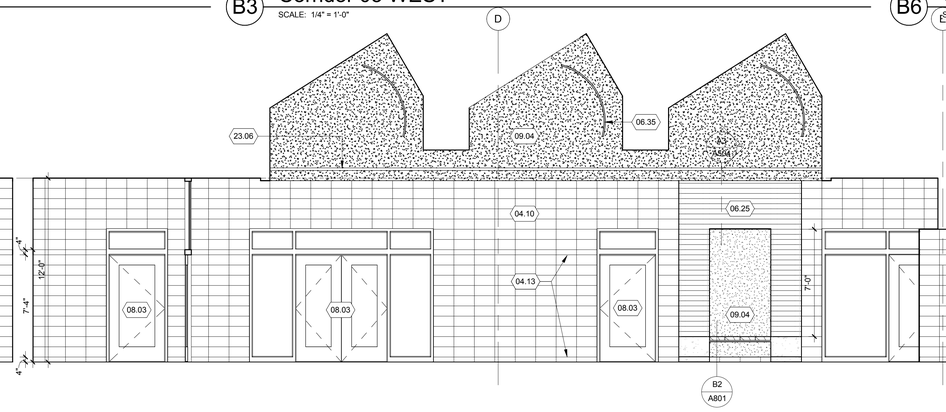
B3 Corridor 03 WEST
SCALE: 1/4" = 1'-0"



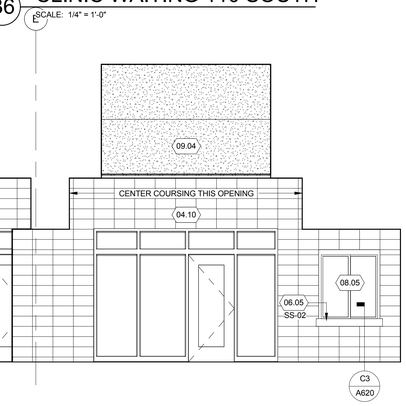
B6 CLINIC WAITING 110 SOUTH
SCALE: 1/4" = 1'-0"



A1 MAIN LOBBY L-01 SOUTH
SCALE: 1/4" = 1'-0"



A2 MAIN LOBBY L-01 NORTH
SCALE: 1/4" = 1'-0"



A3 MAIN LOBBY L-01 WEST
SCALE: 1/4" = 1'-0"

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

04.10	8"X8"X16" CMU
04.13	4" X 8" X 16" CMU
05.04	3 5/8" METAL STUD
06.05	COUNTERTOP
06.08	COUNTERTOP WITH INTEGRAL SINK
06.25	WOOD WALL SYSTEM PER SCHEDULE
06.35	SUSPENDED TRANSLUCENT PLASTIC PANEL
08.03	DOOR, RE: DOOR SCHEDULE
08.05	WINDOW PER SCHEDULE
09.04	PAINTED GYPSUM BOARD
09.10	WALL BASE PER FINISH SCHEDULE
09.18	GYPSUM BOARD SOFFIT
09.34	VINYL WALL COVERING
10.13	WHITEBOARD
10.29	PAPER TOWEL DISPENSER
10.31	CORNER GUARD - STAINLESS STEEL
10.33	WALL PROTECTION - VINYL
11.23	TELEVISION/MONITOR BY OWNER, PROVIDE BACKING.
12.01	FURNITURE BY OWNER
22.20	SINK, RE: PLUMBING DRAWINGS
23.06	LINEAR DIFFUSER, RE MECHANICAL DRAWINGS
26.13	ELECTRICAL LIGHT FIXTURE RE: ELECTRICAL DRAWINGS

GENERAL NOTES:

A. REFER TO SHEET A-801 FOR MILLWORK DETAILS.
B. CONTRACTOR TO PROVIDE BLOCKING BEHIND ALL MILLWORK.
C. ALL CABINET INTERIORS AND SHELVES TO BE FINISHED IN WHITE MELAMINE, TYP.
D. PROVIDE FINISHED END PANEL AT ALL EXPOSED MILLWORK SIDES, TO MATCH ADJACENT MILLWORK FRONT FINISH.
E. GENERAL CONTRACTOR TO COORDINATE ALL OWNER PROVIDED EQUIPMENT WITH OWNER.
F. CONTRACTOR TO PROVIDE BACKING FOR ALL TOILET ACCESSORIES.
G. WIRE MANAGEMENT AND GROMMETS TO BE PROVIDED AT ALL MILLWORK.
H. ACCENT WALL LOCATIONS TO BE DEFINED IN FIELD.
I. SEE DRAWING AF-401 FOR TYPICAL WALL TILE PATTERN AT RESTROOMS 117, 119, 125, 126, 131, 138, 147, AND 148.
J. AT ALL RESTROOMS ALL WALLS ARE TO RECEIVE FULL HEIGHT TILE, FROM FLOOR TO CEILING.
K. ALL WHITEBOARDS TO BE MOUNTED 3'-0" AFF AND CENTERED ON WALL, WHERE APPLICABLE. REFER TO INTERIOR ELEVATION SHEETS A-700'S FOR EXACT LOCATIONS.
L. ALL WALL MOUNTED TELEVISIONS ARE TO HAVE POWER/DATA/AV RECEPTACLES AS PER POWER PLANS. RECEPTABLES TO BE CENTERED ON WALL BEHIND TELEVISION.

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

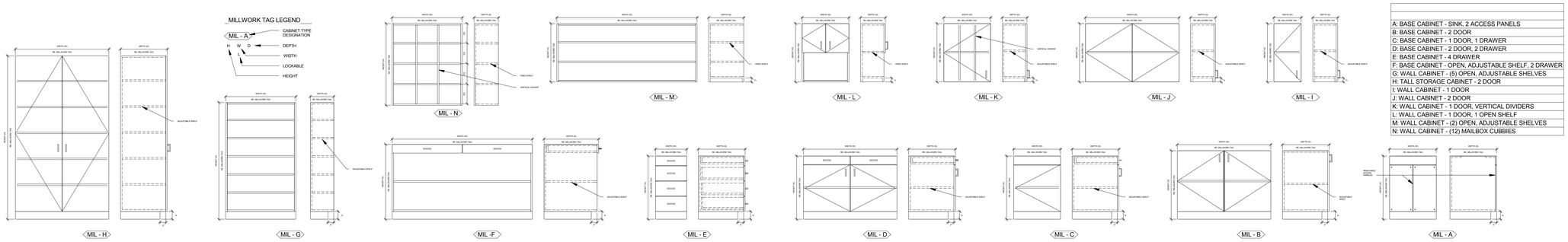
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

INTERIOR ELEVATIONS

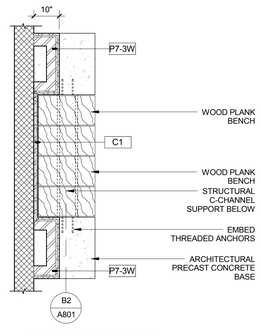
A704

9/11/2012 9:33:04 AM

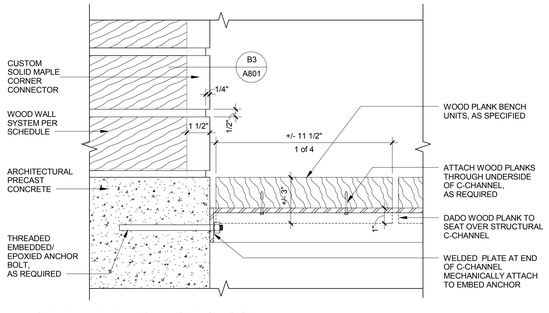


MILLWORK SCHEDULE
A: BASE CABINET - SINK, 2 ACCESS PANELS
B: BASE CABINET - 2 DOOR
C: BASE CABINET - 1 DOOR, 1 DRAWER
D: BASE CABINET - 2 DOOR, 2 DRAWER
E: BASE CABINET - 4 DRAWER
F: BASE CABINET - OPEN, ADJUSTABLE SHELF, 2 DRAWER
G: WALL CABINET - (5) OPEN, ADJUSTABLE SHELVES
H: TALL STORAGE CABINET - 2 DOOR
I: WALL CABINET - 1 DOOR
J: WALL CABINET - 2 DOOR
K: WALL CABINET - 1 DOOR, VERTICAL DIVIDERS
L: WALL CABINET - 1 DOOR, 1 OPEN SHELF
M: WALL CABINET - (2) OPEN, ADJUSTABLE SHELVES
N: WALL CABINET - (12) MAILBOX CUBBIES

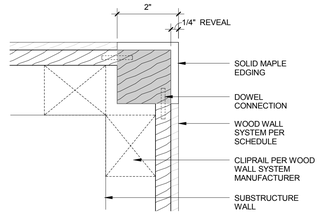
EI MILLWORK SCHEDULE
SCALE: 1/2" = 1'-0"



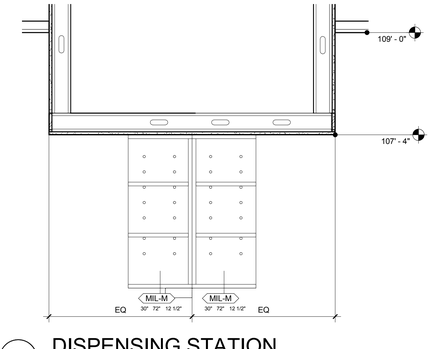
B1 BENCH PLAN
SCALE: 1/2" = 1'-0"



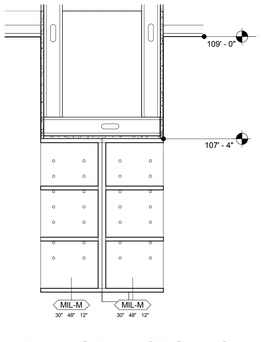
B2 LOBBY BENCH SECTION
SCALE: 3" = 1'-0"



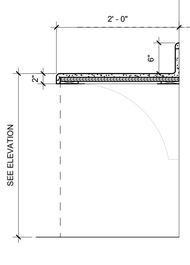
B3 DETAIL SECTION
SCALE: 6" = 1'-0"



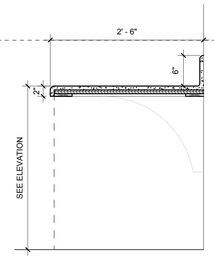
A1 DISPENSING STATION
SCALE: 1" = 1'-0"



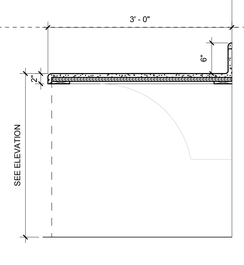
A2 MOBILE STORAGE
SCALE: 1" = 1'-0"



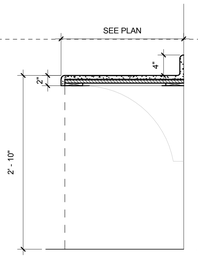
A3 COUNTER
SCALE: 1" = 1'-0"



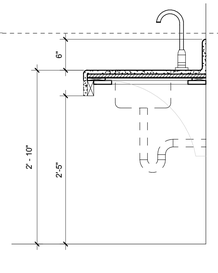
A4 COUNTER
SCALE: 1" = 1'-0"



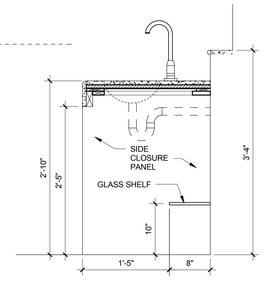
A5 COUNTER
SCALE: 1" = 1'-0"



A6 COUNTER
SCALE: 1" = 1'-0"



A7 SINK COUNTER
SCALE: 1" = 1'-0"



A8 SINK COUNTER @ DOC
SCALE: 1" = 1'-0"

DFCM APPROVAL STAMP

REFERENCE NOTES

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

MILLWORK SCHEDULE & DETAILS

A801

9/11/2012 9:33:07 AM

GENERAL NOTES:

A. ALL HOLLOW METAL DOORS, FRAMES AND RAILINGS TO BE PNT-09, U.N.O.
B. EPOXY PAINT AT ALL WET AREAS, TYP.
C. INTERIOR WALL FINISH FOR PAINTED WALLS TO BE SATIN FINISH.
D. ALL FLOOR MATERIAL TRANSITIONS TO OCCUR AT CENTER OF DOOR, U.N.O.
E. ACCENT WALL LOCATIONS TO BE DEFINED IN FIELD.
F. SEE DRAWING AF-401 FOR TYPICAL WALL TILE PATTERN AT RESTROOMS 117, 119, 125, 126, 131, 138, 147, AND 148.
G. AT ALL RESTROOMS ALL WALLS ARE TO RECEIVE FULL HEIGHT TILE. FROM FLOOR TO CEILING, U.N.O. IN ELEVATIONS.
H. FLOOR PATTERN TO BE DETERMINED IN FIELD.
I. ALL VCT FLOOR PATTERNS TO BE DETERMINED IN FIELD.
J. SEE DRAWING AF401 FOR RESTROOM FLOOR PATTERNS.

FINISH LEGEND

ROOM NAME
RM NO.
F | B | W
F = FLOOR FINISH W = WALL FINISH
B = BASE FINISH

FLOOR FINISH	
1a	CARPET 1(CPT-01)
1b	CARPET 2(CPT-02)
1c	CARPET 3(CPT-03)
2	VINYL COMPOSITION TILE (VCT)
3a	MOSAIC TILE (CT-04)
3b	MOSAIC TILE (SEE AF401 FOR PATTERN)
4	SEALED CONCRETE
5	RESILIET SHEET
6	ENTRY MAT
7	STONE TILE (SEE AF401 FOR FLOOR PATTERN AND STONE TYPES)
BASE FINISH	
A1	CARPET BASE 1(CB-01)
A2	CARPET BASE 2(CB-02)
A3	CARPET BASE 3(CB-03)
B	RUBBER
C	QUARRY TILE
D	CERAMIC TILE
E	NO BASE REQUIRED
F	STONE TILE
G	INTEGRAL COVE
H	WOOD BASE
I	PORCELAIN TILE
WALL FINISH	
1a	GYP. BOARD - PAINTED(PNT-07)
1b	GYP. BOARD - PAINTED(PNT-01)
2	GYP. BOARD NOT PAINTED
3	CMU
4	CMU PAINTED
5	CERAMIC TILE (CT)
6	MASONRY
7	WOOD PANEL
8	VARIES, SEE INT. ELEVATIONS
9	FIRE TREATED PLYWOOD
10	WALL GUARD - CRASH RAIL WITH PAINTED GYP. BD. ABOVE.

REFERENCE NOTES

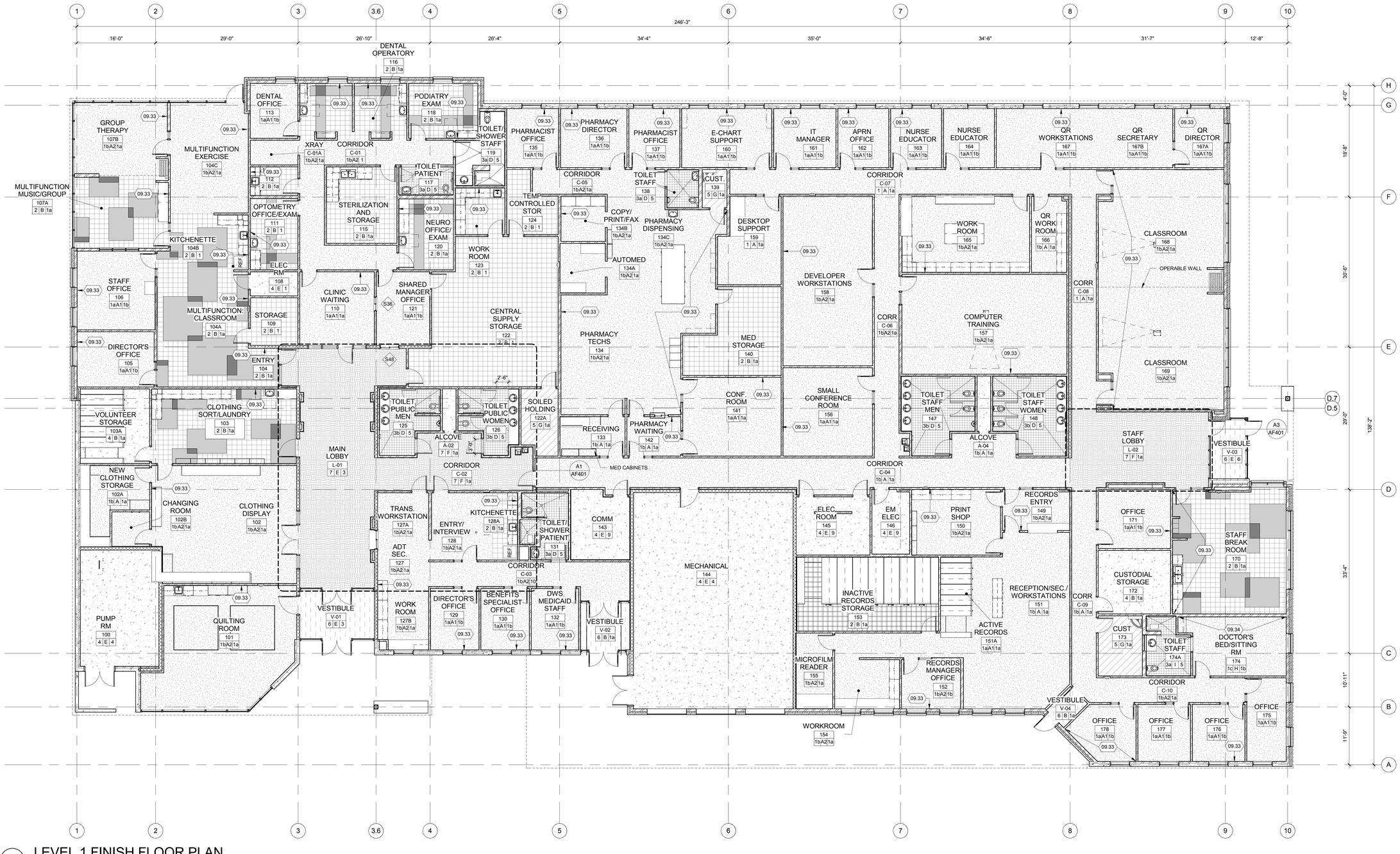
09.33 ACCENT PAINTED GYPSUM BOARD
09.34 VINYL WALL COVERING

FLOOR FINISH LEGEND

1, 1a, 1b, 1c, 2, 3a, 3b, 4, 5, 6, 7

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com



A1 LEVEL 1 FINISH FLOOR PLAN
SCALE: 1/8" = 1'-0"

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

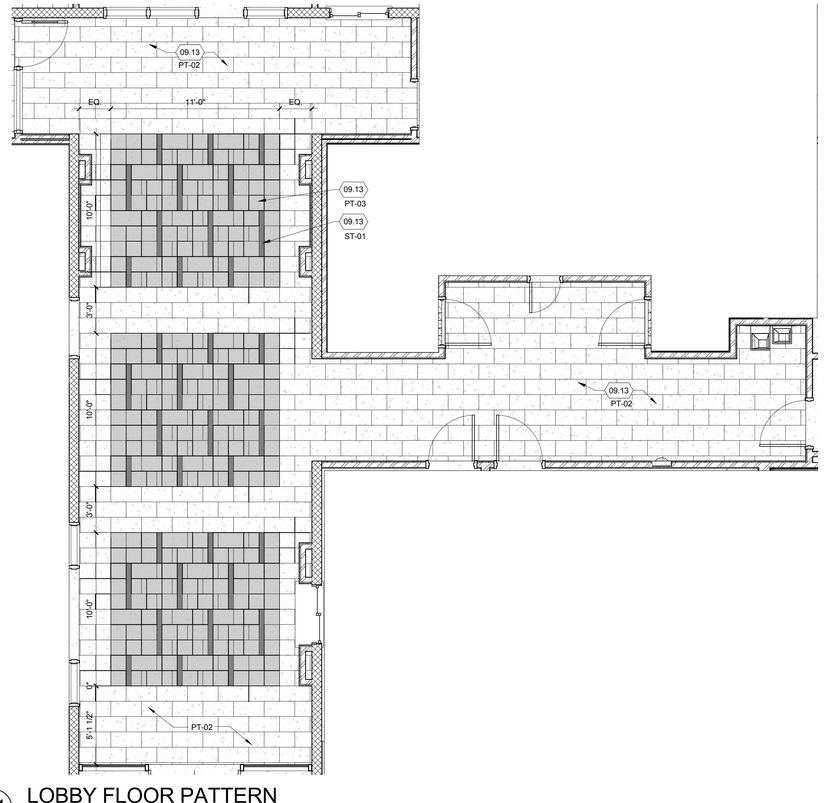
	DATE	REVISION
A	2012 08 15	Code Related Changes

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

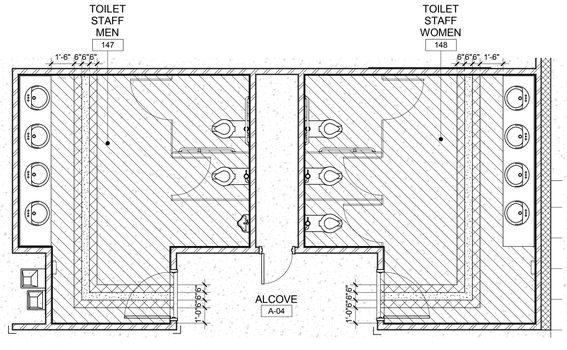
LEVEL 1 FINISH FLOOR PLAN

AF101

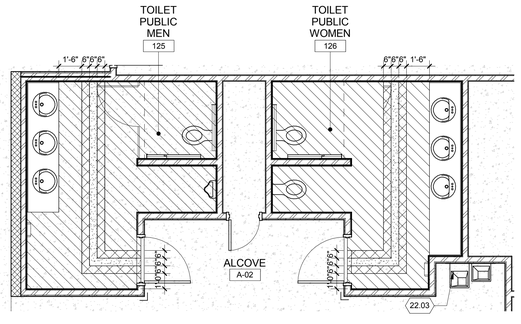
9/11/2012 9:33:12 AM



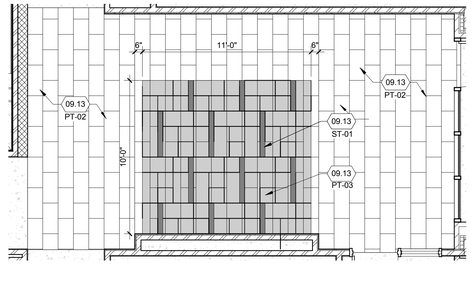
A1 LOBBY FLOOR PATTERN
SCALE: 1/4" = 1'-0"



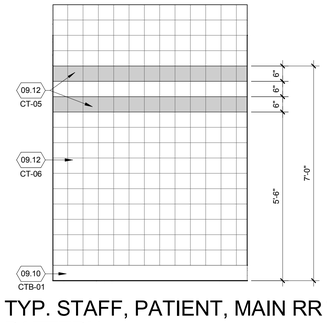
B3 FINISH MAIN RR 147 & 148
SCALE: 1/4" = 1'-0"



B5 FINISH RR 125 & 126
SCALE: 1/4" = 1'-0"



A3 STAFF LOBBY FLOOR PATTERN
SCALE: 1/4" = 1'-0"



A5 TYP. STAFF, PATIENT, MAIN RR WALL TILE PATTERN
SCALE: 1/2" = 1'-0"

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

09.10	WALL BASE PER FINISH SCHEDULE
09.12	CERAMIC WALL TILE
09.13	FLOOR TILE
22.03	DRINKING FOUNTAIN, RE: PLUMBING DRAWINGS

HATCH LEGEND

- CT-02
- CT-03
- BLEND OF CT-01, CT-02, AND CT-03

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

FINISH ENLARGED PLAN

AF401

9/11/2012 9:33:15 AM

LEGEND OF MECHANICAL SYMBOLS AND ABBREVIATIONS

MECHANICAL

- POSITIVE PRESSURE DUCT - RISE
- POSITIVE PRESSURE DUCT - DROP
- NEGATIVE PRESSURE DUCT - RISE
- NEGATIVE PRESSURE DUCT - DROP
- ROUND DUCT - RISE
- ROUND DUCT - DROP
- UNDER FLOOR DUCT
- TURNING VANES
- FRESH AIR LOUVER
- RELIEF AIR OR EXHAUST AIR LOUVER
- 12X12 / 200 — CEILING SUPPLY DIFFUSER
- 22X22 / 200 — CEILING RETURN REGISTER
- 12X12 / 200 — CEILING EXHAUST REGISTER, (BALANCE TO MATCH SUPPLY IF RETURN CFM IS NOT SHOWN)
- 24X10 / 200 — SIDEWALL SUPPLY REGISTER
- 24X10 / 200 — SIDEWALL EXHAUST OR RETURN REGISTER
- 12X12 / 200 — CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT
- 12X12 / 200 — CEILING AIR GRILLE WITH FLEXIBLE DUCT

  (TOP FIGURES INDICATE NECK SIZE. BOTTOM FIGURE INDICATES CFM.)
- CEILING RETURN AIR GRILE W/ SOUND BOOT
- 3-1" SLOTS @ 48" 400 — LINEAR DIFFUSER WITH PLENUM AND FLEXIBLE DUCT CONNECTION. NO. OF SLOTS & SIZE OF SLOT ON TOP, ACTIVE LENGTH AND CFM ON BOTTOM
- FLEXIBLE DUCT CONNECTION
- FLEXIBLE DUCT
- FAN
- 12/8 FO — FLAT OVAL DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
- 12/8 — RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
- 12⌀ — ROUND DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
- UP — INCLINED RISE
- DN — INCLINED DROP

  (WITH RESPECT TO AIR FLOW 15° NOMINAL INCLINE WITH RADIUS TURNS=DEPTH OF DUCT.)
- W R — RW=1. ROUND DUCT SIMILAR TO RECTANGULAR
- 12/12 8/8 — RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND DUCT TRANSFORMATION MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE.
- 12/12 12⌀ — RECTANGULAR TO ROUND DUCT TRANSFORMATION
- R 6 — BRANCH DUCT SPLIT WITH 6" WIDTH AND MIN. R=WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL.
- 45° 1.5D D 1.25D D — TAP ENTRY AREA EQUALS 150% OF BRANCH AREA
- 12⌀ 12/12 — HIGH EFFICIENCY FITTING
- MANUAL VOLUME DAMPER
- FD — FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD.
- FSD — COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL
- SD — SMOKE DAMPER W/ ACCESS PANEL
- BDD — BACK DRAFT DAMPER
- ATC OR — ATC DAMPER
- AD — ACCESS PANEL IN DUCT OR PLENUM
- HEATING OR COOLING COIL IN DUCT
- SINGLE DUCT AIR TERMINAL BOX VARIABLE OR CONSTANT VOLUME. MIN. 1-1/2 TERMINAL INLET SIZE STRAIGHT DUCT AT TERMINAL INLET.
- 4-WAY BLOW PATTERN
- 3-WAY BLOW PATTERN
- 2-WAY BLOW PATTERN
- 2-WAY BLOW PATTERN
- 1-WAY BLOW PATTERN
- SD — DUCT SMOKE DETECTOR
- UNIT HEATER

PLUMBING

- FLOOR SINK
- FLOOR DRAIN
- FCO / COTG — FLOOR CLEAN-OUT OR CLEAN-OUT TO GRADE
- ROOF DRAIN
- DOWNSPOUT NOZZLE
- ARROW INDICATES DIRECTION OF FLOW IN PIPE
- CHECK VALVE
- PRESSURE REDUCING, EXTERNAL PRESSURE VALVE
- PRESSURE REDUCING, SELF CONTAINED VALVE
- ATC VALVE - 2 WAY
- ATC VALVE - 3 WAY
- SOLENOID VALVE
- GATE VALVE
- GATE VALVE - NON RISING STEM
- GLOBE VALVE
- TEMPERATURE AND PRESSURE TEST PORT
- PS — PRESSURE SWITCH
- GAS COCK
- 5.5 GPM — CALIBRATED BALANCING VALVE WITH GPM INDICATED
- RPBP — REDUCED PRESSURE BACKFLOW PREVENTOR W/ DRAIN PAN
- BRANCH - BOTTOM CONNECTION
- BRANCH - TOP CONNECTION
- BRANCH - SIDE CONNECTION
- RISE OR DROP
- RISER - DOWN (ELBOW)
- RISER - DOWN (ELBOW)
- VTR — VENT THRU ROOF
- WATER HAMMER ARRESTOR
- INLINE PUMP
- INLINE PUMP
- CLEAN-OUT
- RELIEF VALVE
- ANGLE VALVE
- FLOW METER
- UNION
- BALANCING COCK
- SHUT-OFF COCK FOR USE WITH PRESSURE GAUGE
- FLEXIBLE EXPANSION JOINT
- THERMOMETER - TEMP RANGE AS INDICATED
- PRESSURE GAUGE WITH SHUT-OFF COCK
- PRESSURE GAUGE WITH PIGTAIL
- LATERAL STRAINER WITH BLOW-OFF VALVE, PROVIDE HOSE END WITH CAP WHERE DISCHARGE IS NOT PIPED TO DRAIN
- BALL VALVE (PIPE SIZES 2" AND SMALLER) BUTTERFLY VALVE (PIPE SIZES 2-1/2" AND LARGER)
- MOTOR OPERATED BUTTERFLY VALVE
- VALVE IN RISE
- AIR VENT-MANUAL
- AIR VENT-AUTO
- FLOW SWITCH
- REDUCER
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER

PLUMBING CONT.

- THERMOSTATIC MIXING VALVE
- HOSE BIBB
- PIPE CAP
- S — SWITCH
- S — SENSOR
- T — THERMOSTAT
- T N — NIGHT THERMOSTAT
- FILL PORT
- DRAIN PAN AND P-TRAP
- (NAME) — FIXTURE FROM LEVEL ABOVE
- GPM LB/HR. — FLOW METER ORIFICE
- FLANGE
- 90° ELBOW
- STEAM TRAP, F&T=FLOAT & THERMOSTATIC 45° ELBOW
- F&T — B=BUCKET, T=THERMOSTATIC
- DN — LEADER INDICATES DOWNWARD SLOPE
- DEMOLITION
- ALIGNMENT GUIDE
- ANCHOR
- LUBRICATED PLUG COCK

SYMBOLS

- P-1 — PLUMBING FIXTURES
- POINT OF CONNECTION
- A / M-101 — SECTION TAG - TOP FIGURE IS SECTION NO. BOTTOM FIGURE IS SHEET NO.
- A / M101 — DETAIL TAG - TOP FIGURE IS DETAIL NO. BOTTOM FIGURE IS SHEET NO.
- EF / 1 — EQUIPMENT IDENTIFICATION
- 1 — KEYED NOTE IDENTIFICATION

FIRE

- HOSE VALVE
- NRS GATE VALVE WITH SUPERVISION
- FLOW SWITCH
- FIRE RISER
- SPRINKLER HEAD
- F — FIRE SPRINKLER WATER

LINETYPES

- AV — ACID VENT
- AW — ACID WASTE
- BBD — BOILER BLOW DOWN
- BF — BOILER FEED WATER
- B — BRINE
- CO2 — CARBON DIOXIDE
- CA — COMPRESSED AIR
- CF — CHEMICAL FEED
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- CS — CONDENSER WATER SUPPLY
- CR — CONDENSER WATER RETURN
- DOMESTIC COLD WATER (DCW)
- DOMESTIC HOT WATER (DHW)
- DOMESTIC HOT WATER RETURN (DHWR)
- DI — DEIONIZED WATER SUPPLY
- DIR — DEIONIZED WATER RETURN
- E(NAME) — EXISTING PIPING
- (NAME) — EXISTING PIPING TO BE REMOVED
- GHR — GLYCOL HEAT RECOVERY PIPING
- G(NAME) — GLYCOL PIPING SOLUTION
- FOR — FUEL OIL RETURN
- FOS — FUEL OIL SUPPLY
- FOV — FUEL OIL VENT
- G — NATURAL GAS
- HG — HOT GAS
- HFR — HELICOPTER FUEL RETURN
- HFS — HELICOPTER FUEL SUPPLY
- HP(NAME) — HIGH PRESSURE DOMESTIC WATER
- HPC — HIGH PRESSURE CONDENSATE
- HPS — HIGH PRESSURE STEAM
- HWR — HEATING HOT WATER RETURN
- HWS — HEATING HOT WATER SUPPLY
- IA — INSTRUMENT AIR
- IA 120 — INSTRUMENT AIR AT PRESSURE INDICATED
- LA — LAB AIR
- LV — LAB VACUUM
- LPC — LOW PRESSURE CONDENSATE
- LPG — LIQUIFIED PETROLEUM GAS
- LPS — LOW PRESSURE STEAM
- MA — MEDICAL AIR
- MA 120 — MEDICAL AIR AT PRESSURE INDICATED
- MPC — MEDIUM PRESSURE CONDENSATE
- MPS — MEDIUM PRESSURE STEAM
- MUW — MAKE UP WATER
- MV — MEDICAL VACUUM
- N — NITROGEN
- N20 — NITROUS OXIDE
- OX — MEDICAL OXYGEN
- OX 120 — MEDICAL OXYGEN AT PRESSURE INDICATED
- PUMPED CONDENSATE

LINETYPES CONT.

- RO — REVERSE OSMOSIS WATER SUPPLY
- ROR — REVERSE OSMOSIS WATER RETURN
- RD — ROOF DRAIN
- RDO — ROOF DRAIN OVERFLOW
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- SEWER (BELOW GRADE)
- SEWER (ABOVE GRADE)
- SW — SOFT DOMESTIC WATER (SW)
- V — VACUUM
- VENT (SEWER)

MECH. GENERAL NOTES

1. CFM — ALL CEILING DIFFUSERS SHOWN AS SUCH ARE CD-1, CFM AS NOTED, UNLESS OTHERWISE NOTED. REFER TO DETAIL A6/M501.
2. ALL CEILING RETURN GRILLES SHOWN AS SUCH ARE RG-1 UNLESS OTHERWISE NOTED. PROVIDE SOUND BOOT PER DETAIL B6/M501.
3. CFM — ALL CEILING EXHAUST GRILLES SHOWN AS SUCH ARE EG-1, CFM AS NOTED, UNLESS OTHERWISE NOTED.
4. DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGHI. DO NOT ROUTE DUCTS AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM.
5. COORDINATE EXACT LOCATIONS OF CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
6. REFER TO REHEAT BOX DETAIL C6/M501, A6/M502 & D4/502.
7. ALL DUCT DIMENSIONS ARE INSIDE FREE AREA DIMENSIONS. ADJUST SHEET METAL DIMENSION FOR LINED DUCT.
8. ALL FIRE DAMPERS SHOWN ARE 1-1/2 HOUR UNLESS OTHERWISE NOTED.
9. PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL EQUIPMENT, VALVES, VAV BOXES, FIRE DAMPERS, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
10. ALL DUCT AND FLUE PENETRATIONS THRU 1 HOUR ROOF ASSEMBLY TO BE ENCLOSED WITH 2 SHEET ROCK LAYERS FROM SHEET ROCK AT BOTTOM OF ROOF TRUSSES TO ROOF DECK.
11. STEEL ROOF DECK SHALL NOT BE USED TO SUPPORT LOADS FROM PIPING, DUCTWORK OR EQUIPMENT, UNLESS NOTED OTHERWISE. HANGER LOADS LESS THAN 50 LBS. MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHEN HANGING FROM THE STEEL ROOF DECK CANNOT BE AVOIDED; THE ATTACHMENT METHOD MUST DISTRIBUTE THE LOAD ACROSS THE DECK AS APPROVED BY THE STRUCTURAL ENGINEER.

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBF Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	12" = 1'-0"

MECHANICAL SYMBOLS ABBREV. & GENERAL NOTES

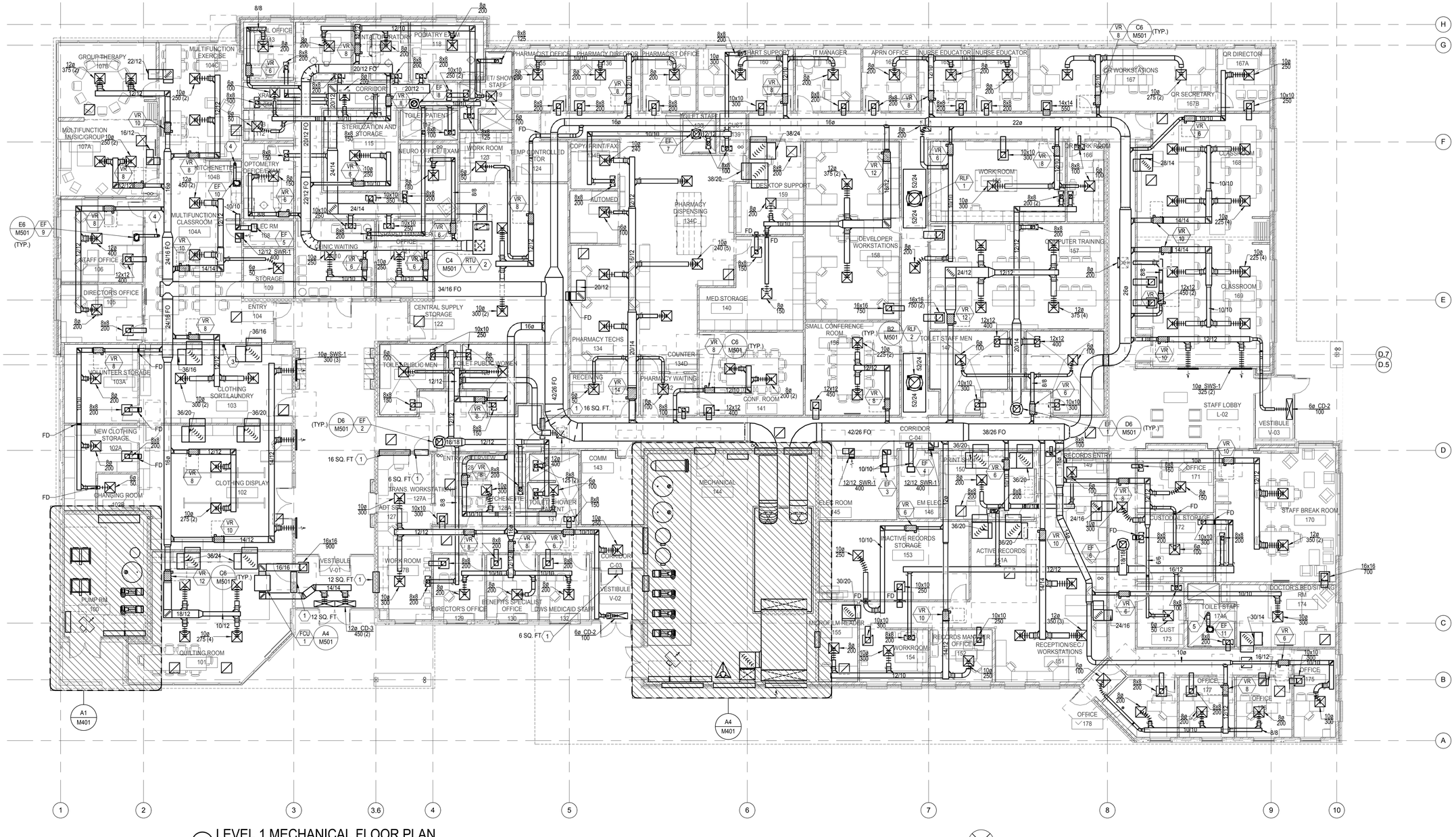
M001

9/7/2012 11:26:50 AM

REFERENCE NOTES

1. PROVIDE OPENING FOR RETURN AIR ABOVE CEILING. AREA OF OPENING AS INDICATED.
2. CURB SHALL EXTEND OFF OF THE TOP OF THE ROOF SUCH THAT IT WOULD HOUSE THE FINAL FILTER AND SO THAT THE BOTTOM OF THE OUTSIDE AIR INTAKE SHALL BE A MINIMUM OF 3 FEET ABOVE THE TOP OF THE ROOF.
3. EXTEND AND CONNECT 4" DRYER VENT THROUGH ROOF. TERMINATE WITH RAIN CAP.
4. EXTEND 6" EXHAUST DUCT THROUGH ROOF. TERMINATE WITH GOOSE NECK.
5. EXTEND 8" DIA. EXHAUST DUCT THROUGH ROOF. TERMINATE WITH GOOSENECK.

DFCM APPROVAL STAMP



A2 LEVEL 1 MECHANICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.539.3148 T
Salt Lake City, UT 84111 801.539.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/8" = 1'-0"

LEVEL 1 MECHANICAL FLOOR PLAN

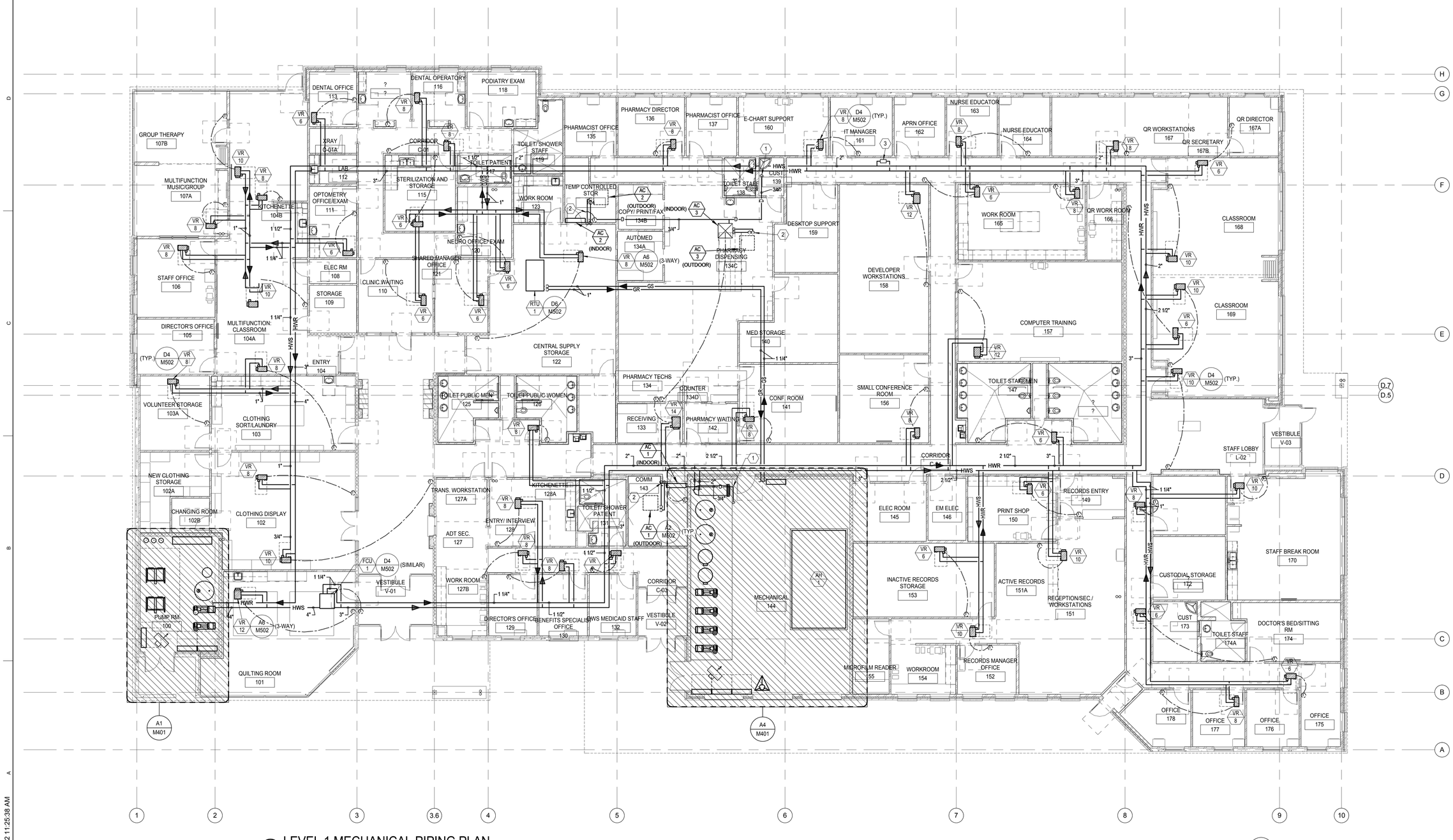
M101

9/7/2012 11:25:06 AM

REFERENCE NOTES

1. EXTEND 3/4" DRAIN LINE FROM INDOOR UNIT AND TERMINATE ABOVE NEAREST FLOOR DRAIN OR JANITORS MOP SINK.
2. EXTEND AND CONNECT REFRIGERANT PIPING FROM INDOOR UNIT, UP THROUGH ROOF TO OUTDOOR UNIT. PROVIDE, INSTALL, AND SIZE REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS.
3. PROVIDE AND INSTALL DIFFERENTIAL PRESSURE SENSOR.

DFCM APPROVAL STAMP



A2 LEVEL 1 MECHANICAL PIPING PLAN
SCALE: 1/8" = 1'-0"

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

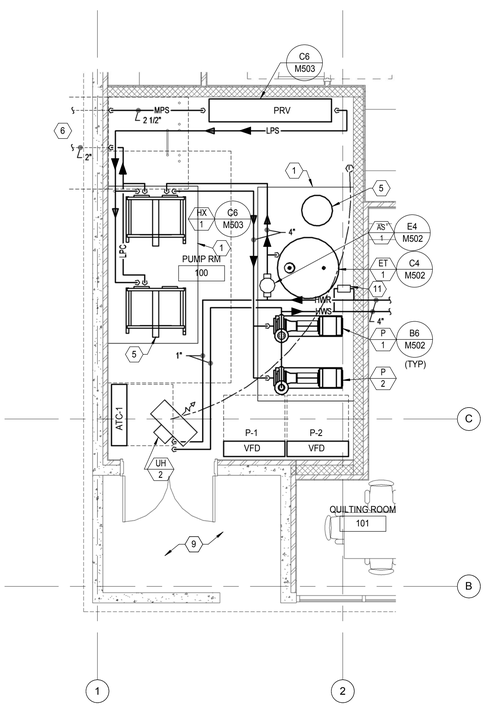
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/8" = 1'-0"

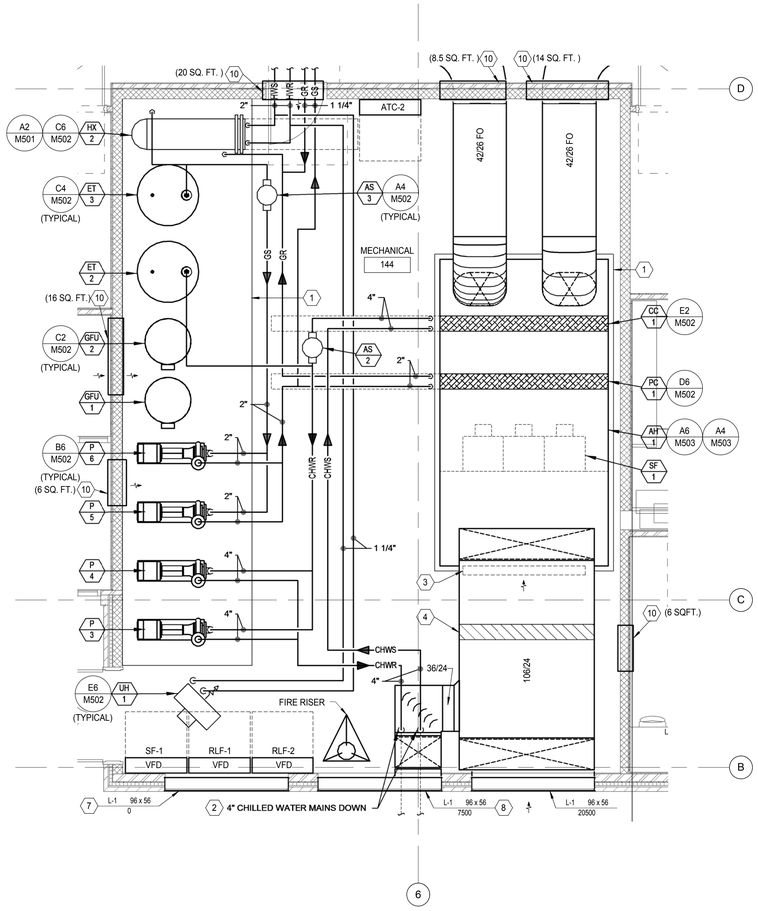
LEVEL E MECHANICAL PIPING PLAN

MP101

9/7/2012 11:25:38 AM



A1 LARGE SCALE PUMP ROOM PLAN
SCALE: 1/4" = 1'-0"



A4 LARGE SCALE MECHANICAL ROOM PLAN
SCALE: 1/4" = 1'-0"

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

1. PROVIDE AND INSTALL NEW 4" CONCRETE HOUSEKEEPING PAD.
2. SEE MECHANICAL SITE PLANS FOR CONTINUATION OF PIPING.
3. RETURN AIR DAMPER ON SIDE OF AIR HANDLER. SEE DETAIL FOR SIZE MECHANICAL ROOM TO SERVE AS RETURN AIR PLENUM.
4. PROVIDE AND INSTALL OUTSIDE AIRFLOW MEASURING STATION, (BY ATC).
5. PLUMBING EQUIPMENT, SEE PLUMBING DRAWINGS.
6. SEE CIVIL SITE PLAN C100 FOR CONTINUATION OF PIPING.
7. BLANK OFF EXTERIOR WALL LOUVER.
8. BLANK OFF SECTION OF EXTERIOR WALL LOUVER. CONNECT OUTSIDE AIR DUCT TO REMAINING 36"x56" LOUVER.
9. ATC CONTRACTOR TO LOCATE OUTDOOR AIR SENSOR AT LOCATION SHOWN. COORDINATE WITH ARCHITECT.
10. MECHANICAL ROOM TO BE RETURN AIR PLENUM. PROVIDE OPENING FOR RETURN AIR ABOVE CEILING. AREA OF OPENING AS INDICATED.
11. PROVIDE AND INSTALL DIFFERENTIAL PRESSURE SENSOR.

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City · Logan · St. George · Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

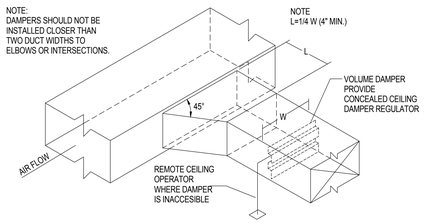
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/4" = 1'-0"

LARGE SCALE MECHANICAL PLANS

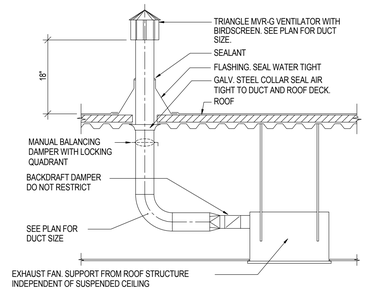
M401

9/7/2012 11:25:12 AM



D4 / M501 BRANCH DUCT TAKE-OFF & DAMPER DETAIL

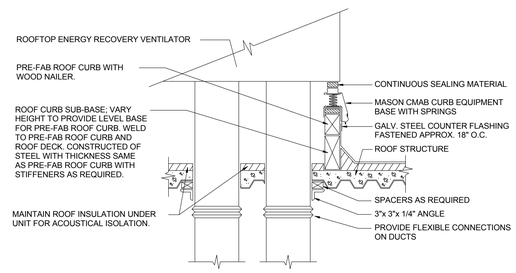
NO SCALE



E6 / M501 INLINE EXHAUST FAN DETAIL

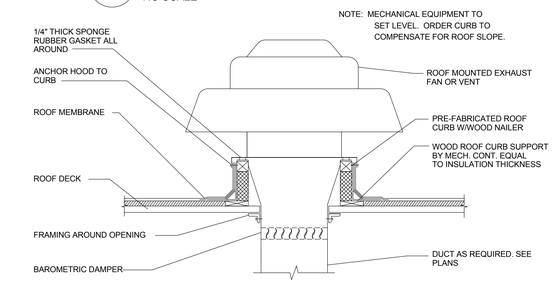
NO SCALE

NOTE:
1. ANCHOR UNIT TO PRE-FAB ROOF CURB PER SEISMIC RESTRAINT REQUIREMENTS.
2. FINAL FITTER TO BE INSTALLED AT ROOF CURB IN SUPPLY AIR DUCT.



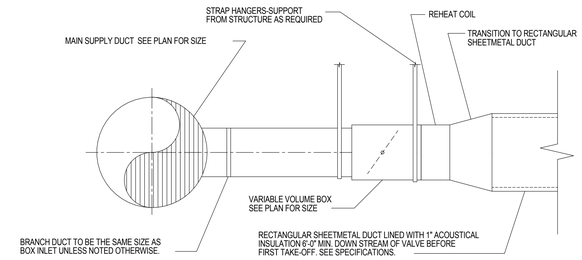
C4 / M501 ROOFTOP UNIT ON SPRING BASE DETAIL

NO SCALE



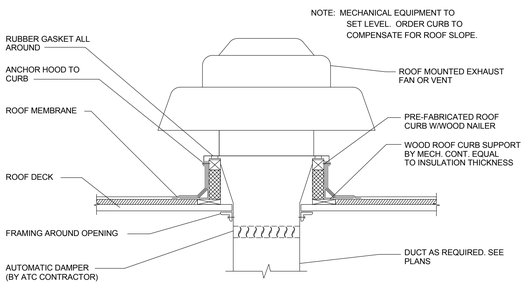
D6 / M501 ROOF MOUNTED EXHAUST FAN DETAIL

NO SCALE



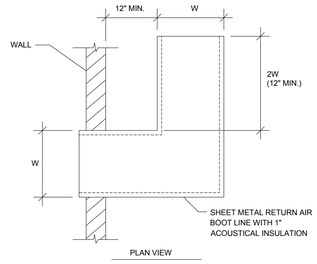
C6 / M501 VARIABLE VOLUME BOX DETAIL

NO SCALE



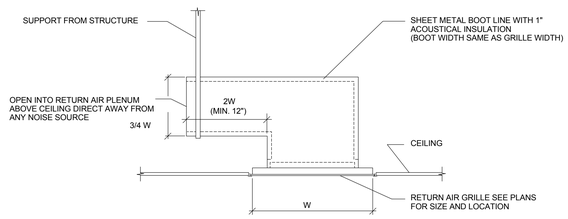
B2 / M501 ROOF MOUNTED RELIEF FAN DETAIL

NO SCALE



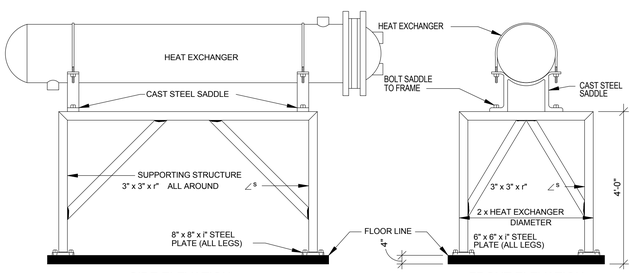
B4 / M501 RETURN AIR BOOT DETAIL

NO SCALE



B6 / M501 RETURN AIR SOUND BOOT DETAIL

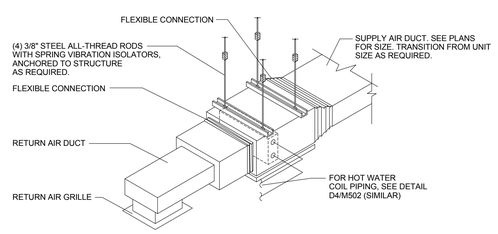
NO SCALE



NOTE: SUPPORT OF THE HEAT EXCHANGER SHALL BE DESIGNED BY THE SEISMIC & VIBRATION ENGINEER AS SPECIFIED IN SECTION 230548. PROVIDE ALL NECESSARY FRAMING INFORMATION INCLUDING: MEMBER SIZES, CONNECTIONS, ANCHORAGE, AND STRUCTURAL CALCULATIONS, ETC.

A2 / M501 HEAT EXCHANGER SUPPORT DETAIL

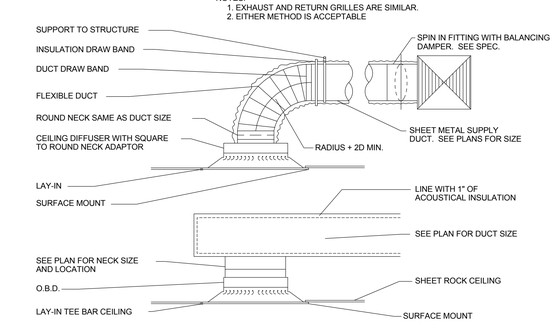
NO SCALE



A4 / M501 FAN COIL UNIT DETAIL

NO SCALE

NOTES:
1. EXHAUST AND RETURN GRILLES ARE SIMILAR.
2. EITHER METHOD IS ACCEPTABLE



A6 / M501 CEILING DIFFUSER DETAIL

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC. CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

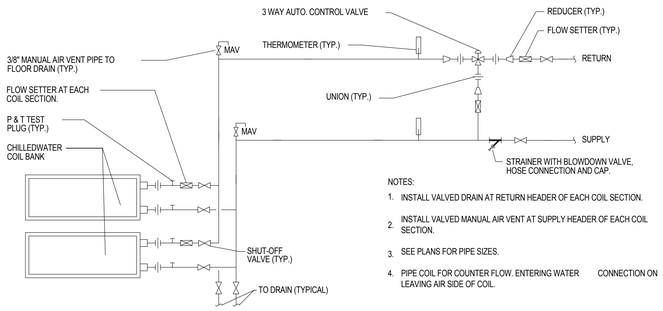
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE

MECHANICAL DETAILS

M501

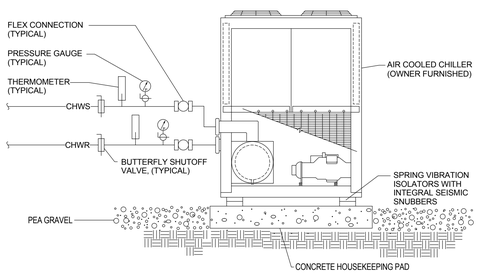
9/7/2012 11:25:14 AM



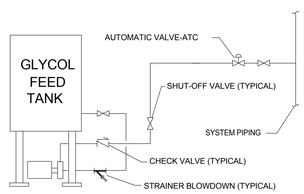
NOTES:
1. INSTALL VALVED DRAIN AT RETURN HEADER OF EACH COIL SECTION.
2. INSTALL VALVED MANUAL AIR VENT AT SUPPLY HEADER OF EACH COIL SECTION.
3. SEE PLANS FOR PIPE SIZES.
4. PIPE COIL FOR COUNTER FLOW. ENTERING WATER CONNECTION ON LEAVING AIR SIDE OF COIL.

E2 / M502 COOLING COIL PIPING SCHEMATIC (3-WAY)
NO SCALE

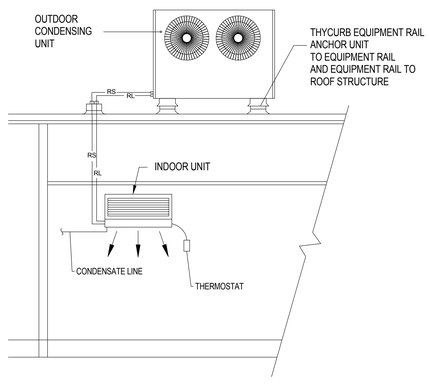
NOTE:
ARRANGE PIPING TO FACILITATE TUBE SERVICE SPACE.



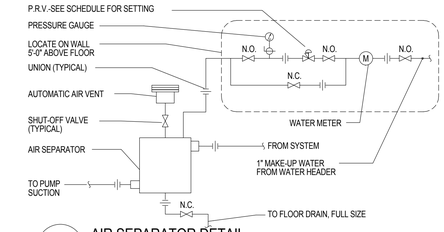
D2 / M502 CHILLER PIPING DETAIL
NO SCALE



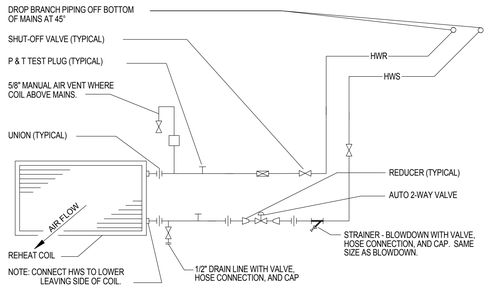
C2 / M502 GLYCOL FEED UNIT DETAIL
NO SCALE



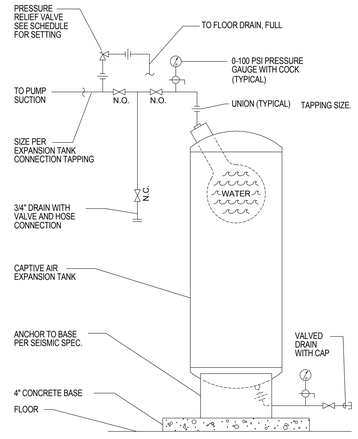
A2 / M502 SPLIT SYSTEM AC UNIT DETAIL



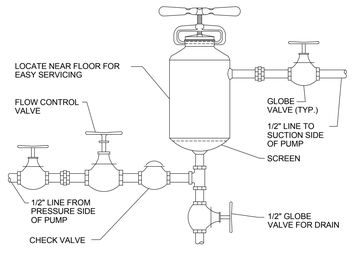
E4 / M502 AIR SEPARATOR DETAIL
NO SCALE



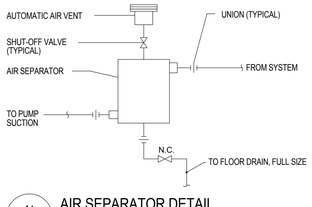
D4 / M502 REHEAT COIL W/2-WAY VALVE DETAIL
NO SCALE



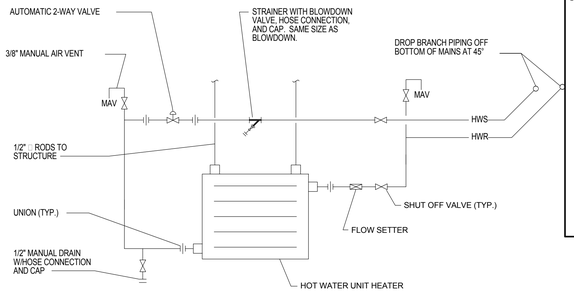
C4 / M502 EXPANSION TANK DETAIL
NO SCALE



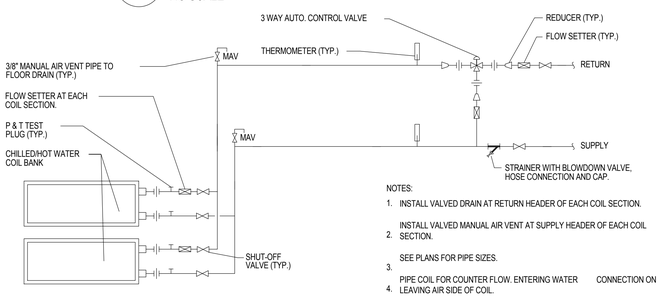
B4 / M502 POT TYPE CHEMICAL FEEDER DETAIL
NO SCALE



A4 / M502 AIR SEPARATOR DETAIL
NO SCALE

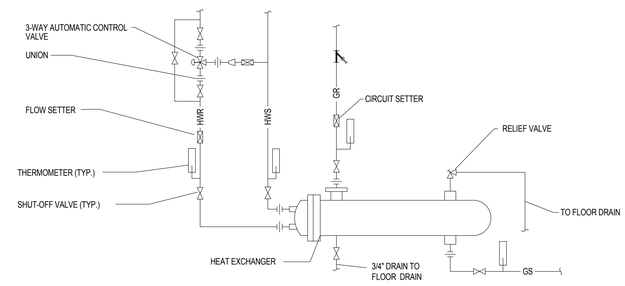


E6 / M502 HOT WATER UNIT HEATER PIPING DETAIL
NO SCALE

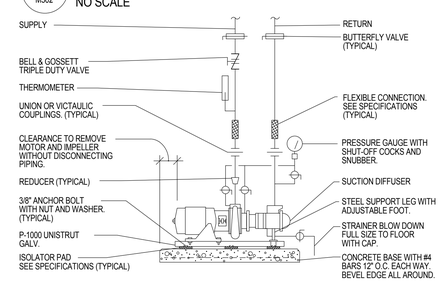


NOTES:
1. INSTALL VALVED DRAIN AT RETURN HEADER OF EACH COIL SECTION.
2. INSTALL VALVED MANUAL AIR VENT AT SUPPLY HEADER OF EACH COIL SECTION.
3. SEE PLANS FOR PIPE SIZES.
4. PIPE COIL FOR COUNTER FLOW. ENTERING WATER CONNECTION ON LEAVING AIR SIDE OF COIL.

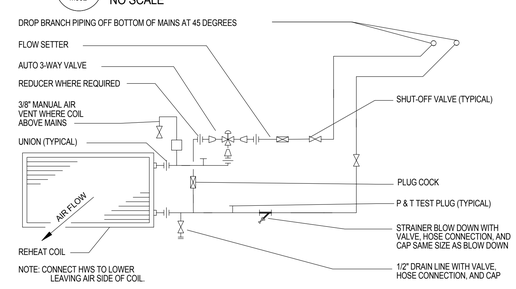
D6 / M502 HEATING & PREHEAT COIL PIPING SCHEMATIC (3-WAY)
NO SCALE



C6 / M502 WATER TO GLYCOL HEAT EXCHANGER
NO SCALE



B6 / M502 PUMP CONNECTION DETAIL
NO SCALE



A6 / M502 REHEAT COIL W/3-WAY VALVE DETAIL
NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE

MECHANICAL DETAILS

M502

9/7/2012 11:25:16 AM

DFCM APPROVAL STAMP

FFKR ARCHITECTS

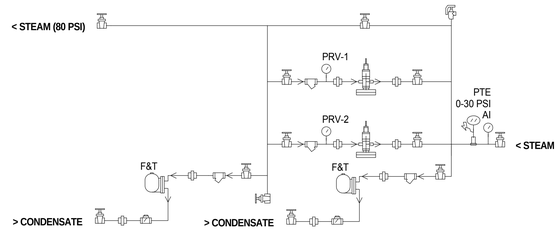
bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

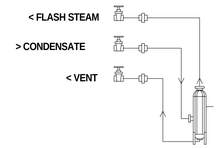
VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL ELECTRICAL
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

PARTIAL LEGEND

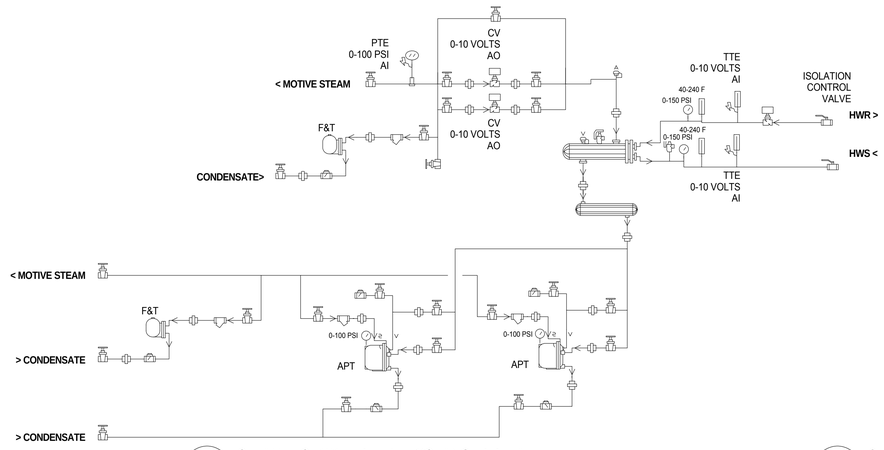
- BALL VALVE (<2"=BALL, >2"=BUTTERFLY)
- GATE VALVE
- PLUG COCK
- BUTTERFLY VALVE
- GLOBE VALVE
- CHECK VALVE
- TEMPERATURE AND PRESSURE TEST PORT - TTE, PTE
- FLANGE
- UNION
- STRAINER WITH BLOWDOWN VALVE
- BALANCING VALVE
- PRESSURE RELIEF VALVE
- VACUUM RELIEF VALVE
- MANUAL AIR VENT
- 3-WAY CONTROL VALVE - CV
- 2-WAY CONTROL VALVE - CV
- PRESSURE GUAGE WITH SHUT-OFF COCK
- TEMPERATURE INDICATOR
- F&T TRAP
- FLEXIBLE CONNECTOR
- RPBP
- PRV
- EQUIPMENT
- APT PUMP/STEAM TRAP
- DRAIN VALVE
- RELIEF VALVE
- CS CURRENT SENSOR
- STR STARTER
- RECEIVER



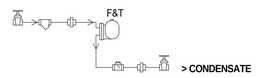
D4 / M503 STEAM PRV STATION DETAIL
SCALE: NONE



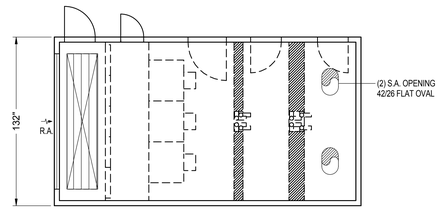
D6 / M503 FLASHTANK DETAIL
SCALE: NONE



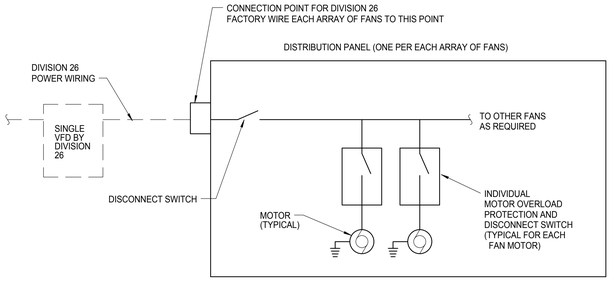
C4 / M503 STEAM - TO - WATER HEAT EXCHANGER DETAIL
SCALE: NONE



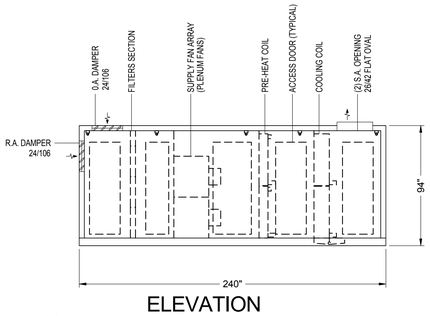
C6 / M503 STEAM TRAP DETAIL
SCALE: NONE



PLAN VIEW



A4 / M503 AIR HANDLER - FAN ARRAY WIRING
NO SCALE



ELEVATION
VIEW

A6 / M503 AIR HANDLER LAYOUT - AH-1
SCALE: 1/4" = 1'-0"

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE

MECHANICAL DETAILS

M503

9/7/2012 11:25:18 AM

GRILLES, REGISTERS AND DIFFUSERS

ID	MANUFACTURER	MODEL	MAX NC	DESCRIPTION
CD-1	EH PRICE	SPD	30	SQUARE PLAQUE FACE CEILING DIFFUSERS. REMOVABLE FACE, C.W./O.B.D. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE.
CD-2	EH PRICE	ASPI	30	1 SLOT LINEAR CEILING DIFFUSER WITH FULLY ADJUSTABLE AIR PATTERN AND FLOW CONTROL VANES FOR ONE OR TWO WAY THROW PATTERN. UNITS SHALL HAVE 1" SLOTS AND INSULATED PLENUM WITH ROUND DUCT CONNECTION. FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED. UNIT SHALL BE CURVED FACE FOR EXPOSED DUCT MOUNTING AS REQUIED. FRAME COLOR TO BE BLACK.
CD-3	EH PRICE	ASPI	30	2 SLOT LINEAR CEILING DIFFUSER WITH FULLY ADJUSTABLE AIR PATTERN AND FLOW CONTROL VANES FOR ONE OR TWO WAY THROW PATTERN. UNITS SHALL HAVE 1.5" SLOTS AND INSULATED PLENUM WITH ROUND DUCT CONNECTION. FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED. UNIT SHALL BE CURVED FACE FOR EXPOSED DUCT MOUNTING AS REQUIED. FRAME COLOR TO BE BLACK.
RG-1	EH PRICE	PDDR	30	PERFORATED FACE RETURN AIR UNIT, REMOVABLE FACE & CORE. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES HSLL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE. AIR QUANTITY SHALL MATCH ROOM SUPPLY OR EXHAUST AIR QUANTITY.
EG-1	EH PRICE	80	30	CRATE TYPE CEILING RETURN AIR UNIT, WITH OBD. REMOVABLE FACE AND CORE. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE. UNITS SHALL HAVE 1/2" x 1/2" x 1/2" SQUARES.
SWS-1	EH PRICE	ASPI	30	2 SLOT LINEAR CEILING DIFFUSER WITH FULLY ADJUSTABLE AIR PATTERN AND FLOW CONTROL VANES FOR ONE OR TWO WAY THROW PATTERN. UNITS SHALL HAVE 1" SLOTS AND INSULATED PLENUM WITH ROUND DUCT CONNECTION. FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED. UNIT SHALL BE CURVED FACE FOR EXPOSED DUCT MOUNTING AS REQUIED. NO BORDER.
SWR-1	EH PRICE	535	30	SIDEWALL RETURN AIR GRILLE. HORIZONTAL STATIONARY 45 DEG DEFLECTION VANES SET ON 1/2 INCH CENTER, COMPLETE WITH OBD ADJUSTABLE THROUGH FACE.
L-1	AIROLITE	K6776	SEE PLANS	WALL LOUVER , STATIONARY 6 INCH THICK 35 BLADE, 12 GA., EXT. ALUMINUM BLADES, 8 GA, EXT. ALUMINUM JAMBS. CHANNEL FRAME. BIRD SCREEN. CUSTOM COLOR AND FINISH TO BE SELECTED BY ARCHITECT.

FAN COIL SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	AIR: MAXIMUM AIRFLOW RATE (CFM)	FAN: EXTERNAL STATIC PRESSURE (IN. WATER)	COIL 1: MEDIUM	COIL 2: MEDIUM	ELECTRICAL: FAN QUANTITY	MOTOR SIZE (HP)	VOLT/PH/HZ	PHYSICAL: LENGTH/ WIDTH/ HEIGHT (IN)	NOTES
FCU-1	CARRIER 39S-02	VESTIBULE	NOTE 1	900	0.50	H. WATER	NA	1	1/2	115/1/60	37 / 36 / 18	1,2,3

1. CAPACITIES BASED ON 4500 FEET ELEVATION.
2. HORIZONTAL, FRONT DISCHARGE FAN COIL UNIT.
3. UNIT TO COME WITH STARTER AND DISCONNECT.

FAN COIL, COIL SCHEDULE

ID	COIL #	USE TYPE	AIR: AIRFLOW RATE (CFM)	AIR: LOAD (BTU/H)	AIR: SENSIBLE LOAD (BTU/H)	AIR: ENTERING TEMP. DB/WB (°F)	AIR: LEAVING TEMP. DB/WB (°F)	HYDRONIC: FLOW RATE (GPM)	HYDRONIC: ENTERING/ LEAVING TEMP. (°F)	HYDRONIC: WORKING FLUID	HYDRONIC: HEAD LOSS (FT)	PHYSICAL: MINIMUM NO. ROWS/ FINS PER INCH	NOTES
FCU-1	1	HEATING	900	38,840	NA	65	110	4.0	180 / 160	H. WATER	4.2	2 / 10	1,2

1. CAPACITIES BASED ON 4500 FEET ELEVATION.
2. HEATING UNIT ONLY.

AIR HANDLER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	AIR: SUPPLY AIRFLOW (CFM)	AIR: MIN OUTSIDE AIRFLOW (CFM)	COMPONENTS: FANS	COMPONENTS: COOLING COIL	COMPONENTS: HEATING COIL	COMPONENTS: FILTER AREA (FT²)	ELECTRICAL: VOLT/PH/HZ	ELECTRICAL: LIGHTS	PHYSICAL: CABINET LENGTH/ WIDTH/HEIGHT (IN)	PHYSICAL: WEIGHT (LB)	NOTES
AH-1	UNITECH CUSTOM BUILT	MECHANICAL ROOM	28,000	6,000	SF-1	CC-1	PC-1	70	208/3/60	120/1/60	240/132/94	30,000	1

1. CUSTOM BUILT AIR-HANDLING UNIT.

COIL SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	USAGE	AIR: AIRFLOW RATE (CFM)	AIR: TOTAL LOAD (BTU/H)	AIR: SENSIBLE LOAD (BTU/H)	AIR: ENTERING TEMP. DB/WB (°F)	AIR: LEAVING TEMP. DB/WB (°F)	AIR: STATIC PRESSURE (IN. WATER)	FLUID: FLOW RATE (GPM)	FLUID: ENTERING/ LEAVING TEMP. (°F)	FLUID: WORKING FLUID	FLUID: HEAD LOSS (FT)	PHYSICAL: NO. COILS	PHYSICAL: EACH COIL FIN WIDTH/ HEIGHT (IN)	PHYSICAL: MINIMUM FACE AREA (FT²)	PHYSICAL: MINIMUM NO. ROWS/ FINS PER INCH	NOTES
PC-1	UNITECH 58W39X52-6-2-W-Q-R	MECHANICAL ROOM	HEATING	8,400	NA	403,400	20	67	0.02	25	140 / 104	50% PG	2.7	4	52 / 39	56.3	2 / 6	1
CC-1	UNITECH 58W39X52-11-6-W-H-R	MECHANICAL ROOM	COOLING	28,000	794,000	716,100	80 / 62	52 / 52	0.7	145	45 / 56	30% PG	10.5	4	52 / 39	56.3	6 / 11	1

1. CAPACITIES BASED ON 4500 FEET ELEVATION.

FAN SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FAN QUANTITY	AIR TYPE	AIR: MAXIMUM AIRFLOW RATE (CFM)	AIR: STATIC PRESSURE (IN. WATER)	FAN: OUTLET VELOCITY (FPM)	FAN: FAN SPEED (RPM)	FAN: FAN WHEEL DIAMETER (IN)	FAN: STATIC EFFICIENCY (%)	ELECTRICAL: EACH MOTOR SIZE (HP)	ELECTRICAL: TOTAL MOTOR (HP)	ELECTRICAL: EACH MOTOR BHP (HP)	ELECTRICAL: TOTAL MOTOR (BHP)	ELECTRICAL: MOTOR SPEED (RPM)	ELECTRICAL: VOLT/PH/HZ	NOTES
SF-1	TWIN CITY FAN MPQN-182	MECHANICAL ROOM	NOTE 4	6	SUPPLY	28,000	4.75	896	2277	18.25	66.00%	7.5	50	5.3	31.6	1800	208/3/60	1,3,4
RLF-1	COOK 402 ACEB	ROOF	NOTE 2	NA	RLF	10,650	0.35	1004	363	40	46%	2	NA	1.36	NA	1750	208/3/60	1,2,3
RLF-2	COOK 402 ACEB	ROOF	NOTE 2	NA	RLF	10,650	0.35	1004	363	40	46%	2	NA	1.36	NA	1750	208/3/60	1,2,3

1. CAPACITIES BASED ON 4500 FEET ELEVATION.
2. ROOF MOUNTED RELIEF FAN, COMPLETE WITH 18" PRE-FAB ROOF CURB, COUNTER BALANCED BAROMETRIC BACKDRAFT DAMPER, BIRD SCREEN, INTEGRAL THERMAL OVERLOAD PROTECTION.
3. MOTOR TO BE VFD COMPATIBLE, PREMIUM EFFICIENT MOTOR. VFD TO BE PROVIDED BY DIVISION 26
4. MULTI-FAN ARRAY.

PACKAGED VAV ROOFTOP UNIT SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	SUPPLY FAN: AIRFLOW RATE (CFM)	SUPPLY FAN: MIN OUTSIDE AIRFLOW (CFM)	SUPPLY FAN: EXTERNAL STATIC PRESSURE (IN. WATER)	HEATING SECTION: HEATING AIRFLOW (CFM)	HEATING SECTION: HEATING LOAD (BTU/H)	HEATING SECTION: AMBIENT TEMP. DB (°F)	HEATING SECTION: ENTERING/ LEAVING AIR TEMP. (°F)	HEATING SECTION: MEDIUM	HEATING SECTION: ENTERING/ LEAVING WATER (°F)	HEATING SECTION: FLOW RATE (GPM)	COOLING SECTION: TOTAL COOLING LOAD (BTU/H)	COOLING SECTION: SENSIBLE COOLING LOAD (BTU/H)	COOLING SECTION: AMBIENT TEMP. DB/WB (°F)	COOLING SECTION: ENTERING AIR TEMP. DB/WB (°F)	COOLING SECTION: LEAVING AIR TEMP. DB/WB (°F)	COOLING SECTION: MEDIUM	ELECTRICAL: TOTAL MCA	ELECTRICAL: TOTAL MOCP	ELECTRICAL: SINGLE POINT VOLT/PH/HZ	WEIGHT (LBS)	NOTES
RTU-1	AAON RN-008	ROOF	2,400	550	2.75	750	50,400	0	25 / 92	50% PG	140 / 117	5.0	75,000	61,750	95 / 75	80 / 62	51 / 51	R-410A	55	70	208/3/60	1500	1,2,3,4,5,6

1. CAPACITIES BASED ON 4500 FEET ELEVATION.
2. PACKAGED VAV ROOFTOP UNIT CONSISTING OF 30% PREFILTERS, 90% FINAL FILTERS AT CURB, 100% ECONOMIZER MODE WITH POWER EXHAUST.
3. UNIT TO COME WITH MODULATING COMPRESSOR, 2-ROW HEATING COIL, 115V CONVENIENCE OUTLET, 36" HIGH ROOF CURB WITH INTEGRAL SEISMIC RESTRAINED VIBRATION ISOLATION.
4. UNIT TO COME WITH VFD AND NON-FUSED DISCONNECT.
5. UNIT TO COME WITH BACNET CARD TO INTERLOCK WITH BMS.
6. OUTSIDE AIR INTAKE TO BE 36" MINIMUM ABOVE ROOF.

EXHAUST FAN SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	AIR TYPE	AIR: MAXIMUM AIRFLOW RATE (CFM)	AIR: STATIC PRESSURE (IN. WATER)	FAN: OUTLET VELOCITY (FPM)	FAN: FAN SPEED (RPM)	FAN: STATIC EFFICIENCY (%)	ELECTRICAL: MOTOR SIZE (HP)	ELECTRICAL: MOTOR BHP (HP)	ELECTRICAL: MOTOR SPEED (RPM)	ELECTRICAL: VOLT/PH/HZ	PHYSICAL: WEIGHT (LB)	CONTROL	NOTES
EF-1	COOK ACEB 135	RESTROOM 148	NOTE 2	EXH	1,400	0.50	1173	1219	56%	1/3	0.23	1750	115/1/60	75	B	1,2
EF-2	COOK ACEB 120	RESTROOM 126	NOTE 2	EXH	1,150	0.50	1001	1274	60%	1/4	0.14	1750	115/1/60	75	B	1,2
EF-3	COOK GC-640	ELECTRICAL 145	NOTE 3	EXH	400	0.35	910	1075	22%	1/6	NA	1750	120/1/60	40	A	1,3
EF-4	COOK GC-640	EM ROOM 146	NOTE 3	EXH	400	0.35	910	1075	22%	1/6	NA	1750	120/1/60	40	A	1,3
EF-5	COOK GC-640	ELECTRICAL 108	NOTE 3	EXH	400	0.35	910	1075	22%	1/6	NA	1750	120/1/60	40	A	1,3
EF-6	COOK ACEB 135	SHOWER 172	NOTE 2	EXH	1,000	0.50	1005	1132	60%	1/4	0.17	1750	120/1/60	75	B	1,2
EF-7	COOK ACEB 100	PHARMACY 134	NOTE 2	EXH	600	0.50	879	1547	48%	1/4	0.11	1750	120/1/60	50	B	1,2
EF-8	COOK ACEB 100	CORRIDOR C-01	NOTE 2	EXH	550	0.50	840	1527	47%	1/4	0.11	1750	120/1/60	50	B	1,2
EF-9	COOK GC-420	STAFF OFFICE 106	NOTE 3	EXH	200	0.35	1892	1145	25%	1/6	NA	1750	120/1/60	40	B	1,3
EF-10	COOK GC-420	KITCHENETTE 104B	NOTE 3	EXH	200	0.35	1892	1145	25%	1/6	NA	1750	120/1/60	40	B	1,3
EF-11	COOK GC-420	DOCS RESTROOM	NOTE 3	EXH	200	0.35	1892	1145	25%	1/6	NA	1750	120/1/60	40	C	1,3

1. ALL CAPACITIES BASED ON 4500 FEET ELEVATION.
2. ROOF MOUNTED EXHAUST FAN, COMPLETE WITH 18" PRE-FAB ROOF CURB, COUNTER BALANCED BAROMETRIC BACKDRAFT DAMPER, BIRD SCREEN, INTEGRAL THERMAL OVERLOAD PROTECTION.
3. CEILING MOUNTED INLINE EXHAUST FAN. PROVIDE GRAVITY BACKDRAFT DAMPER, INTERGRAL THERMAL OVERLOAD PROTECTION, SPEED CONTROLLER

A. CONTROL: THERMOSTAT
B. CONTROL: ATC - OCCUPIED / UNOCCUPIED SCHEDULE
C. CONTROL: SWITCH

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE 12" = 1'-0"

MECHANICAL SCHEDULES

M601

9/7/2012 11:25:23 AM

(OWNER FURNISHED) AIR-COOLED CHILLER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	REFRIG.	LOAD (TONS)	AIR: AMBIENT ENTERING TEMP. DB/WB (°F)	FLUID: FLOW RATE (GPM)	FLUID: ENTERING/ LEAVING TEMP. (°F)	FLUID: WORKING FLUID	FLUID: HEAD LOSS (FT)	ELECTRICAL: TOTAL MCA	ELECTRICAL: TOTAL MOCP	ELECTRICAL: EER	ELECTRICAL: CHILLER AND CONTROL CIRCUIT VOLT/PH/HZ	PHYSICAL: LENGTH/ WIDTH/ HEIGHT (IN)	NOTES
CH-1	MCQUAY AGZ075C	MECH YARD	AIR-COOLED	R-410A	71.1	95	145	55 / 45	30% PG	10.0	364	400	9.7	208/3/60	135 / 88 / 101	1,2,3,4

1. OWNER FURNISHED, CONTRACTOR TO INSTALL UNIT.
2. CAPACITIES BASED ON 4500 FEET ELEVATION.
3. SINGLE POINT POWER CONNECTION.
4. OWNER FURNISHED NON FUSED DISCONNECT AND STARTER.

HOT WATER UNIT HEATER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	USE TYPE	AIR: AIRFLOW RATE (CFM)	AIR: LOAD (BTU/H)	AIR: ENTERING TEMP. DB (°F)	AIR: LEAVING TEMP. DB (°F)	FLUID: FLOW RATE (GPM)	FLUID: ENTERING/ LEAVING TEMP. (°F)	FLUID: WORKING FLUID	FLUID: HEAD LOSS (FT)	ELECTRICAL: MOTOR SIZE (HP)	ELECTRICAL: MOTOR SPEED (RPM)	ELECTRICAL: VOLT/PH/HZ	PHYSICAL: LENGTH / WIDTH / HEIGHT (IN)	NOTES
UH-1	RITTLING H-47	MECHANICAL 144	NOTE 1	HEATING	730	33,800	60	103	3.5	180 / 160	WATER	0.2	1/15	1550	115/1/60	19 / 20 / 13	1
UH-2	RITTLING H-18	PUMP ROOM 001	NOTE 1	HEATING	460	18,000	60	96	2.5	180 / 165	WATER	0.2	1/20	1550	115/1/60	19 / 20 / 13	1

1. HORIZONTAL MOUNTED HOT WATER UNIT HEATER

STEAM-TO-HYDRONIC HEAT EXCHANGER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	USAGE	LOAD (BTU/H)	SOURCE MEDIUM (STEAM): FLOW RATE (LB/H)	SOURCE MEDIUM (STEAM): ENTERING PRESSURE (PSIG)	TRANSFER MEDIUM (HYDRONIC): FLOW RATE (GPM)	TRANSFER MEDIUM (HYDRONIC): ENTERING/ LEAVING TEMP. (°F)	TRANSFER MEDIUM (HYDRONIC): WORKING FLUID	TRANSFER MEDIUM (HYDRONIC): HEAD LOSS (FT)	PHYSICAL: WEIGHT (LBS)	PHYSICAL: SURFACE AREA (FT^2)	NOTES
HX-1	SPIRAX SARCO QUICKHEAT HTG-HEX-25087SWA-XX	PUMP ROOM	SHELL & PLATE	HEATING	860,000	866	20	87	160/180	WATER	3.6	680	120	1,2

1. COMPLETE WITH STEAM SIDE CONTROL, APT PUMP-TRAP, LOCAL ASCON CONTROL PANEL, AND BACNET INTERFACE CARD.

HEAT EXCHANGER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	USAGE	LOAD (BTU/H)	SOURCE MEDIUM (HYDRONIC): FLOW RATE (GPM)	SOURCE MEDIUM (HYDRONIC): ENTERING/ LEAVING TEMP. (°F)	SOURCE MEDIUM (HYDRONIC): WORKING FLUID	SOURCE MEDIUM (HYDRONIC): HEAD LOSS (FT)	TRANSFER MEDIUM (HYDRONIC): FLOW RATE (GPM)	TRANSFER MEDIUM (HYDRONIC): ENTERING/ LEAVING TEMP. (°F)	TRANSFER MEDIUM (HYDRONIC): WORKING FLUID	TRANSFER MEDIUM (HYDRONIC): HEAD LOSS (FT)	PHYSICAL: DIA./ LENGTH / (IN/IN)	PHYSICAL: SURFACE AREA (FT^2)	NOTES
HX-2	TACO G10414-3L	MECH ROOM	SHELL AND TUBE	PREHEAT COILS	483,100	31	180 / 150	WATER	2	30	104 / 140	50% PG	2	10 / 84	36.2	1

1. STEEL SHELL, COPPER TUBES, 4-PASS HEAD

PUMP SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	SYSTEM	LOCATION	TYPE	FLUID: FLOW RATE (GPM)	FLUID: WORKING FLUID	FLUID: HEAD LOSS (FT)	PUMP: EFFICIENCY (%)	PUMP: CONSTRUCTION	ELECTRICAL: MOTOR SIZE (HP)	ELECTRICAL: MOTOR BHP (HP)	ELECTRICAL: MOTOR SPEED (RPM)	ELECTRICAL: VOLT/PH/HZ	NOTES
P-1	TACO FI 1509	HEATING	PUMP ROOM	BASE MOUNTED	118	WATER	81	63%	CAST IRON	5	3.9	1750	208/3/60	1,2,3
P-2	TACO FI 1509	HEATING	PUMP ROOM	BASE MOUNTED	118	WATER	81	63%	CAST IRON	5	3.9	1750	208/3/60	1,2,3
P-3	TACO FI 1511	CHILLED	MECH ROOM	BASE MOUNTED	145	30% PG	83	52%	CAST IRON	7.5	4.9	1750	208/3/60	1,2
P-4	TACO FI 1511	CHILLED	MECH ROOM	BASE MOUNTED	145	30% PG	83	52%	CAST IRON	7.5	4.9	1750	208/3/60	1,2
P-5	TACO FI 1207	PREHEAT	MECH ROOM	BASE MOUNTED	30	50% PG	52	41%	CAST IRON	2	1.7	1750	208/3/60	1,2
P-6	TACO FI 1207	PREHEAT	MECH ROOM	BASE MOUNTED	30	50% PG	52	41%	CAST IRON	2	1.7	1750	208/3/60	1,2

1. BASE-MOUNTED, END SUCTION CENTRIFUGAL PUMP
2. PUMPS ARE PRIMARY / STANDBY
3. VFD BY ELECTRICAL

SPLIT SYSTEM

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	COOLING CAPACITY (BTU/H)	HEATING CAPACITY (BTU/H)	INDOOR UNIT: CFM RANGE	INDOOR UNIT: DIMENSIONS W" x H" x D"	INDOOR UNIT: AMPS (MCA)	INDOOR UNIT: VOLTS/PH/HZ.	OUTDOOR UNIT: DIMENSIONS W" x H" x D"	OUTDOOR UNIT: WEIGHT (LBS.)	OUTDOOR UNIT: AMPS (MCA)	OUTDOOR UNIT: VOLTS/PH/HZ.	REFRIGERANT LINES: LIQUID	REFRIGERANT LINES: GAS	NOTES
AC-1	MITSUBISHI MSY-GA 24NA	COMM 143	24,000	NA	300-625	44 X 13 X 11	1	208/1/60	34 X 34 X 13	150	17	208/1/60	3/8	5/8	1,2,3,4,5,6,7
AC-2	MITSUBISHI PLA-A24BA	PHARMACY	24,000	26,000	450 - 650	34 X 34 X 11	1	208/1/60	37 X 37 X 14	200	18	208/1/60	3/8	5/8	1,2,3,4,5,6,7
AC-3	MITSUBISHI MSZ-GE09NA	TEMP CONTROLLED	9,000	10,900	145 - 400	32 X 10 X 12	1	208/1/60	32 X 12 X 22	75	12	208/1/60	1/4	3/8	1,2,3,4,5,6,7

1. CAPACITIES RATED AT THE FOLLOWING OUTDOOR CONDITIONS: COOLING - 95 DEG. F. D.B., 75 DEG. F. W.B. HEATING - 40 DEG F DB
2. CAPACITIES RATED AT THE FOLLOWING INDOOR CONDITIONS: COOLING - 80 DEG. F. D.B., 67 DEG. F. W.B., HEATING - 70 DEG F DB
3. PROVIDE LOW AMBIENT HEAD CONTROLLER TO ALLOW COOLING OPERATION DOWN TO 0 DEG. F. D.B.
4. R410A REFRIGERANT.
5. WIRELESS REMOTE CONTROLLER. PROVIDE WALL MOUNTED HOLDER.
6. PROVIDE ACCESSORY CONDENSATE PUMP FOR INDOOR UNIT.
7. UNIT TO COME WITH BACNET CARD.

VAV BOX SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	INLET SIZE (IN)	AIR: COOLING MAXIMUM AIR (5) (CFM)	AIR: HEATING MAXIMUM AIR (CFM)	AIR: MINIMUM AIR (3) (CFM)	ENTERING AIR TEMP. DB (DEG. F)	LEAVING AIR TEMP. DB (DEG. F)	S.P. LOSS AT MAX CFM (4) (IN H20)	NC AT 1" H2O (1) S.P.	FLUID (2): HEAT LOAD (MB)	TOTAL FLUID FLOW (GPM)	ENT. FLUID TEMP (DEG. F)	WORKING FLUID	MAX. FLUID PRESSURE DROP (FT)	COIL: MIN. COIL ROWS	PIPE SIZE (IN)	BALANCING VALVE SIZE (IN)	REMARKS
VR-6	EH PRICE-SDV5	6	400	240	80	52	100	0.5	28	9.9	1	180	H. WATER	1	2	3/4	1/2	1,2,3,4,5,6
VR-8	EH PRICE-SDV5	8	700	420	145	52	100	0.65	28	17.4	1.5	180	H. WATER	1	2	3/4	1/2	1,2,3,4,5,6
VR-10	EH PRICE-SDV5	10	1100	660	230	52	100	0.65	26	27..3	2	180	H. WATER	1	2	3/4	3/4	1,2,3,4,5,6
VR-12	EH PRICE-SDV5	12	1600	960	325	52	100	0.65	26	39.7	2.5	180	H. WATER	1	2	3/4	3/4	1,2,3,4,5,6
VR-14	EH PRICE-SDV5	14	2200	1320	450	52	100	0.65	26	54.6	3	180	H. WATER	1	2	3/4	3/4	1,2,3,4,5,6
VR-16	EH PRICE-SDV5	16	2800	1680	580	52	100	0.7	26	69.6	3.5	180	H. WATER	1	2	3/4	3/4	1,2,3,4,5,6
VR-20	EH PRICE-SDV5	24X16 FO	4200	2520	1260	52	100	0.7	29	104.3	5	180	H. WATER	1.5	2	1	3/4	1,2,3,4,5,6

1. MAXIMUM DISCHARGE NC AT BOX DIFFENTIAL PRESSURE BASED ON ARI STANDARD 880-89
2. COIL HEATING CAPACITY BASED ON HEATING MAIXIMUM AIR FLOW (60% OF MAXIMUM COOLING CFM).
3. MINIMUM CFM IS LOWEST CONTROLLABLE CFM SETTING (BASED ON 400 FPM INLET VELOCITY).
4. MAXIMUM STATIC PRSSURE DROP PERMISSABLE ACROSS BOX AND COIL AT MAXIMUM COOLING CFM.
5. BOX COOLING MAXIMUM IS THE SUM OF DIFFUSERS CFM VALUES AS SHOWN IN THE DRAWINGS. BOX MINIMUM CFM TO BE SET AT 30% OF THIS MAXIMUM. BOX HEATING CFM TO BE SET AT 60% OF THIS SAME MAXIMUM. TYPICAL UNLESS OTHERWISE NOTED.
6. PRESSURE INDEPENDENT TYPE BOX.

EXPANSION TANK SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	SYSTEM	TYPE	FLUID: WORKING FLUID	FLUID: MIN. TANK/ ACCEPTANCE (GAL)	PHYSICAL: TANK SIZE (GAL)	PHYSICAL: RELIEF VALVE (PSIG)	PHYSICAL: DIA./ HEIGHT (IN)	PHYSICAL: NPT FITTING (IN)	NOTES
ET-1	TACO CA300-125	PUMP ROOM	HEATING	BLADDER	WATER	79 / 79	79	75	20 / 58	1-1/2	1
ET-2	TACO CA215-125	FAN ROOM	CHILLED	BLADDER	30% PG	57 / 57	57	60	16 / 59	1	1
ET-3	TACO CX130-125	FAN ROOM	PREHEAT	DIAPHRAM V	50% PG	35 / 15	35	75	16 / 52	1/2	1

1. ASME CERTIFIED

AIR SEPARATOR SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	SYSTEM	TYPE	FLUID: FLOW RATE (GPM)	FLUID: WORKING FLUID	FLUID: HEAD LOSS (FT)	NOTES
AS-1	TACO AC03-125	PUMP ROOM	HEATING	NOTE 1	118	WATER	3.0	1,2
AS-2	TACO AC03-125	FAN ROOM	CHILLED	NOTE 1	145	30% PG	3.0	1,2
AS-3	TACO AC02-125	FAN ROOM	PREHEAT	NOTE 1	30	50% PG	3.0	1,2

1. AMSE CERTIFIED.
2. TANK TYPE AIR SEPARATOR.

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

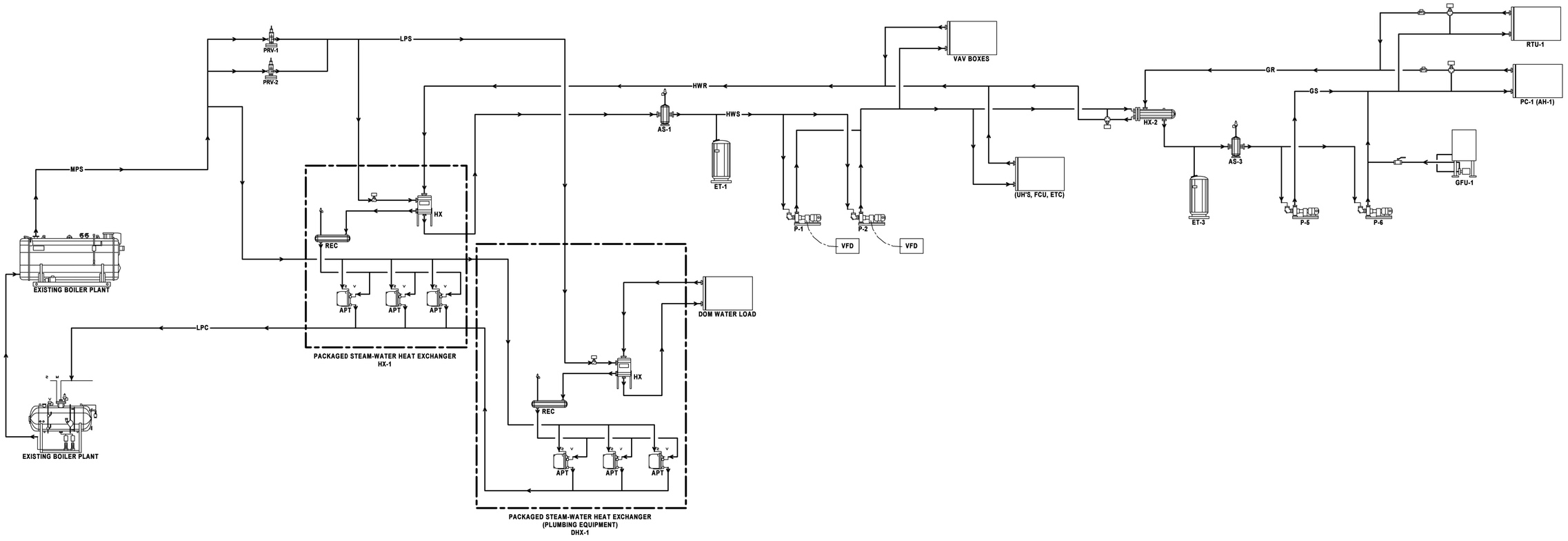
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE 12" = 1'-0"

MECHANICAL SCHEDULES

M602

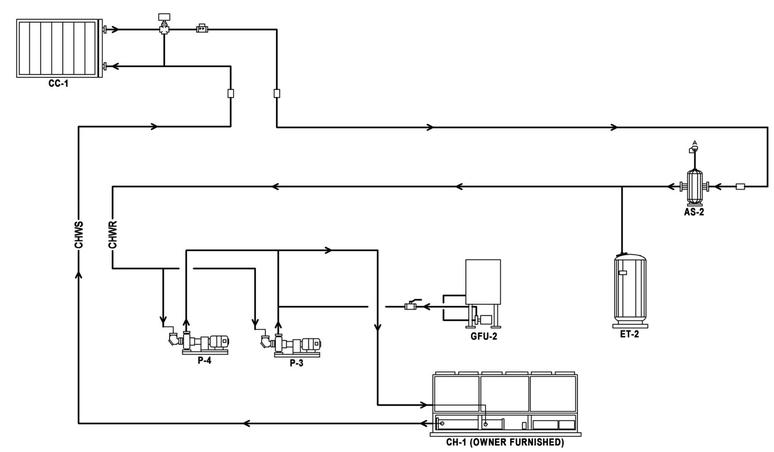
9/7/2012 11:25:27 AM



B2
M701

HOT WATER PIPING SCHEMATIC

NO SCALE



A5
M701

CHILLED WATER PIPING SCHEMATIC

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL ELECTRICAL
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

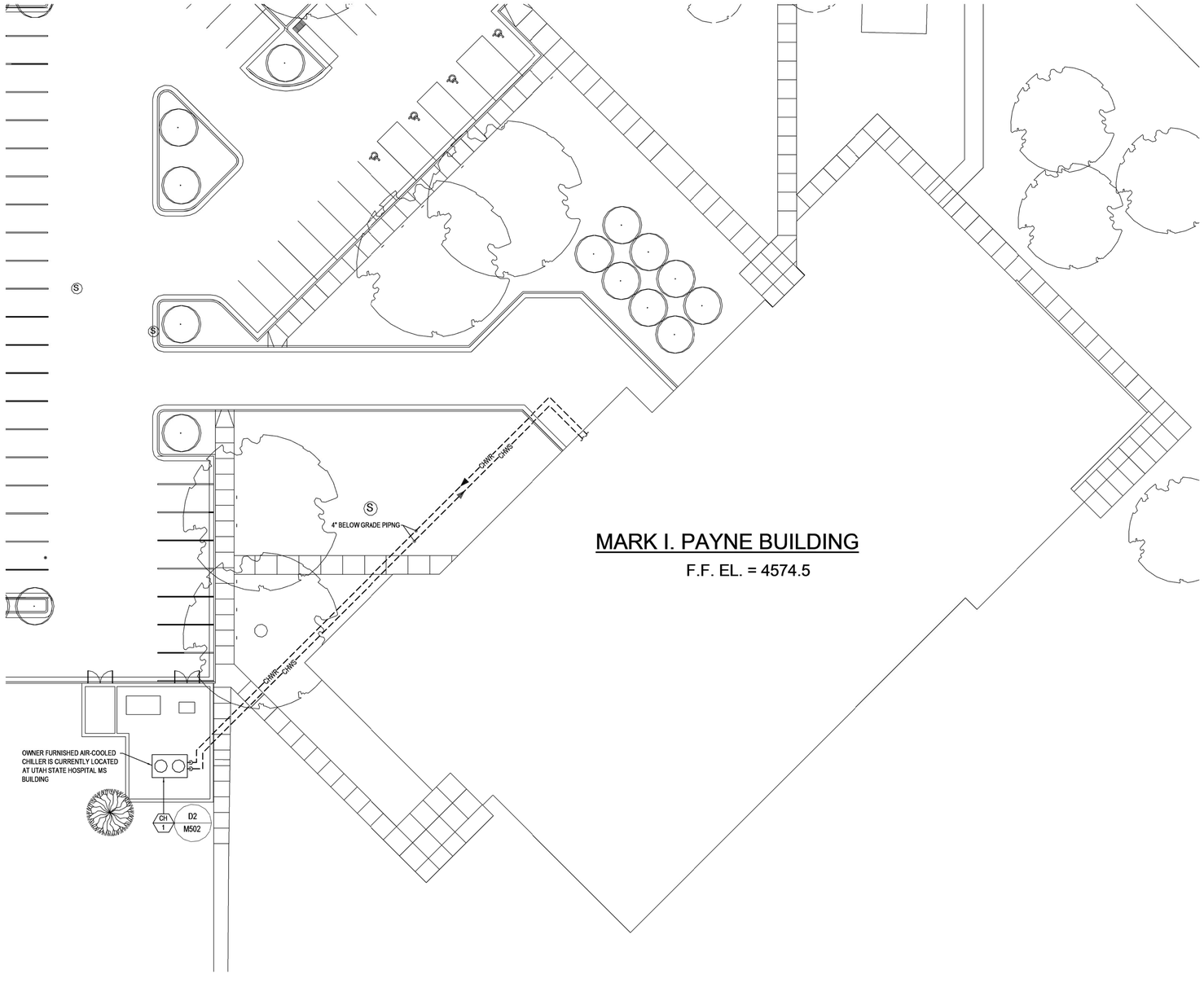
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE 12" = 1'-0"

MECHANICAL SCHEMATICS

M701

9/7/2012 11:25:31 AM



A2 MECHANICAL SITE PLAN
SCALE: 1/16" = 1'-0"

0" 16' 32'

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.539.3148 T
Salt Lake City, UT 84111 801.539.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/16" = 1'-0"

MECHANICAL SITE PLAN

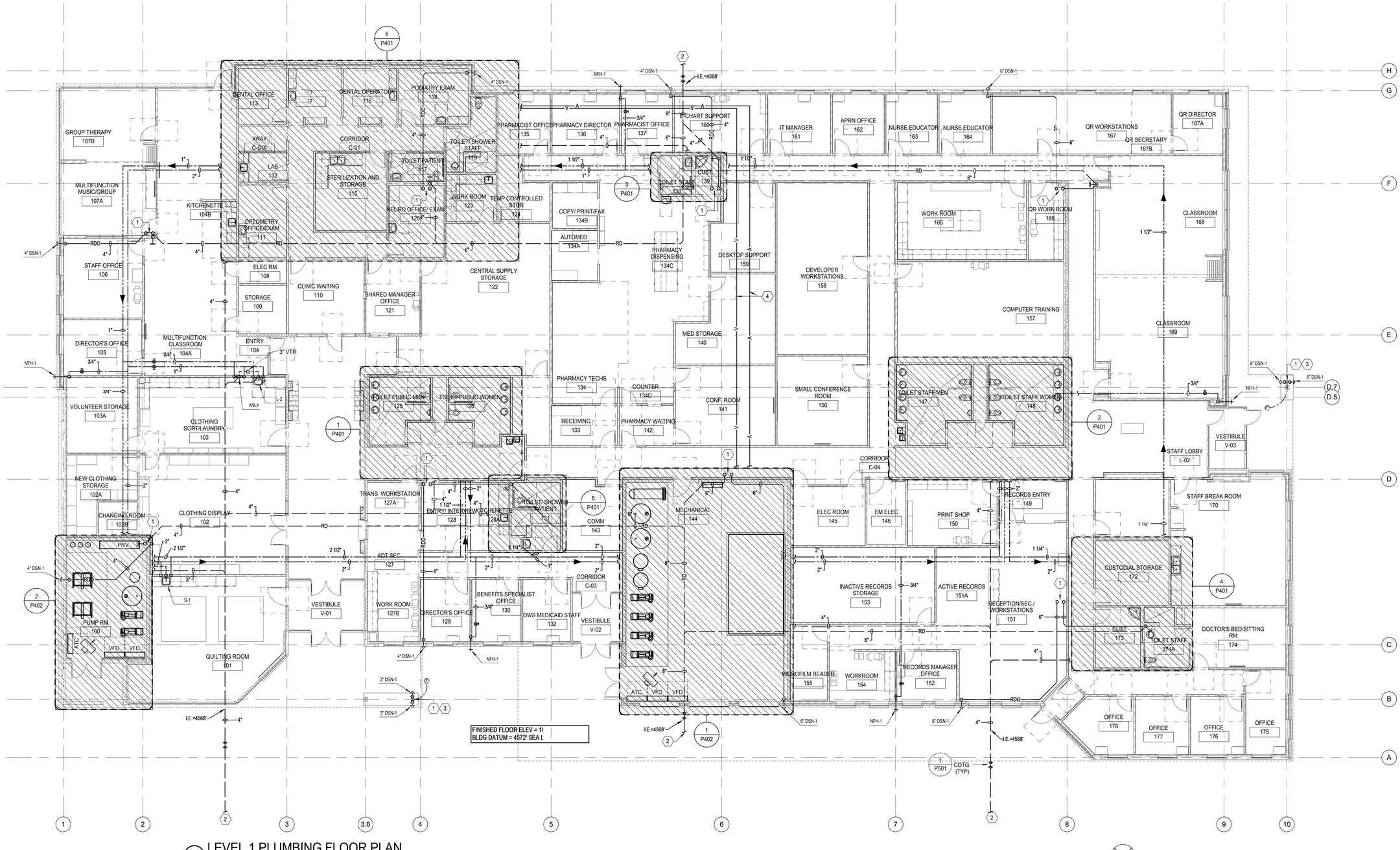
MS101

9/7/2012 11:25:43 AM

REFERENCE NOTES

1. ROOF DRAIN PIPING UP TO DRAINS ABOVE.
2. SEE SITE UTILITY DRWGS FOR CONT.
3. HEAT TRACE EXTERIOR ROOF DRAIN PIPING WITH 5 WATTS/FT HEAT CABLE. SEE ELECTRICAL DRWGS.
4. 3/4" AIR AND VACUUM MEDICAL PIPING. MEDICAL CLEAN TYPE L COPPER TUBE WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS.

DFCM APPROVAL STAMP



A2 LEVEL 1 PLUMBING FLOOR PLAN
SCALE: 1/8" = 1'-0"

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL ELECTRICAL
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/8" = 1'-0"

LEVEL 1 PLUMBING FLOOR PLAN

P101

9/7/2012 11:25:53 AM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL ELECTRICAL
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBF A Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

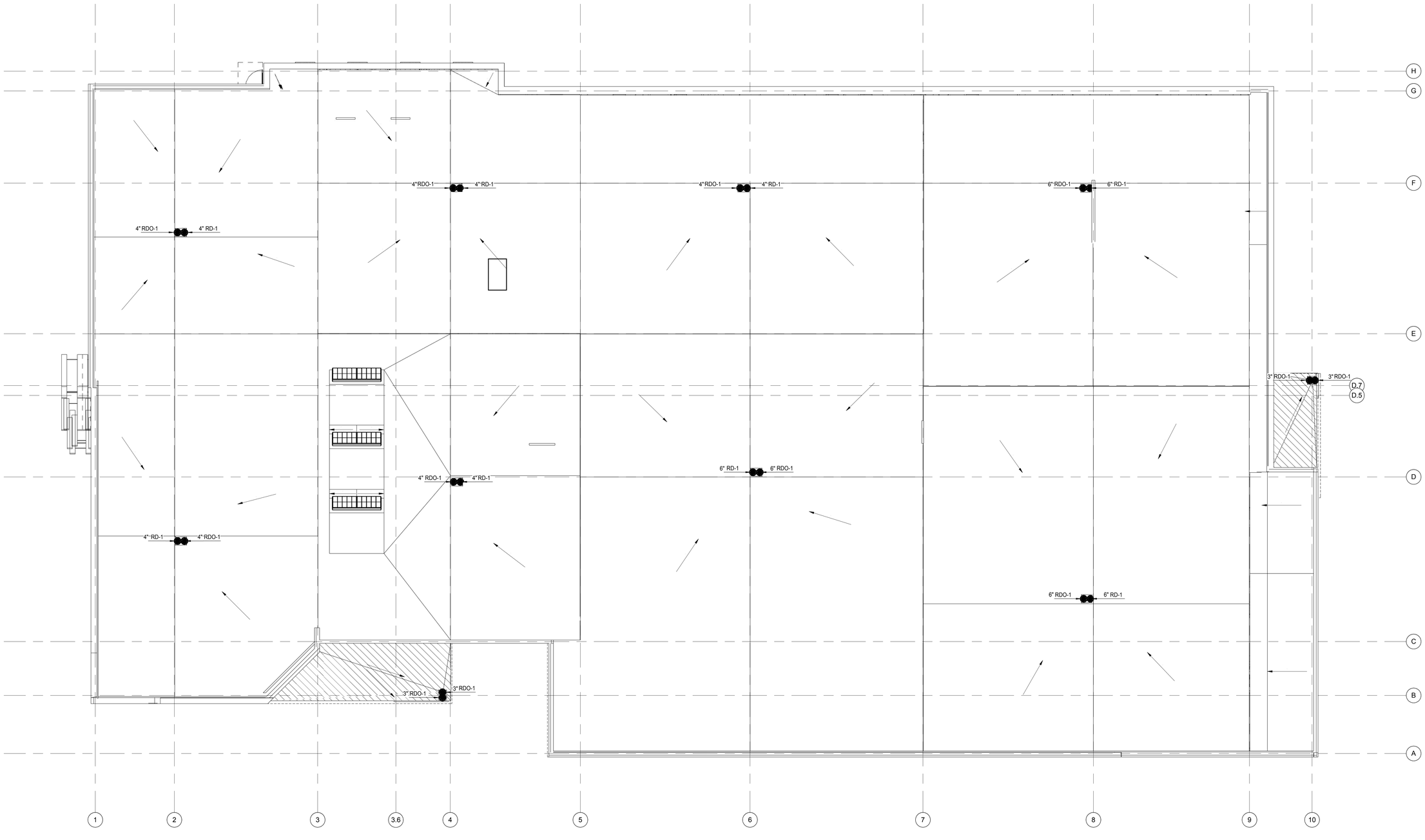
DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/8" = 1'-0"

ROOF PLUMBING PLAN

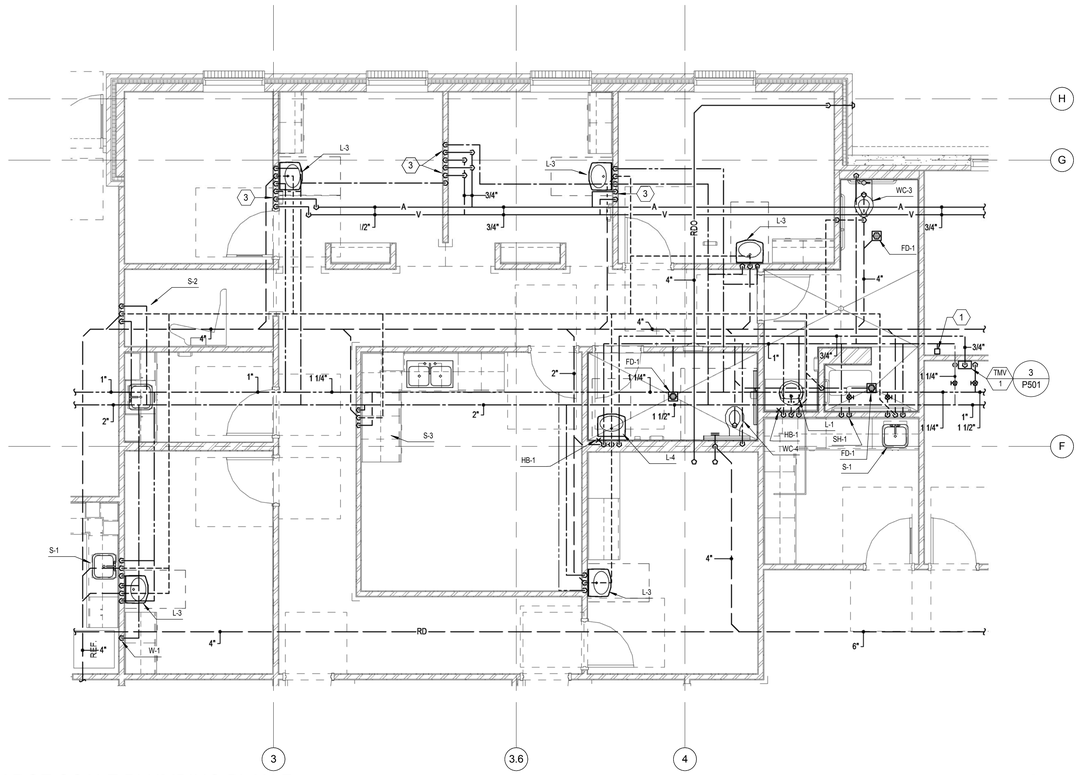
P102



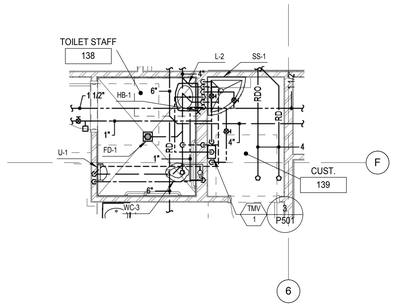
A2 PLUMBING ROOF PLAN
SCALE: 1/8" = 1'-0"

0" 8' 16'

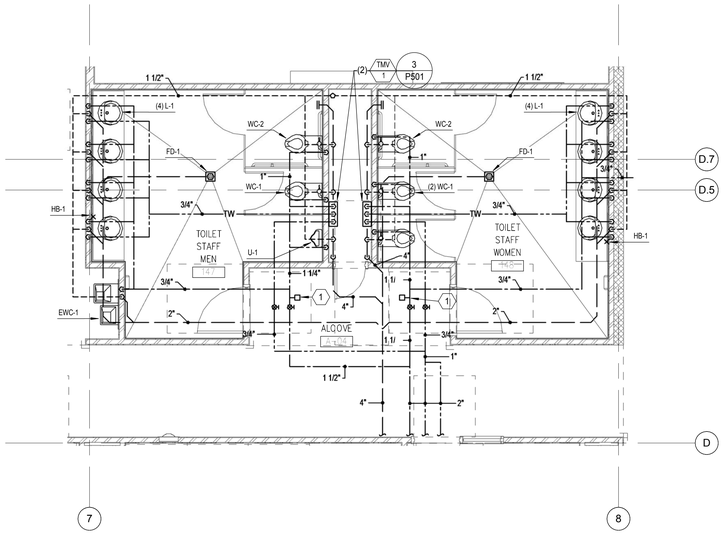
9/7/2012 11:25:59 AM



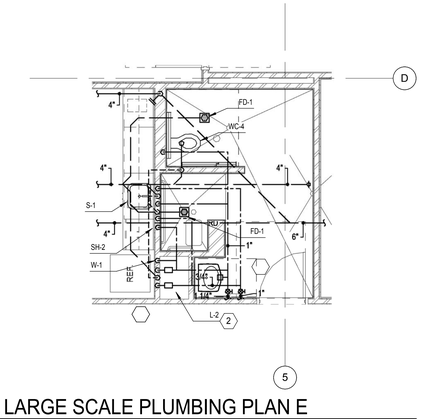
6 LARGE SCALE PLUMBING PLAN F
SCALE: 1/4" = 1'-0"



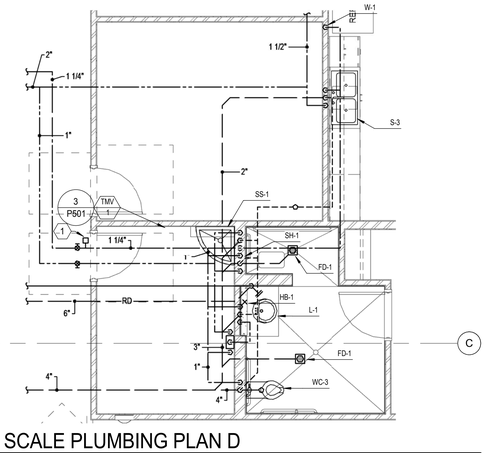
3 LARGE SCALE PLUMBING PLAN C
SCALE: 1/4" = 1'-0"



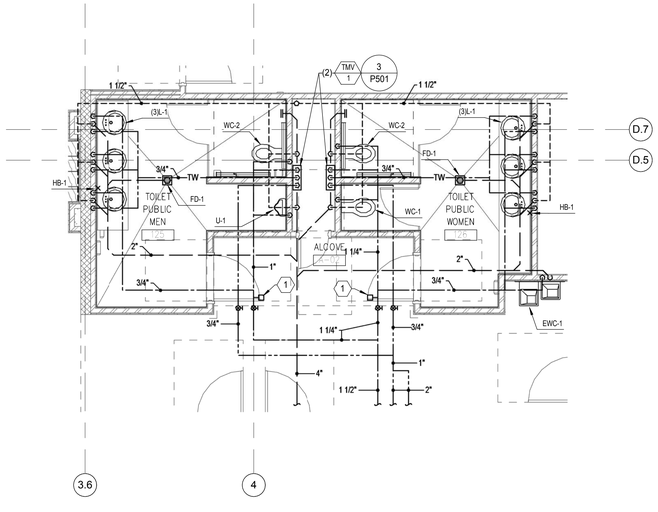
2 LARGE SCALE PLUMBING PLAN B
SCALE: 1/4" = 1'-0"



5 LARGE SCALE PLUMBING PLAN E
SCALE: 1/4" = 1'-0"



4 LARGE SCALE PLUMBING PLAN D
SCALE: 1/4" = 1'-0"



1 LARGE SCALE PLUMBING PLAN A
SCALE: 1/4" = 1'-0"

DFCM APPROVAL STAMP

REFERENCE NOTES

1 WATER HAMMER ARRESTOR.

2 SYMMONS S-120-CK THERMOSTATIC MIXING VALVE ON HOT WATER SUPPLY.

3 3/4" AIR AND VACUUM MEDICAL PIPING. MEDICAL CLEAN TYPE L COPPER TUBE WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS.

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

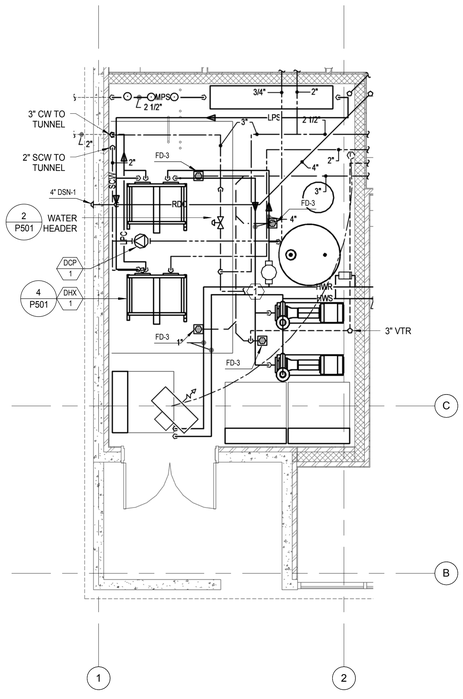
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/4" = 1'-0"

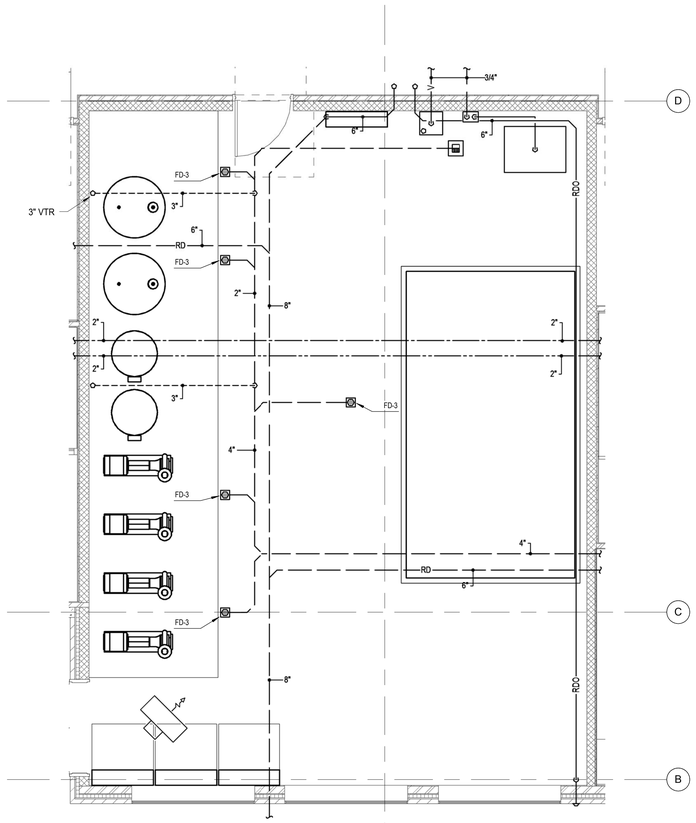
LARGE SCALE PLUMBING PLANS

P401

9/7/2012 11:26:12 AM



2 LARGE SCALE MECHANICAL ROOM B
SCALE: 1/4" = 1'-0"



1 LARGE SCALE MECHANICAL ROOM A
SCALE: 1/4" = 1'-0"

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

REFERENCE NOTES

1. 2" MUW WATER TO HEATING WATER SYSTEM.
2. INSTALL LAB AIR COMPRESSOR PROVIDED BY OWNER.
3. INSTALL REFRIGERATED AIR DRYER PROVIDED BY OWNER.
4. INSTALL DENTAL VACUUM PUMP PROVIDED BY OWNER.
5. 1" VACUUM DISCHARGE THRU ROOF.

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

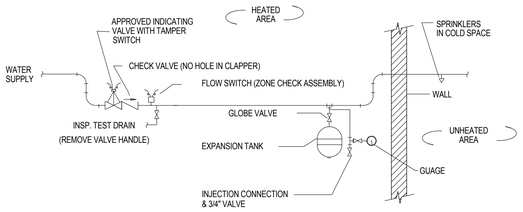
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/4" = 1'-0"

LARGE SCALE MECHANICAL ROOM

P402

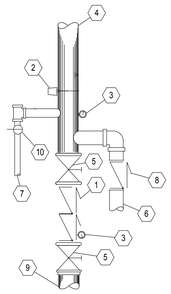
9/7/2012 11:26:22 AM



1. PRIOR TO INSTALLATION EXPANSION TANK SHALL BE PRESSURIZED EQUAL TO SYSTEM STATIC PRESSURE.
2. PRESSURE RELIEF VALVE ON ANTIFREEZE SYSTEM SET AT 150 PSI. PIPE TO DISCHARGE TO EXTERIOR (MAIN DRAIN PIPING)
3. PROVIDE EXPANSION TANK PER CALCULATION. PRE-PRESSURIZE TANK EQUAL TO STATIC WATER PRESSURE.
4. FILL SYSTEM WITH PROPYLENE GLYCOL SOLUTION ONLY AT 50%.
5. LOCATE TANK IN HEATED ROOM.

8 / P501 ANTI-FREEZE W/ EXPANSION TANK DETAIL

NO SCALE

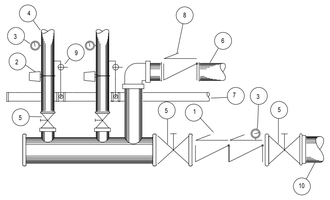


1. DOUBLE CHECK VALVE ASSEMBLY
2. FLOW SWITCH TO HORN STROBE ALARM, WIRING BY DIVISION 26.
3. WATER PRESSURE GAGE
4. TO WET SYSTEM.
5. CONTROL VALVE WITH TAMPER SWITCH, WIRING BY DIVISION 26.
6. TO FIRE DEPARTMENT CONNECTION.
7. MAIN DRAIN PIPED TO EXTERIOR.
8. CHECK VALVE
9. FIRE LINE FROM SUPPLY. PROVIDE GALVANIZED PIPING UP TO VALVE ASSEMBLY. PROVIDE RESTRAINTS, FLEXIBLE COUPLINGS, AND ANNULAR CLEARANCE AS REQUIRED BY NFPA.
10. MAINTENANCE VALVE

5 / P501 FIRE SPRINKLER RISER DETAIL

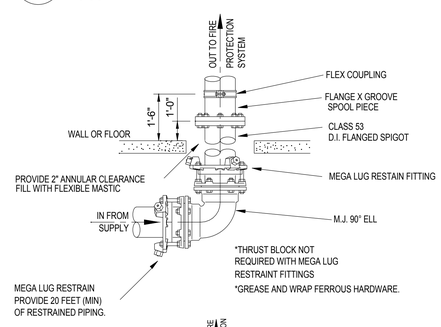
NO SCALE

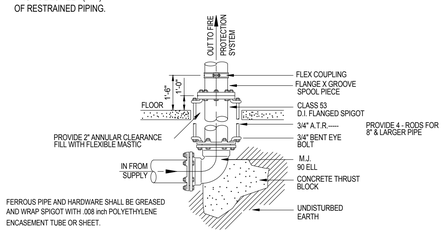
1. DOUBLE CHECK VALVE ASSEMBLY.
2. FLOW SWITCH TO HORN STROBE ALARM WIRING BY DIVISION 26
3. WATER PRESSURE GAUGE
4. TO FIRE SPRINKLER ZONES
5. CONTROL VALVE W/ TAMPER SWITCH WIRING BY DIVISION 26
6. TO FIRE DEPT. CONNECTION
7. PIPE TO EXTERIOR
8. CHECK VALVE
9. MAIN DRAIN CONNECTION
10. GALV. FIRE LINE FROM SUPPLY. PROVIDE FLANGE SPIGOT RESTRAINT FLEXIBLE COUPLINGS, AND ANNULAR CLEARANCE AS REQUIRED BY NFPA



6 / P501 FIRE SPRINKLER RISER ASSEMBLY DETAIL

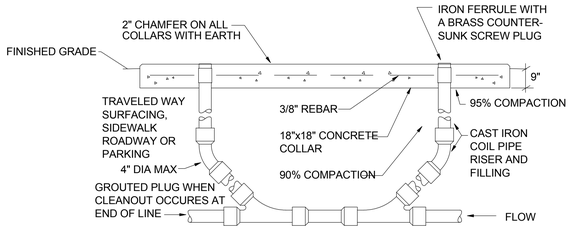
NO SCALE





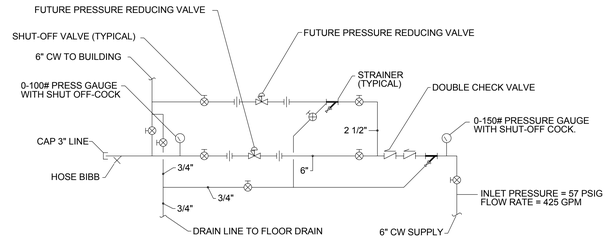
7 / P501 FLANGED SPIGOT THROUGH FLOOR

NO SCALE



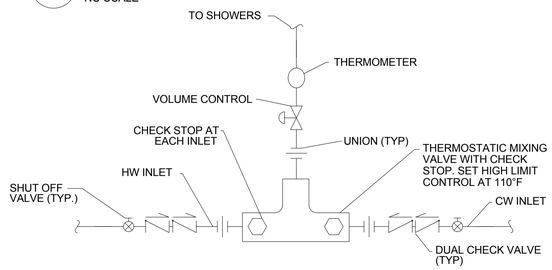
1 / P501 CLEANOUT TO GRADE DETAIL (COTG)

NO SCALE



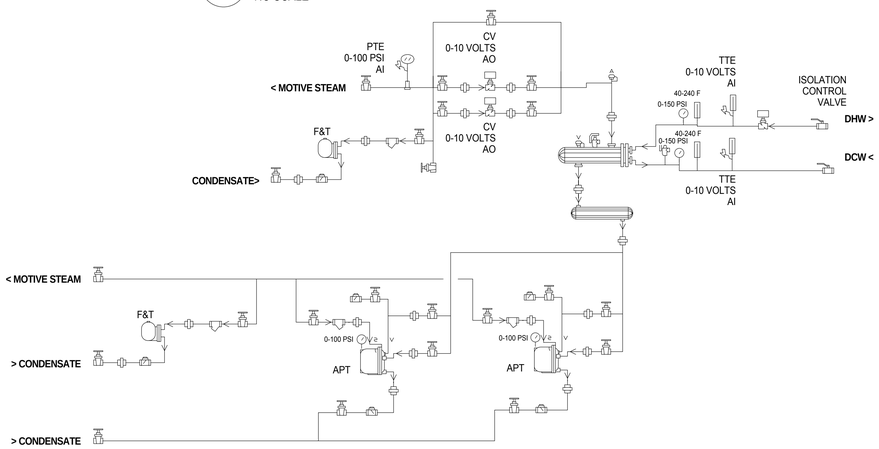
2 / P501 WATER HEADER DETAIL

NO SCALE



3 / P501 THERMOSTATIC MIXING VALVE DETAIL

NO SCALE



4 / P501 STEAM - TO - WATER HEAT EXCHANGER DETAIL

NO SCALE

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL ELECTRICAL
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.539.3148 T
Salt Lake City, UT 84111 801.539.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	

PLUMBING DETAILS

P501

9/7/2012 11:26:25 AM

STEAM-TO-DOMESTIC HOT WATER HEAT EXCHANGER SCHEDULE

						SOURCE MEDIUM (STEAM)			TRANSFER MEDIUM (DOMESTIC HOT WATER)				PHYSICAL		
ID	MANUFACTURER	MODEL NO.	TYPE	USAGE	LOAD (BTU/H)	FLOW RATE (LB/H)	ENTERING PRESSURE (PSIG)	IN TUBE	FLOW RATE (GPM)	ENTERING/ LEAVING TEMP. (°F)	WORKING FLUID	HEAD LOSS (FT)	DIA./ LENGTH/ NO. PLATES (IN/IN)	SURFACE AREA (FT^2)	NOTES
DHX-1	SPIRAX SARCO	EASY HEAT	PLATE AND FRAME	DOM HW	1,250,000	1250	15	2	25	40/140	DOM WATER	5			

DOMESTIC PUMP SCHEDULE

				FLUID			PUMP		ELECTRICAL				
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FLOW RATE (GPM)	WORKING FLUID	HEAD LOSS (FT)	EFFICIENCY (%)	CONSTRUCTION	MOTOR SIZE (HP)	MOTOR BHP (HP)	MOTOR SPEED (RPM)	VOLT/PH/HZ	NOTES
DCP-1	BELL & GOSSETT PR-3/4-AB	SEE PLANS	INLINE	2	WATER	10	NA	ALL BRONZE	1/6	NA	1750	115/1/60	

DOMESTIC MIXING STATION SCHEDULE

					FLUID		PHYSICAL	
ID	MANUFACTURER	MODEL NO.	TYPE	BODY CONSTRUCTION	FLOW RATE (GPM)	HEAD LOSS (PSI)	CONNECT SIZE (IN)	NOTES
TMV-1	POWERS	LM-495	THERMOSTATIC	BRONZE	4	5	3/4	1

1. PROVIDE WATTS NO. 7 DUAL CHECK VALVE ON HOT AND COLD WATER SUPPLIES TO VALVE.

PLUMBING FIXTURE SCHEDULE

ID	FIXTURE	CW (IN)	HW (IN)	W (IN)	V (IN)	NOTES
L-1	LAVATORY	1/2	1/2	1 1/2	1 1/2	COUNTER MOUNTED, OVAL, ADA
L-2	LAVATORY	1/2	1/2	1 1/2	1 1/2	WALL HUNG, ADA
L-3	LAVATORY	1/2	1/2	1 1/2	1 1/2	WALL HUNG, ADA
L-4	LAVATORY	1/2	1/2	1 1/2	1 1/2	WALL HUNG, CONCEALED FAUCET
L-5	LAVATORY	1/2	1/2	1 1/2	1 1/2	WALL HUNG, CONCEALED SENSOR FAUCET
L-6	LAVATORY	1/2	1/2	1 1/2	1 1/2	COUNTER MOUNTED, CONCEALED SENSOR FAUCET
L-7	LAVATORY	1/2	1/2	1 1/2	1 1/2	WALL HUNG, SENSOR FAUCET, ADA
L-8	LAVATORY	1/2	1/2	1 1/2	1 1/2	COUNTER MOUNTED, SENSOR FAUCET
EWC-1	ELECTRIC WATER COOLER	1/2	-.-	1 1/2	1 1/2	DUAL LEVEL
EWC-2	ELECTRIC WATER COOLER	1/2	-.-	1 1/2	1 1/2	-.-
FD-1	FLOOR DRAIN	-.-	-.-	2	2	
FD-2	FLOOR DRAIN	-.-	-.-	2	2	SECURITY GRATE
FD-3	FLOOR DRAIN	-.-	-.-	2	2	
FS-1	FLOOR SINK	-.-	-.-	3	2	
HB-1	HOSE BIB	3/4	-.-	-.-	-.-	-.-
NFH-1	NON FREEZE WALL HYDRANT	3/4	-.-	-.-	-.-	-.-
RD-1	ROOF DRAIN	-.-	-.-	-.-	-.-	SEE PLANS FOR SIZE
RDO-1	ROOF DRAIN OVERFLOW	-.-	-.-	-.-	-.-	SEE PLANS FOR SIZE
DSN-1	DOWN SPOUT NOZZLE	-.-	-.-	-.-	-.-	SEE PLANS FOR SIZE
S-1	SINK	1/2	1/2	2	1 1/2	COUNTER MOUNTED, SINGLE COMPARTMENT
S-2	SINK	1/2	1/2	2	1 1/2	COUNTER MOUNTED, SINGLE COMPARTMENT
S-3	SINK	1/2	1/2	2	1 1/2	COUNTER MOUNTED, DOUBLE COMPARTMENT
S-4	SINK	1/2	1/2	2	1 1/2	COUNTER MOUNTED, SINGLE COMPARTMENT
S-5	SINK	1/2	1/2	2	1 1/2	COUNTER MOUNTED, DOUBLE COMPARTMENT
S-6	LAUNDRY SINK	1/2	1/2	2	1 1/2	COUNTER MOUNTED, SINGLECOMPARTMENT
S-7	SINK	1/2	1/2	2	1 1/2	COUNTER MOUNTED, SINGLE COMPARTMENT
SH-1	STAFF SHOWER	1/2	1/2	2	2	ADA
SH-2	PATIENT SHOWER	1/2	1/2	2	2	ADA
SH-3	SECLUSION SHOWER	1/2	1/2	2	2	-.-
SS-1	SERVICE SINK	3/4	3/4	3	2	-.-
U-1	URINAL	3/4	-.-	2	2	WALL HUNG, FLUSH VALVE, ADA
U-2	URINAL	3/4	-.-	2	2	WALL HUNG, SENSOR FLUSH VALVE
WB-1	WASHER BOX	3/4	3/4	2	2	-.-
WC-1	WATER CLOSET	1	-.-	4	2	WALL HUNG, FLUSH VALVE
WC-2	WATER CLOSET	1	-.-	4	2	WALL HUNG, FLUSH VALVE, ADA
WC-3	WTER CLOSET	1	-.-	4	-.-	FLOOR MOUNTED FLUSH VALVE
WC-4	WATER CLOSET	1	-.-	4	2	FLR MTD, CONCEALED FLUSH VALVE, ADA
WC-5	WATER CLOSET	1	-.-	4	2	WALL HUNG, CONCEALED FLUSH VALVE, ADA
WC-6	WATER CLOSET	1	-.-	4	2	WALL HUNG, SENSOR FLUSH VALVE, ADA
WC-7	WATER CLOSET	1	-.-	4	2	FLR MTD, SENSOR FLUSH VALVE, ADA
WC-8	WATER CLOSET	1	-.-	4	2	FLR MTD, SENSOR FLUSH VALVE
WC-9	WATER CLOSET	1	-.-	4	2	WALL HUNG, SENSOR FLUSH VALVE
SF-1	SECURITY FIXTURE	1	1/2	4	2	SS FLOOR MTD WITH INTEGRAL LAV
CS-1	CLINICAL SINK	1	1/2	4	2	FLOOR MOUNTED
BT-1	BATHTUB	1/2	1/2	2	2	

1. ALL UNDER GROUND WASTE AND VENT SHALL BE 2" OR GREATER PER DRAWINGS.

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

VAN BOERUM & FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL ELECTRICAL
Salt Lake City - Logan - St. George - Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3159 F
VBFA Project Number: 11542

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY Author
CHECKED BY Checker
SCALE 12" = 1'-0"

PLUMBING SCHEDULES

P601

9/7/2012 11:26:30 AM

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
A5 / E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
ROOM NAME 100	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
	BREAK, ROUND
MATCH LINE SEE XX/X-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE
	PROPERTY LINE: DASHED, WIDE LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
WIRING METHODS	
	WIRING.
	WIRING TURNED UP OR TOWARDS OBSERVER.
	WIRING TURNED DOWN OR AWAY FROM OBSERVER.
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
1 A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
	FLEXIBLE WIRING.
— X —	WIRING AND/OR RACEWAY: THIN LINE. WHERE "X" = : CATV = CABLE TELEVISION; CCTV = CLOSED CIRCUIT TELEVISION; FA = FIRE ALARM; FO = FIBER OPTICS; I = INTERCOM; NC = NURSE CALL; P = POWER; RC = RIGID CONDUIT; S = SOUND; T = TELEPHONE; TV = TELEVISION OTHERS AS NOTED IN OTHER SCHEDULES. RACEWAYS AND WIRING SHALL BE SIZED AS SHOWN AND/OR SPECIFIED.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
1	CONDUCTOR RUN IDENTIFICATION.
	JUNCTION BOX.
PB	PULL BOX.
C C	CABLE TRAY ABOVE ACCESSIBLE CEILING.
	EARTH GROUND (ONE-LINE DIAGRAM).
C	JUNCTION BOX, CEILING.
	LADDER RACK.
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
C	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
DF	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
S	RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R.
UC	RECEPTACLE, DUPLEX, FLOOR, UNDER CARPET: NEMA 5-20R.
WP	RECEPTACLE, DUPLEX, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.
	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, DUPLEX, CONNECTED TO UPS: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
WP	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
D	RECEPTACLE, DRYER: NEMA 10-30R.
R	RECEPTACLE, RANGE: NEMA 10-50R.
FB#	FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
PP#	POWER POLE. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
PT#	FLUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.
	SWITCH, DIMMER.
X $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
X $3	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
X $4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).
$K	SWITCH, KEY OPERATED.
$M	SWITCH, MOMENTARY.
$WP	SWITCH, WEATHERPROOF.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, CONNECTED TO UPS: NEMA 5-20R.
	EQUIPMENT CONNECTION
SITE ELECTRICAL AND COMMUNICATIONS UTILITIES	
E	UTILITY, PRIMARY ELECTRICAL HAND HOLE.
T	TRANSFORMER.
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
(W-3)	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
EM	EMERGENCY.
↑	EGRESS DIRECTION ARROW.
LV	LOW VOLTAGE LIGHTING TRANSFORMER.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.
P	PHOTOCELL.
STRUCTURED CABLING	
W	TELEPHONE, WALL MOUNTED: WALL PHONE.
X	OUTLET, DATA COMMUNICATION ("X" INDICATES QUANTITY OF CABLES).
	OUTLET, BUILDING STANDARD COMBINATION TELEPHONE/ DATA COMMUNICATION.
	TELEPHONE TERMINAL BOARD, FIRE TREATED PLYWOOD PAINTED.
	LAN RACK, FLOOR STANDING.
—D—	DATA CABLE, CATEGORY 5 (ONE-LINE DIAGRAM).
—V—	VOICE CABLE, CATEGORY 3 (ONE-LINE DIAGRAM).
FIRE ALARM	
FAAP	FIRE SYSTEM ANNUNCIATOR.
FACP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
NAC	FIRE ALARM NOTIFICATION POWER SUPPLY.
CM	CONTROL MODULE.
MM	MONITOR MODULE.
P	FIRE ALARM MANUAL PULL STATION.
R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
	MAGNETIC DOOR HOLDER.
	DETECTOR, SMOKE.
	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	DETECTOR, HEAT.
	STROBE.
75	STROBE. SUBSCRIPT INDICATES CANDELA RATING.
WP	ALARM, HORN/SPEAKER, WEATHERPROOF.
	ALARM, HORN/STROBE, ONE ASSEMBLY.
75	ALARM, HORN/STROBE, ONE ASSEMBLY. SUBSCRIPT INDICATES CANDELA RATING.
	DETECTOR, FLOW SWITCH: FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
	DETECTOR, TAMPER SWITCH WITH VALVE: TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
SD	SMOKE DAMPER.
FSD	FIRE AND SMOKE DAMPER.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
	FUSE WITH RATING (ONE-LINE DIAGRAM).
	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).
	DISCONNECT WITH FUSE AND MOTOR STARTER COMBINATION (ONE-LINE DIAGRAM).
	OVERLOAD RELAY (ONE-LINE DIAGRAM).
	STARTER (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
MCP	CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTION (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM).
GFP	CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT PROTECTION (ONE-LINE DIAGRAM).
	MOTOR.
	HEATER, ELECTRIC RESISTANCE.
	TRANSFORMER (ONE-LINE DIAGRAM).
	TRANSFORMER, CURRENT (ONE-LINE DIAGRAM).
	BATTERY (ONE-LINE DIAGRAM).
	CAPACITOR (ONE-LINE DIAGRAM).
"1H"	PANELBOARD (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	TRANSFER SWITCH (ONE-LINE DIAGRAM).
	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
G	GENERATOR, POWER (ONE-LINE DIAGRAM).
M	METER.
VFC VFD	VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE DIAGRAM).
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PUSHBUTTON.
	PUSHBUTTONS, MOTOR CONTROL.
	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
DP#__	DISTRIBUTION PANEL OR SWITCHBOARD.
LP	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
	LIGHTING CONTROL STATION.
	DIMMING ENTRY STATION OR CONTROL STATION, FLUSH MOUNTED.
$ST	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
75	TRANSFORMER: NUMBER INDICATES kVA.
HC	ACCESSIBLE DOOR ENTRY PUSH PLATE OPERATOR.
	CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
FIRE ALARM	
FAAP	FIRE SYSTEM ANNUNCIATOR.
FACP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
NAC	FIRE ALARM NOTIFICATION POWER SUPPLY.
CM	CONTROL MODULE.
MM	MONITOR MODULE.
P	FIRE ALARM MANUAL PULL STATION.
R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
	MAGNETIC DOOR HOLDER.
	DETECTOR, SMOKE.
	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	DETECTOR, HEAT.
	STROBE.
75	STROBE. SUBSCRIPT INDICATES CANDELA RATING.
WP	ALARM, HORN/SPEAKER, WEATHERPROOF.
	ALARM, HORN/STROBE, ONE ASSEMBLY.
75	ALARM, HORN/STROBE, ONE ASSEMBLY. SUBSCRIPT INDICATES CANDELA RATING.
	DETECTOR, FLOW SWITCH: FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
	DETECTOR, TAMPER SWITCH WITH VALVE: TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
SD	SMOKE DAMPER.
FSD	FIRE AND SMOKE DAMPER.
TECHNOLOGY SYSTEMS	
—X—	TECHNOLOGY SYSTEM CABLE. SEE SPECIFIC JOB EQUIPMENT LIST FOR APPLICABLE DESIGNATIONS. EXAMPLES: C = CONTROL CABLE G = GROUND CABLE, 10 AWG, 1 CONDUCTOR, GREEN INSULATED M = MICROPHONE CABLE S = SPEAKER CABLE, 70 VOLT SYSTEM Z = SPEAKER CABLE, 8 OHM SYSTEM
S #	SPEAKER, CEILING MOUNTED.
	EQUIPMENT CABINET.
CP	CONTROL PANEL.
V	VOLUME CONTROL.
CP#	CONNECTION PANEL.
PA	AMPLIFIER (ONE-LINE DIAGRAM).
	TERMINATOR (VARIZONE DIGITAL PAGING SYSTEM).
	DIODE (ONE-LINE DIAGRAM).
I/M	TRANSFORMER, ISOLATION/MATCHING (ONE-LINE DIAGRAM).
#W	TRANSFORMER, # WATT (ONE-LINE DIAGRAM).
CCTV	
—P—	CCTV CABLE, POWER.
—V—	CCTV CABLE, VIDEO SIGNAL.
	CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE.
SECURITY	
—X—	SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE TYPE.
ACC	ACCESS CONTROL HEADEND EQUIPMENT.
CTR	SECURITY CONTROL PANEL.
SEC	INTRUSION DETECTION HEADEND EQUIPMENT.
#1	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE.
CR	CARD READER.
KCR	KEYPAD/CARD READER COMBINATION.
ER	EXIT REQUEST.
RL	REMOTE DOOR RELEASE BUTTON.
	BUZZER.
TV DISTRIBUTION	
—T—	TV DISTRIBUTION CABLE, INDIVIDUAL DROPS.
—TR—	TV DISTRIBUTION CABLE, TRUNK.
DC	DIRECTIONAL COUPLER.
DA	DISTRIBUTION AMPLIFIER (ONE-LINE DIAGRAM).
SPL	SPLITTER (ONE-LINE DIAGRAM).
	TV OUTLET.
	TERMINATOR, 75 OHM (TV DISTRIBUTION).

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
C	CEILING MOUNTED
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE THROW DOUBLE THROW
DS	DISCONNECT SWITCH
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIOANL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

ELECTRICAL SHEET INDEX

EE001	SHEET INDEX, ABBREV, & NOTES
EE501	ELECTRICAL DETAILS
EE502	SEISMIC DETAILS
EE701	TYPICAL MOUNTING HEIGHT DETAILS
ES101B	SITE ELECTRICAL DEMO PLAN PHASE 1 AREA B
ES102B	SITE ELECTRICAL PLAN PHASE 1 AREA B
ES501	SITE ELECTRICAL DETAILS
EP101	LEVEL 1 POWER PLAN
EP102	ROOF POWER PLAN
EP501	FLOOR BOX DETAILS
EP601	ONE-LINE DIAGRAM
EP602	EQUIPMENT SCHEDULE
EP603	PANEL SCHEDULES
EP604	PANEL SCHEDULES
EL101	LEVEL 1 LIGHTING PLAN
EL501	LIGHTING DETAILS
EL601	LIGHTING SCHEDULES AND DIAGRAMS
ET101	LEVEL 1 TELECOM PLAN
ET501	CABLE TRAY DETAILS
ET502	TELECOM DETAILS
ET601	TELECOM ROUGH-IN/ RISER DIAGRAMS & SCHEDULES
ET602	TV DIST. ONE-LINE DIAGRAM
EY101	LEVEL 1 AUXILIARY PLAN
EY601	SECURITY DETAILS AND SCHEDULES
EJ101	LEVEL 1 AUDIO VISUAL PLAN
EJ601	AUDIO VISUAL DIAGRAMS AND SCHEDULES
FA101	LEVEL 1 FIRE ALARM PLAN
FA601	FIRE ALARM RISER

DFCM APPROVAL STAMP

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.
2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
4. SUBMITTALS: PROVIDE SUBMITTALS IN THREE RING BINDERS WITH JOB NAME, SUBCONTRACTOR, AND VOLUME ON THE BINDING. PREPARE TABS FOR EACH SPECIFICATION SECTION REQUIRING SUBMITTALS. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

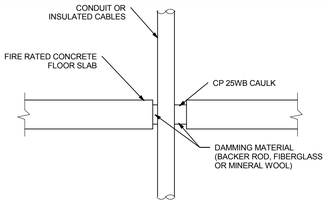
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY WRT
CHECKED BY CAG
SCALE

SHEET INDEX, ABBREV, & NOTES

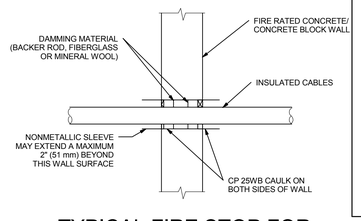
EE001

9/7/2012 2:05:23 PM



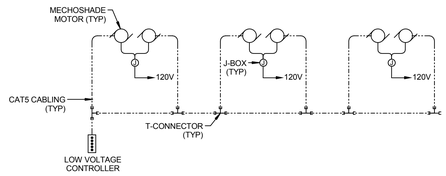
TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE FLOORING

E5 SCALE: NTS



TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE WALLS

E6 SCALE: NTS

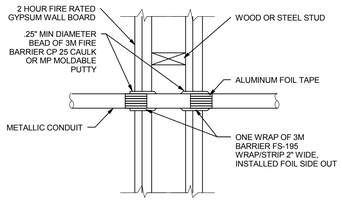


NOTE:

THIS DETAIL IS SCHEMATIC ONLY AND IS TO BE USED AS A BASIS OF DESIGN FOR THE MOTORIZED SHADE SYSTEM. COORDINATE EXACT REQUIREMENTS OF THE SELECTED SYSTEM TO BE INSTALLED WITH THE MANUFACTURER'S INSTALLATION DETAILS.

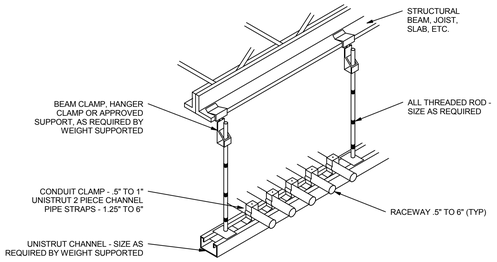
MECHOSHADE CONTROL DIAGRAM

D5 SCALE: NTS



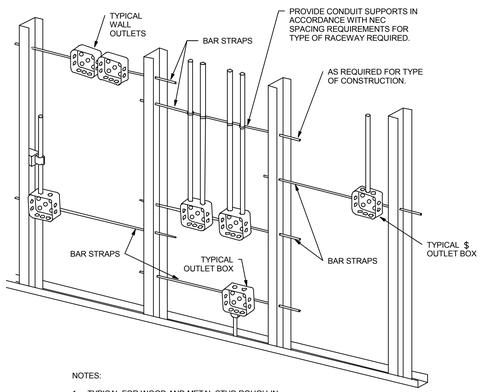
FIRE STOP FOR METAL CONDUIT THROUGH GYPSUM WALL BOARD

C3 SCALE: NTS



TYPICAL CONDUIT RACK DETAIL

C5 SCALE: NTS



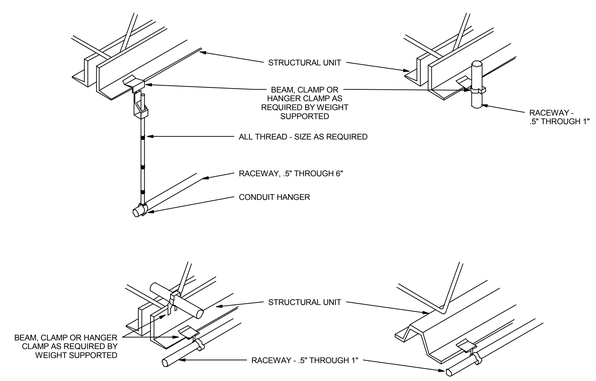
NOTES:

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH IBC 711.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION WALL MUST BE SEPARATED BY A MINIMUN OF 24" HORIZONTAL DISTANCE.
5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.

TYPICAL ROUGH-IN REQUIREMENTS DETAIL

A3 SCALE: NTS

NOTE:
TIE WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGER SYSTEM.



TYPICAL RACEWAY SUPPORT METHODS DETAIL

A5 SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

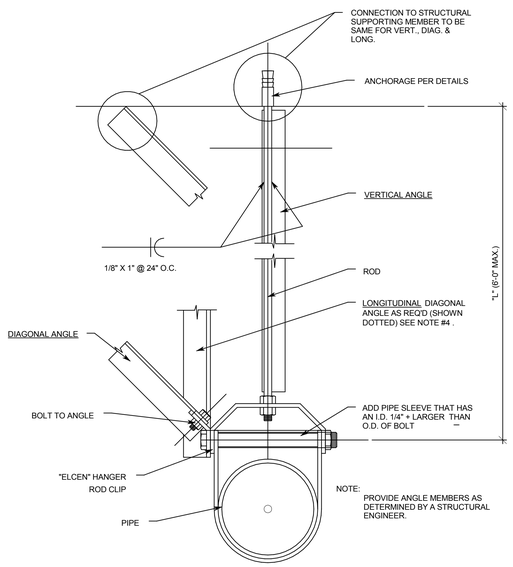
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

ELECTRICAL DETAILS

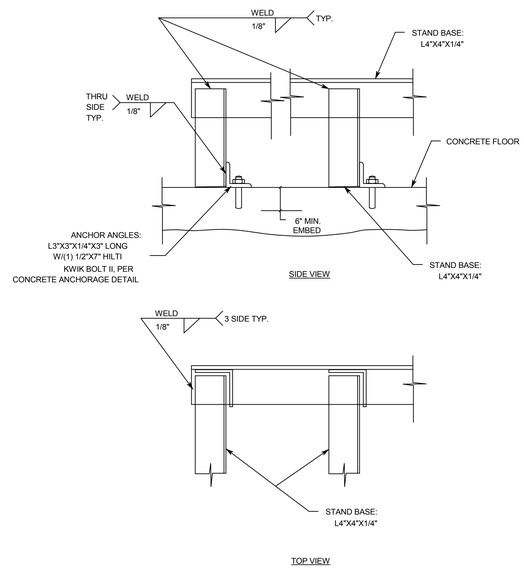
EE501

9/7/2012 2:05:24 PM



C1 TYPICAL SINGLE CONDUIT BRACING

SCALE: NTS

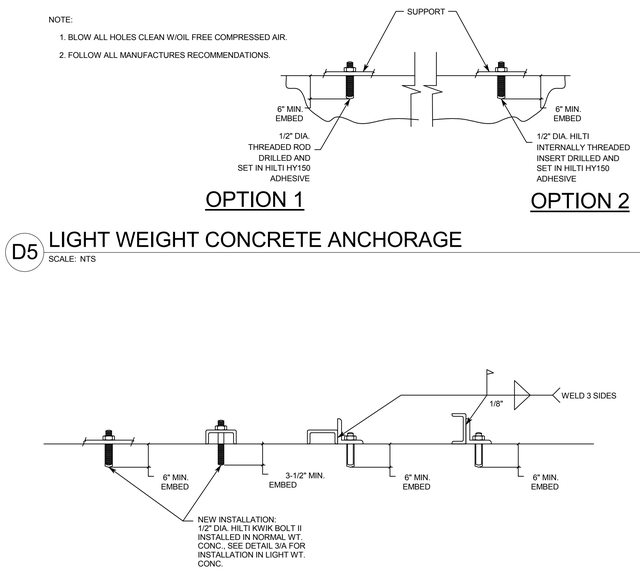


C3 BASE STAND

SCALE: NTS

NOTE:

1. BLOW ALL HOLES CLEAN W/OIL FREE COMPRESSED AIR.
2. FOLLOW ALL MANUFACTURES RECOMMENDATIONS.

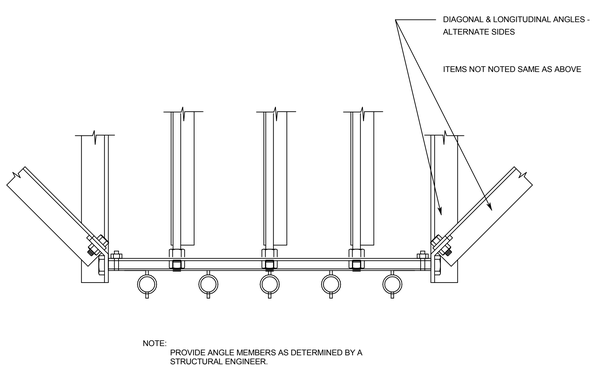


D5 LIGHT WEIGHT CONCRETE ANCHORAGE

SCALE: NTS

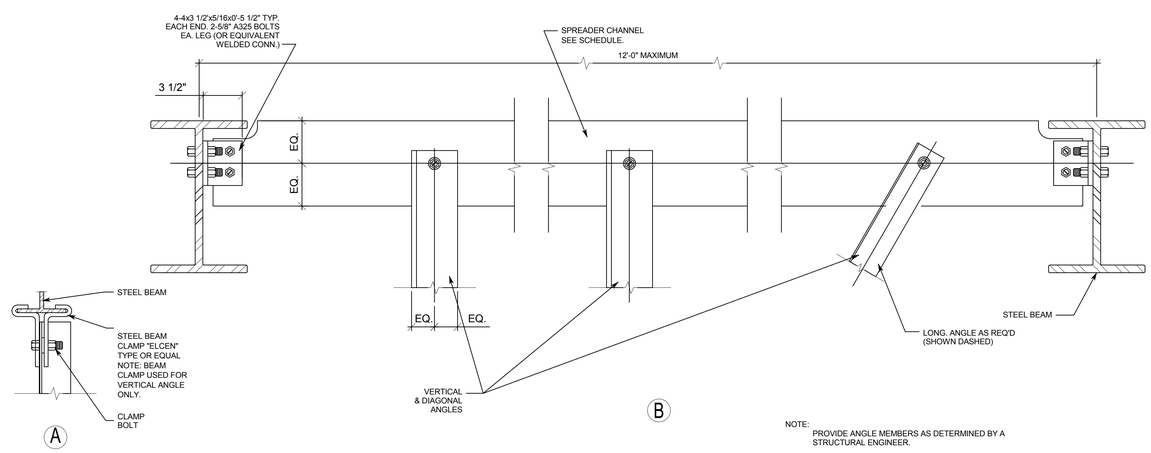
C5 NORMAL WEIGHT CONCRETE ANCHORAGE

SCALE: NTS



A1 TYPICAL CONDUIT RACK BRACING

SCALE: NTS



A3 CONNECTIONS TO STEEL

SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

p 801-521-6186
f 801-539-1916
ffkr.com

GENERAL SHEET NOTES

1. BRACE ALL CONDUIT WITH 2 1/2" I.D. AND LARGER, AND ALL BUSWAY, CABLE TRAY AND CONDUIT RACKS.
2. DETAILS SHOWN PROVIDE A LATERAL BRACING SYSTEM. A TYPICAL VERTICAL SUPPORT SYSTEM MUST ALSO BE USED. HOWEVER, WHERE BRACE OCCURS THE VERTICAL ANGLE SHOWN TYPICAL VERTICAL SUPPORT. MAY REPLACE A
3. TRANSVERSE BRACING AT 30'-0" O.C. MAX.
4. LONGITUDINAL BRACINGS AT 60'-0" O.C. MAX.
5. TRANSVERSE BRACING FOR ONE CONDUIT OR BUSWAY SECTION MAY ALSO ACT AS LONGITUDINAL BRACING FOR THE CONDUIT OR BUSWAY SECTION CONNECTED PERPENDICULAR TO IT, IF THE BRACING IS INSTALLED WITHIN 24" OF THE ELBOW OR TEE AND SIMILAR SIZE.
6. DO NOT USE BRANCH LINES TO BRACE MAIN LINES.
7. PROVIDE FLEXIBILITY IN JOINTS WHERE PIPES PASS THROUGH BUILDING SEISMIC OR EXPANSION JOINTS, OR WHERE RIGIDLY SUPPORTED PIPES CONNECT TO EQUIPMENT WITH VIBRATION ISOLATORS.
8. AT VERTICAL CONDUIT AND BUSWAY RISERS, WHEREVER POSSIBLE, SUPPORT OF WEIGHT OF THE RISER AT A POINT OR POINTS ABOVE THE CENTER OF GRAVITY OF THE RISER. PROVIDE LATERAL GUIDES AT THE TOP AND BOTTOM OF THE RISER, AND AT THE INTERMEDIATE POINTS NOT TO EXCEED 30'-0" ON CENTER.
9. PROVIDE LARGE ENOUGH CONDUIT SLEEVES THROUGH WALLS OR FLOORS TO ALLOW FOR ANTICIPATED DIFFERENTIAL MOVEMENTS.
10. DO NOT FASTEN ONE RIGID CONDUIT OR BUSWAY SYSTEM TO TWO DISSIMILAR PARTS OF A BUILDING THAT MAY RESPOND IN A DIFFERENT MODE DURING AN EARTHQUAKE: FOR EXAMPLE, A WALL AND A ROOF.
11. REFER TO SPECIFICATIONS AND MANUFACTURER'S LITERATURE FOR ADDITIONAL REQUIREMENTS.

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

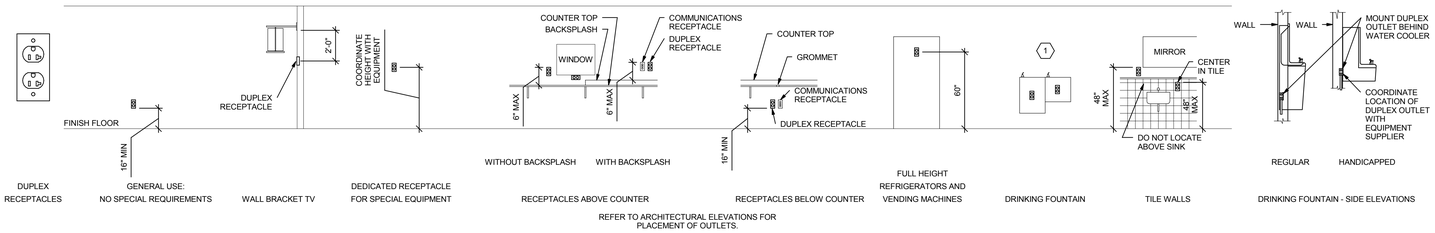
SEISMIC DETAILS

EE502

9/7/2012 2:05:26 PM

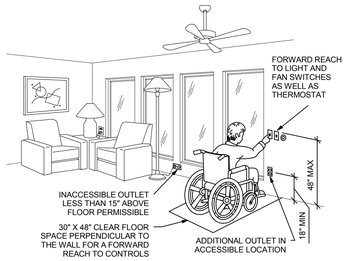
BOXES ON OPPOSITE SIDES OF WALL

E6 BOX MOUNTING DETAILS
SCALE: NTS

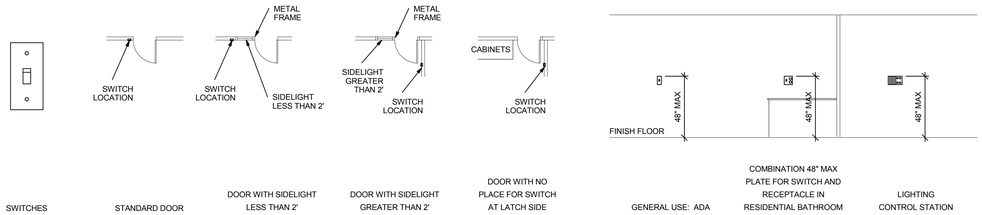


REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.

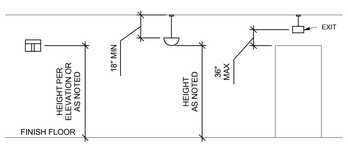
D2 RECEPTACLE MOUNTING DETAILS
SCALE: NTS



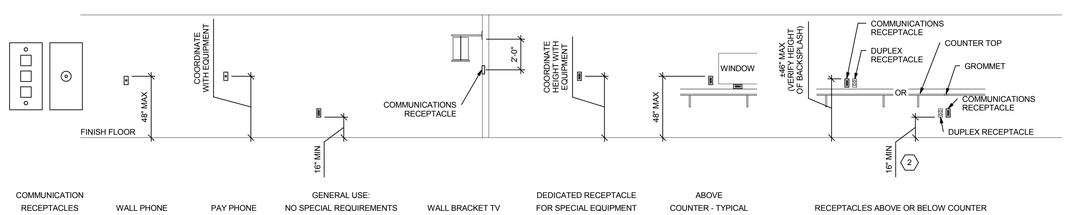
C2 ADA DETAIL
SCALE: NTS



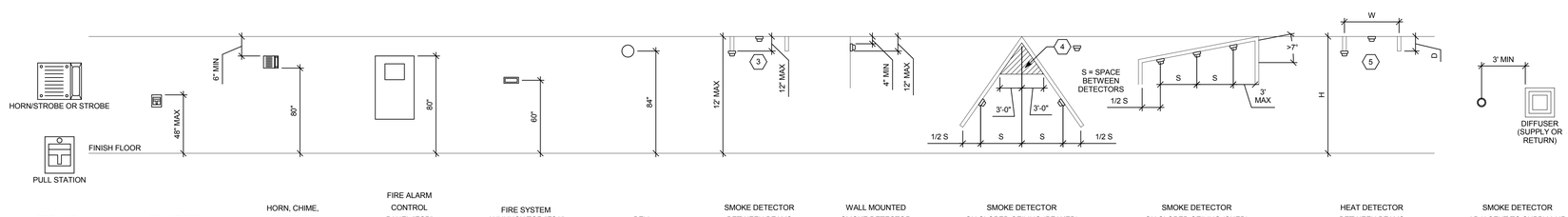
C3 SWITCH MOUNTING DETAILS
SCALE: NTS



B2 LIGHTING MOUNTING DETAILS
SCALE: NTS



B3 COMMUNICATIONS MOUNTING DETAILS
SCALE: NTS



A2 FIRE ALARM MOUNTING DETAILS
SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

GENERAL SHEET NOTES

1. DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:

   1 - ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).

   2 - EQUIPMENT SHOP DRAWINGS.

   3 - FIELD INSTRUCTIONS.
2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.
3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.
4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.
5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
7. VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
8. LOCATE WIREING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.

SHEET KEYNOTES

1. LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.
3. LOCATE AT BOTTOM OF BEAMS (OR JOISTS) OR AT CEILING. (REDUCE SPACING BY .5 PERPENDICULAR TO BEAM OR JOIST DIRECTION.) FOR OTHER CONDITIONS, REFER TO NFPA 72.
4. LOCATE DETECTOR ANYWHERE IN SHADED AREA BUT NOT IN TOP 4" OF PEAK.
5. LOCATE AT BOTTOM OF BEAMS IF D/H < .1 OR W/H < .4; OTHERWISE, LOCATE IN BEAM POCKET. FOR D > 4 REDUCE SPACING .33 PERPENDICULAR TO BEAMS.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

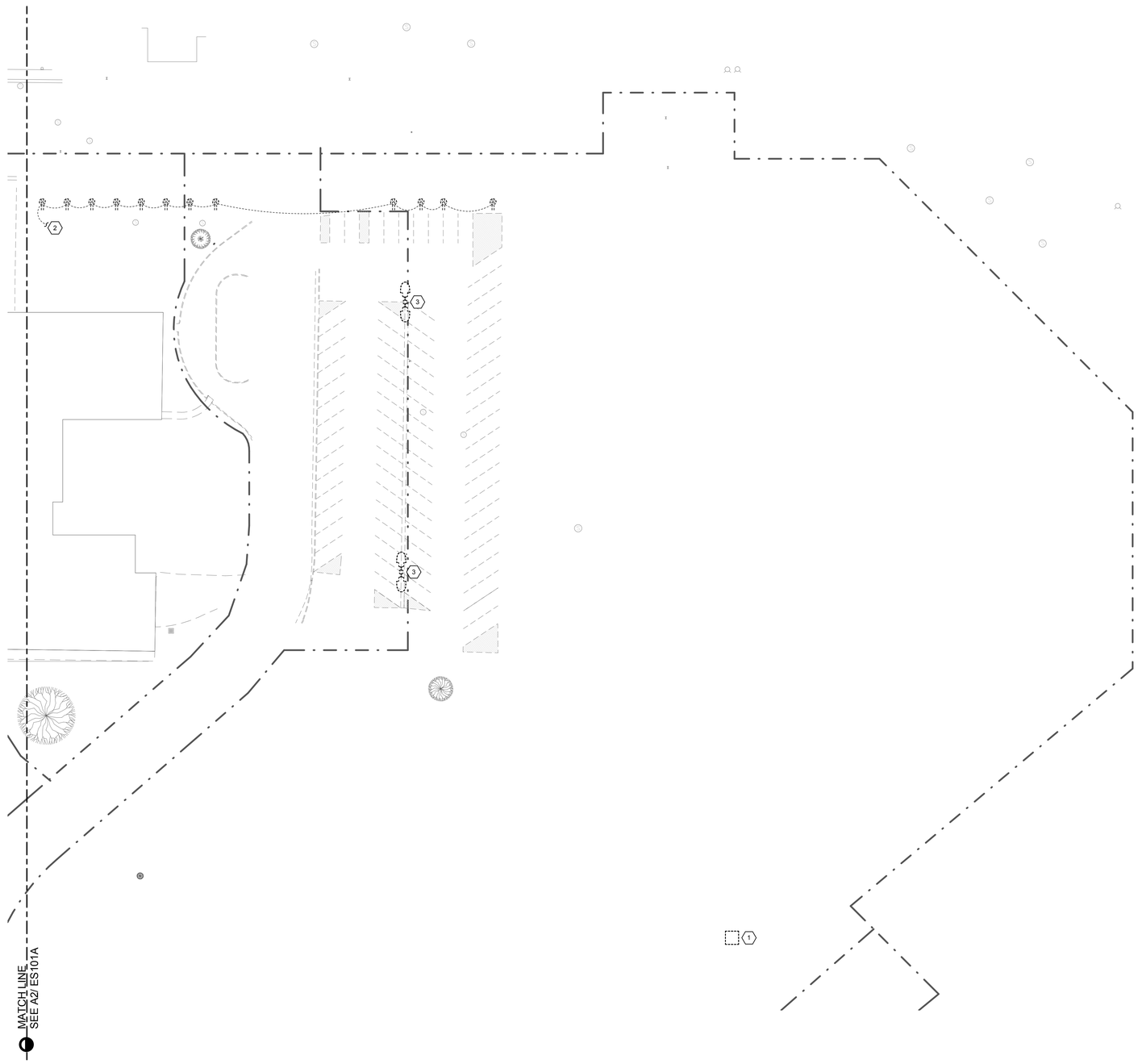
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

TYPICAL MOUNTING HEIGHT DETAILS

EE701

9/7/2012 2:05:27 PM



A2 ELECTRICAL SITE DEMO PLAN - PHASE 1 AREA B
SCALE: 1" = 30'-0"

0 15' 30' 60'

TRUE PLAN

DFCM APPROVAL STAMP

GENERAL SHEET NOTES

SHEET KEYNOTES

1 REMOVE EXISTING SPARE TRANSFORMER. REMOVE EXISTING MEDIUM VOLTAGE PRIMARY CONDUCTORS BACK TO CAMPUS LOOP SECTIONALIZER. PREPARE FOR EXTENSION OF NEW MEDIUM VOLTAGE CABLE FROM SECTIONALIZER TO NEW "PAYNE" BUILDING.

2 REMOVE EXISTING TREE LIGHTING RECEPTACLES, CONDUITS, AND CIRCUITS.

3 REMOVE EXISTING SITE LIGHTING POLE AND FIXTURES. REMOVE ASSOCIATED CONDUITS AND CONDUCTORS BACK TO NEAREST SOURCE.

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

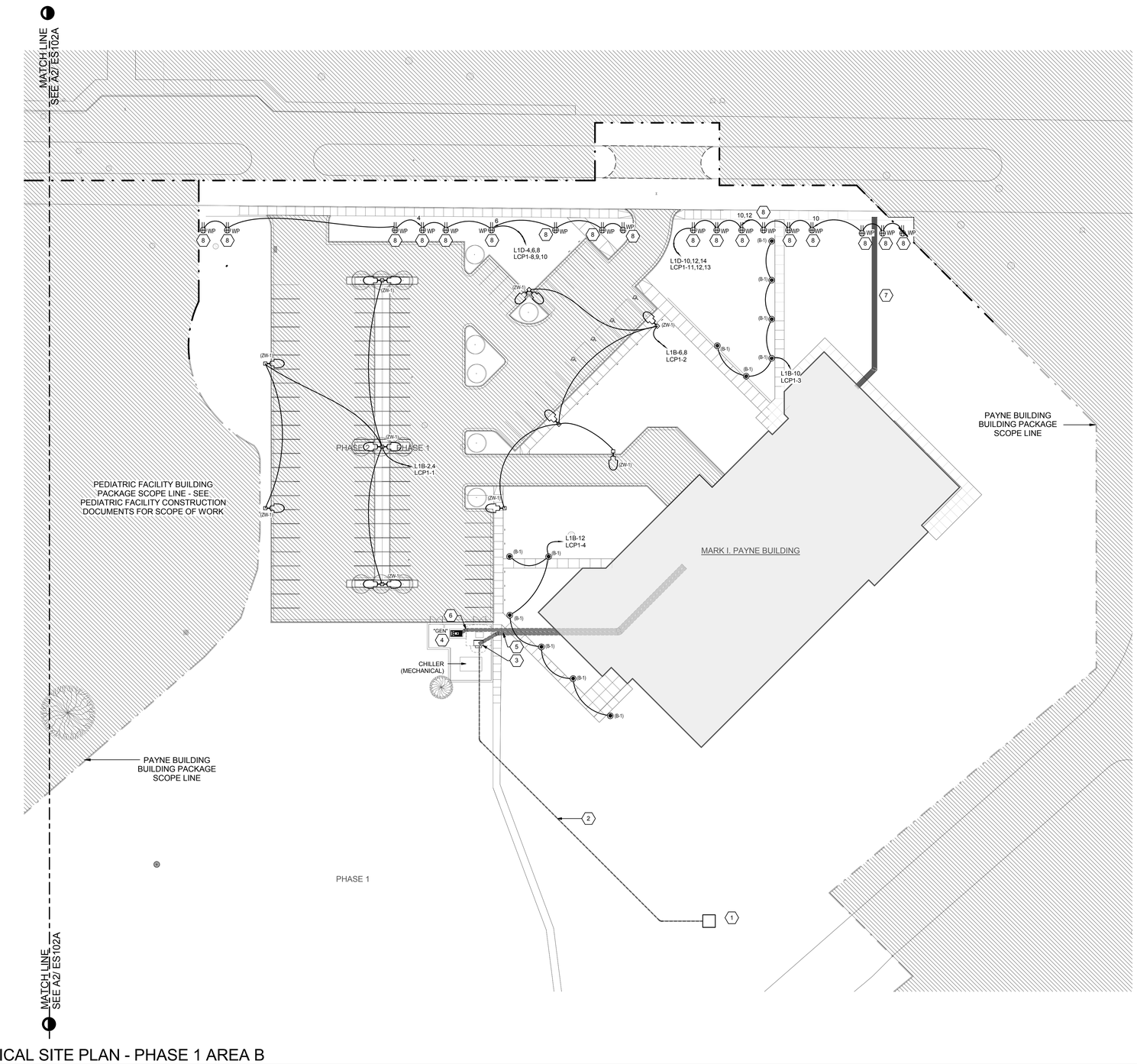
	DATE	REVISION

PROJECT NUMBER	11111
FILE	USH-SITE
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1" = 30'-0"

SITE ELECTRICAL DEMO PLAN PHASE 1 AREA B

ES101B

9/7/2012 2:03:30 PM



A2 ELECTRICAL SITE PLAN - PHASE 1 AREA B

SCALE: 1" = 30'-0"

0 15' 30' 60'

TRUE PLAN

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

GENERAL SHEET NOTES

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

SHEET KEYNOTES

1. EXISTING TRANSFORMER LOCATION (REMOVED DURING SITE DEMOLITION). PROVIDE NEW MEDIUM VOLTAGE CABLE FROM CAMPUS LOOP SECTIONALIZER SERVING REMOVED TRANSFORMER AND EXTEND TO NEW "PAYNE" BUILDING TRANSFORMER LOCATION.
2. PROVIDE (1) 6" CONCRETE ENCASED DUCT BANK FOR MEDIUM VOLTAGE CABLE FROM EXISTING TRANSFORMER LOCATION TO NEW TRANSFORMER LOCATION.
3. NEW "PAYNE" BUILDING TRANSFORMER.
4. NEW "PAYNE" BUILDING EMERGENCY GENERATOR.
5. PROVIDE (6) 4" CONDUITS IN CONCRETE ENCASED DUCT BANK FOR BUILDING SECONDARY SERVICE CONDUCTORS.
6. PROVIDE (4) 4" CONDUITS IN CONCRETE ENCASED DUCT BANK FOR BUILDING EMERGENCY SERVICE CONDUCTORS.
7. PROVIDE THE FOLLOWING SERVICES TO THE NEW "PAYNE" BUILDING VIA THE NEW UTILITY TUNNEL EXTENSION:
   a. PROVIDE (1) SINGLE MODE AND (1) MULTIMODE FIBER OPTIC CABLE FROM MAIN COMMUNICATIONS ROOM IN ADMINISTRATION BUILDING TO NEW BUILDING MAIN DISTRIBUTION FACILITY.
   b. PROVIDE (5) COAX CABLES FROM CABLE TELEVISION DISTRIBUTION FACILITY IN ADMINISTRATION BUILDING TO NEW BUILDING MAIN DISTRIBUTION FACILITY.
   c. PROVIDE (1) 50-PAIR COPPER TELECOMMUNICATIONS CABLE FROM TELECOM HUB IN ADMINISTRATION BUILDING TO NEW BUILDING MAIN DISTRIBUTION FACILITY.
8. PROVIDE GROUND MOUNTED RECEPTACLE WITH WEATHERPROOF ENCLOSURE FOR TREE LIGHTING. MOUNT RECEPTACLE TO WOOD BLOCK SET INTO GROUND. COORDINATE EXACT LOCATION WITH LANDSCAPER PRIOR TO ROUGH-IN. PROVIDE #10 AWG CONDUCTORS FOR TREE LIGHTING BRANCH CIRCUITS.

Mark I. Payne Building
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

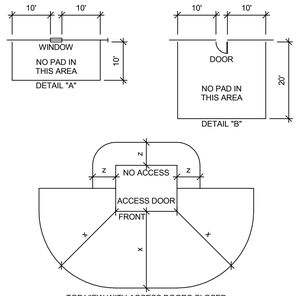
DATE	REVISION

PROJECT NUMBER	11111
FILE	USH-SITE
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1" = 30'-0"

SITE ELECTRICAL PLAN PHASE 1 AREA B

ES102B

9/7/2012 2:03:32 PM



TOP VIEW WITH ACCESS DOORS CLOSED
DETAIL "C"

CLEARANCE GENERAL NOTES:

1. CLEARANCES: THE FRONT OF THE PAD SHOULD ALWAYS FACE AWAY FROM ADJACENT STRUCTURES AND BE FREE OF OBSTRUCTIONS. AT LEAST 3 FEET MUST SEPARATE THE EDGES OF THE PAD FROM ANY ADJACENT STRUCTURE. THE EDGES OF THE PAD MUST BE AT LEAST 10 FEET FROM ANY COMBUSTIBLE STRUCTURE. IF AN ADJACENT STRUCTURE HAS ANY OVERHANG OR EAVE WITHIN 27 VERTICAL FEET OF THE TOP OF THE PAD, CLEARANCES MUST BE MEASURED FROM THE OUTSIDE OF THE OVERHANG. THE PAD MUST NOT BE PLACED IN AN AREA 10 FEET IN LINE WITH OR 10 FEET TO EITHER SIDE OF ANY WINDOW IN AN ADJACENT STRUCTURE (SEE DETAIL "A"). CLEARANCE FOR A DOOR MUST BE 20 FEET IN LINE WITH IT AND 10 FEET ON THE SIDES (SEE DETAIL "B"). PADS MUST NOT BE PLACED WITHIN 15 FEET OF ANY VALVE OR WITHIN 25 FEET OF ANY PLUMBING OR STORAGE FACILITY CONTAINING FLAMMABLE MATERIAL. NO WALLS, FENCES, OR ANY OTHER OBSTRUCTIONS WILL BE PLACED WITHIN 3 FEET OF THE SIDES OR BACK OF THE PAD, OR WITHIN 10 FEET OF THE FRONT OF THE PAD (SEE DETAIL "C"). THE AREA IN FRONT OF THE PAD MUST HAVE 10 FEET OF CLEAR, LEVEL WORKING AREA FOR MAINTENANCE OF THE TRANSFORMER. THE PAD MAY NOT BE PLACED IN LINE WITH AN AIR INTAKE WITHIN 32 VERTICAL FEET OF THE SURFACE PAD. ALSO VERTICALLY, IT MUST NOT BE PLACED WITHIN 12 FEET OF A DOOR OR WINDOW. VAULTS SHALL BE LOCATED WITHIN 15 FEET OF A GRAVELED OR PAVED SURFACE SUITABLE FOR INCIDENTAL HEAVY TRUCK ACCESS.

2. BARRIERS: IF THE TRANSFORMER PAD IS TO BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC, (PARKING LOTS, DRIVEWAYS, ETC) CONTACT ROCKY MOUNTAIN POWER FOR PROTECTIVE BARRIER REQUIREMENTS.

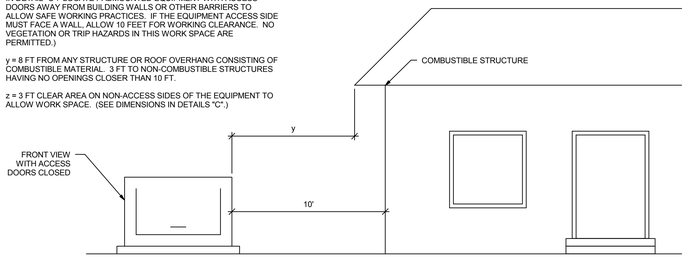
3. IF THE TRANSFORMER WILL NOT COVER THE CABLE OPENINGS ON THESE STANDARD PADS, SEAL THE SIDES OF THE CABLE OPENING TO FIT THE TRANSFORMER USING SACKRETE OR COMPARABLE.

MINIMUM DISTANCE REQUIRED FROM PAD:

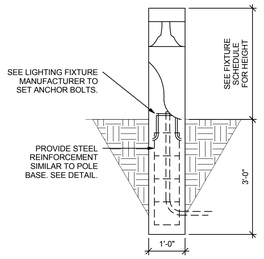
x = 10 FT. CLEAR AREA IN FRONT OF, ANY EQUIPMENT ACCESS DOOR OR OPENING TO ALLOW THE USE OF HOT STICKS. (SEE DIMENSIONS IN DETAIL "C". LOCATE PADMOUNTED EQUIPMENT WITH ACCESS DOORS AWAY FROM BUILDING WALLS OR OTHER BARRIERS TO ALLOW SAFE WORKING PRACTICES. IF THE EQUIPMENT ACCESS SIDE MUST FACE A WALL, ALLOW 10 FEET FOR WORKING CLEARANCE. NO VEGETATION OR TRIP HAZARDS IN THIS WORK SPACE ARE PERMITTED.)

y = 8 FT FROM ANY STRUCTURE OR ROOF OVERHANG CONSISTING OF COMBUSTIBLE MATERIAL. 3 FT TO NON-COMBUSTIBLE STRUCTURES HAVING NO OPENINGS CLOSER THAN 10 FT.

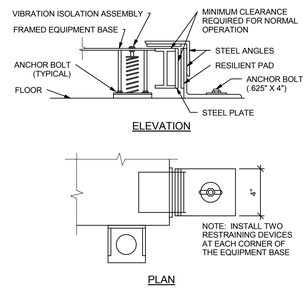
z = 3 FT CLEAR AREA ON NON-ACCESS SIDES OF THE EQUIPMENT TO ALLOW WORK SPACE. (SEE DIMENSIONS IN DETAILS "C".)



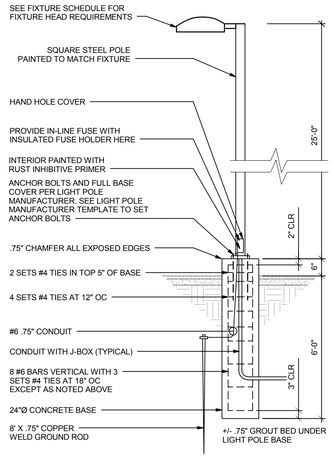
C2 TRANSFORMER CLEARANCE DETAIL
SCALE: NTS



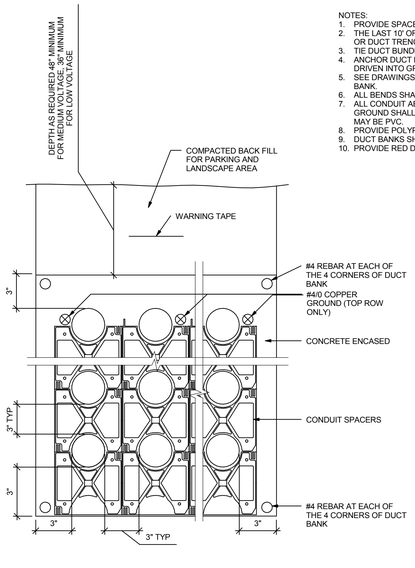
D4 BOLLARD MOUNTING DETAIL
SCALE: NTS



C4 GENERATOR RESTRAINT DETAIL
SCALE: NTS

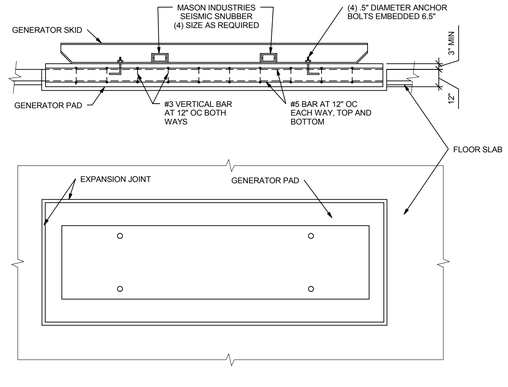


C6 WALKWAY LIGHT POLE BASE DETAIL
SCALE: NTS



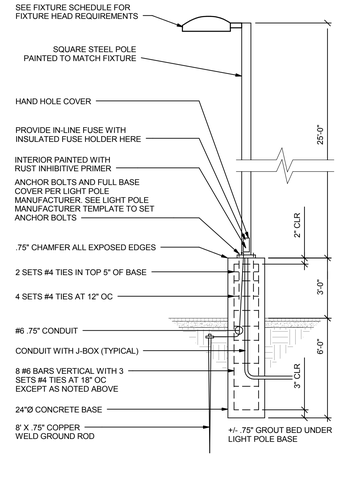
NOTES:
1. PROVIDE SPACERS APPROVED FOR SIZE OF CONDUIT PROVIDED.
2. THE LAST 10' OF DUCTS ENTERING MANHOLE, PULL BOX, TUNNEL OR DUCT TRENCH SHALL BE RMC WITH OZ/GEDNEY BELL ENDS.
3. TIE DUCT BUNDLES WITH PLASTIC TAPE. DO NOT USE METAL WIRE.
4. ANCHOR DUCT BUNDLES DOWN WITH #3 OR LARGER REBAR DRIVEN INTO GROUND BETWEEN DUCTS.
5. SEE DRAWINGS FOR SIZE AND NUMBER OF CONDUITS IN DUCT BANK.
6. ALL BENDS SHALL BE LARGE RADIUS.
7. ALL CONDUIT ABOVE GROUND, ALL BENDS AND FIRST 10' BELOW GROUND SHALL BE WRAPPED RMC. CONDUIT BELOW GROUND MAY BE PVC.
8. PROVIDE POLYPROPYLENE PULL ROPE IN EMPTY CONDUITS.
9. DUCT BANKS SHALL HAVE A MINIMUM SLOPE OF 4" PER 100 FEET.
10. PROVIDE RED DYE IN CONCRETE.

A2 TYPICAL CONDUIT DUCT BANK DETAIL
SCALE: NTS



NOTE:
ELECTRICAL CONTRACTOR SHALL FURNISH GENERAL CONTRACTOR WITH GENERATOR PAD DIMENSIONS SO THAT BLOCK WILL BE MADE FOR GENERATOR PAD. GENERATOR PAD SHALL BE SEPARATE FROM BUILDING FLOOR SLAB TO PROVIDE PROPER VIBRATION ISOLATION.

A4 GENERATOR PAD DETAIL
SCALE: NTS



A6 PARKING LOT LIGHT POLE BASE DETAIL
SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

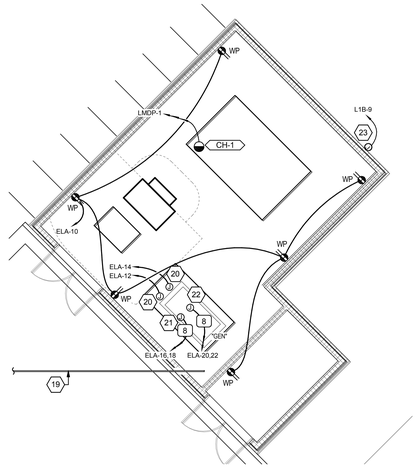
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

SITE ELECTRICAL DETAILS

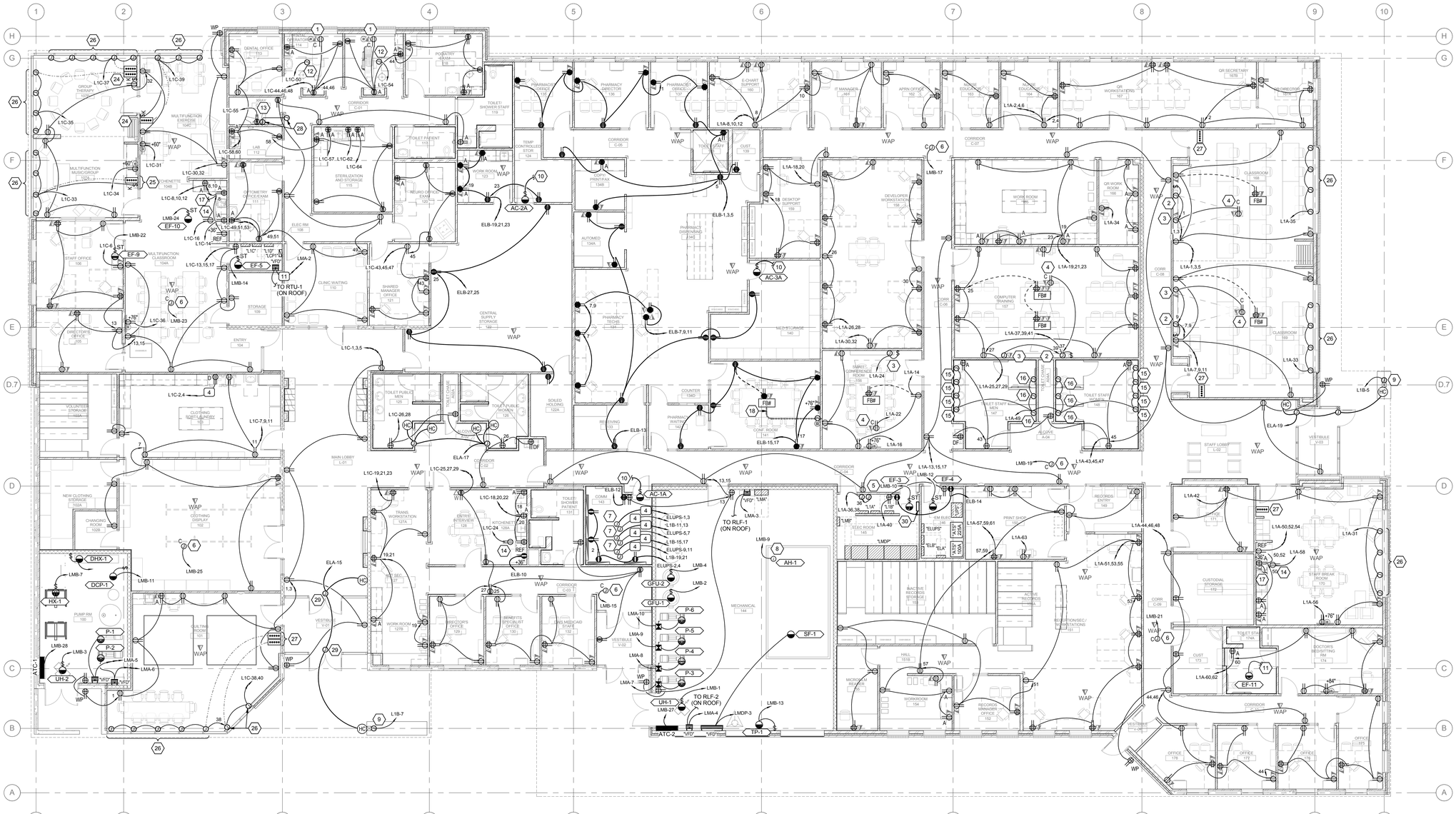
ES501

9/7/2012 2:05:55 PM



D4 ENLARGED UTILITY ENCLOSURE POWER PLAN

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



A1 LEVEL 01 POWER PLAN

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

GENERAL SHEET NOTES

1. LOCATIONS OF MECHANICAL EQUIPMENT SHOWN IS APPROXIMATE. COORDINATE EXACT LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL INSTALLER PRIOR TO ROUGH-IN.
2. REFER TO EQUIPMENT SCHEDULE FOR CONDUCTOR, CONDUIT, AND DEVICE SIZES FOR MECHANICAL EQUIPMENT.

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

SHEET KEYNOTES

1. CEILING MOUNTED RECEPTACLE AND TELE/DATA FOR CEILING MOUTED TELEVISION. COORDINATE EXACT LOCATION WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
2. JUNCTION BOX FOR MOTORIZED SCREEN. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
3. JUNCTION BOX FOR PROMETHEAN BOARD. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
4. CEILING MOUNTED RECEPTACLE AND TELE/DATA FOR PROJECTOR.
5. JUNCTION BOX FOR MISC. MECHANICAL POWER (CONTROLS, ETC.).
6. JUNCTION BOX MOUNTED IN ACCESSIBLE LOCATION ABOVE CEILING FOR VAV CONTROL POWER.
7. PROVIDE POWER CONNECTION TO SERVER EQUIPMENT RACK. PROVIDE (2) #10 AWG CONDUCTORS WITH (1) #12 AWG GROUND IN 1"DIA. CONDUIT. COORDINATE AND VERIFY EXACT USER POWER REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
8. JUNCTION BOX FOR AIR HANDLER RECEPTACLE LIGHTING AND POWER CONNECTION. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
9. JUNCTION BOX FOR POWER CONNECTION TO DRAIN HEAT TRACE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
10. CONNECT TO ASSOCIATED OUTDOOR CONDENSING UNIT LOCATED ON ROOF. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
11. CONNECT TO LIGHTING BRANCH CIRCUIT SWITCH LEG SERVING BATHROOM LIGHTING.
12. JUNCTION BOX FOR POWER CONNECTION TO DENTAL ACCESSORIES EQUIPMENT. COORDINATE EXACT LOCATION WITH EQUIPMENT AND REQUIREMENTS WITH MANUFACTURER'S WRITTEN SPECIFICATION PRIOR TO ROUGH-IN.
13. RECEPTACLE FOR POWER CONNECTION TO PANORAMIC XRAY MACHINE. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
14. RECEPTACLE FOR MICROWAVE. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH MILLWORK PRIOR TO ROUGH-IN.
15. JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED SINKS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
16. JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED TOILETS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
17. CIRCUIT TO UNDER CABINET LIGHT FIXTURES LOCATED DIRECTLY ABOVE.
18. PROVIDE (1) 2" EMPTY CONDUIT WITH PULL STRING FROM FLOORBOX TO FLUSH WALL MOUNTED JUNCTION BOX WITH SINGLE GANG OPENING. MOUNT JUNCTION BOX AT TYPICAL RECEPTACLE HEIGHT.
19. PROVIDE (1) 2" EMPTY CONDUIT WITH PULL STRING FROM PANEL "ELA" AND STUBBED UP AT GENERATOR ENCLOSURE.
20. POWER CONNECTION FOR GENERATOR CONTROLS AND DEVICES.
21. POWER CONNECTION FOR GENERATOR COOLANT HEATER. COORDINATE EXACT STUB-UP LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
22. POWER CONNECTION FOR GENERATOR BLOCK HEATER. COORDINATE EXACT STUB-UP LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
23. JUNCTION BOX FOR IRRIGATION CONTROLLER. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
24. KEYED AND BUTTON CONTROL SWITCHES FOR CONTROLS TO MECHOSHADES IN THIS ROOM. MOUNT SWITCHES ADJACENT TO ROOM LIGHT SWITCHES.
25. CONTROL SWITCH FOR MECHOSHADES LOCATED IN LOCKABLE CABINET. COORDINATE EXACT LOCATION WITH MILLWORK PRIOR TO ROUGH-IN.
26. JUNCTION BOX FOR MOTORIZED MECHOSHADES. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
27. CONTROL SWITCH FOR CONTROLS TO MECHOSHADES IN DAY ROOM. MOUNT SWITCH ADJACENT TO ROOM LIGHT SWITCHES.
28. PROVIDE (1) 1" CONDUIT FROM SINGLE GANG JUNCTION BOX LOCATED ADJACENT TO X-RAY EQUIPMENT TO FOUR GANG JUNCTION BOX FOR EQUIPMENT SWITCHES AND INDICATOR LIGHT. MOUNT EQUIPMENT JUNCTION BOX AT STANDARD RECEPTACLE HEIGHT. X-RAY EQUIPMENT, SWITCHES, INDICATOR LIGHTING, AND CABLING PROVIDED BY OWNER; COORDINATE WITH OWNER FOR INSTALLATION OF OWNER PROVIDED EQUIPMENT, CABLING, AND DEVICES."
29. JUNCTION BOX FOR POWER CONNECTION TO AUTOMATIC DOOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH AUTODOOR EQUIPMENT PRIOR TO ROUGH-IN.
30. GENERATOR ANNUNCIATOR PANEL.

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL: LICENSED PROFESSIONAL ENGINEER No. 7057918 CARLTON A. GETZ STATE OF UTAH 09/12/2012

DATE	STATUS

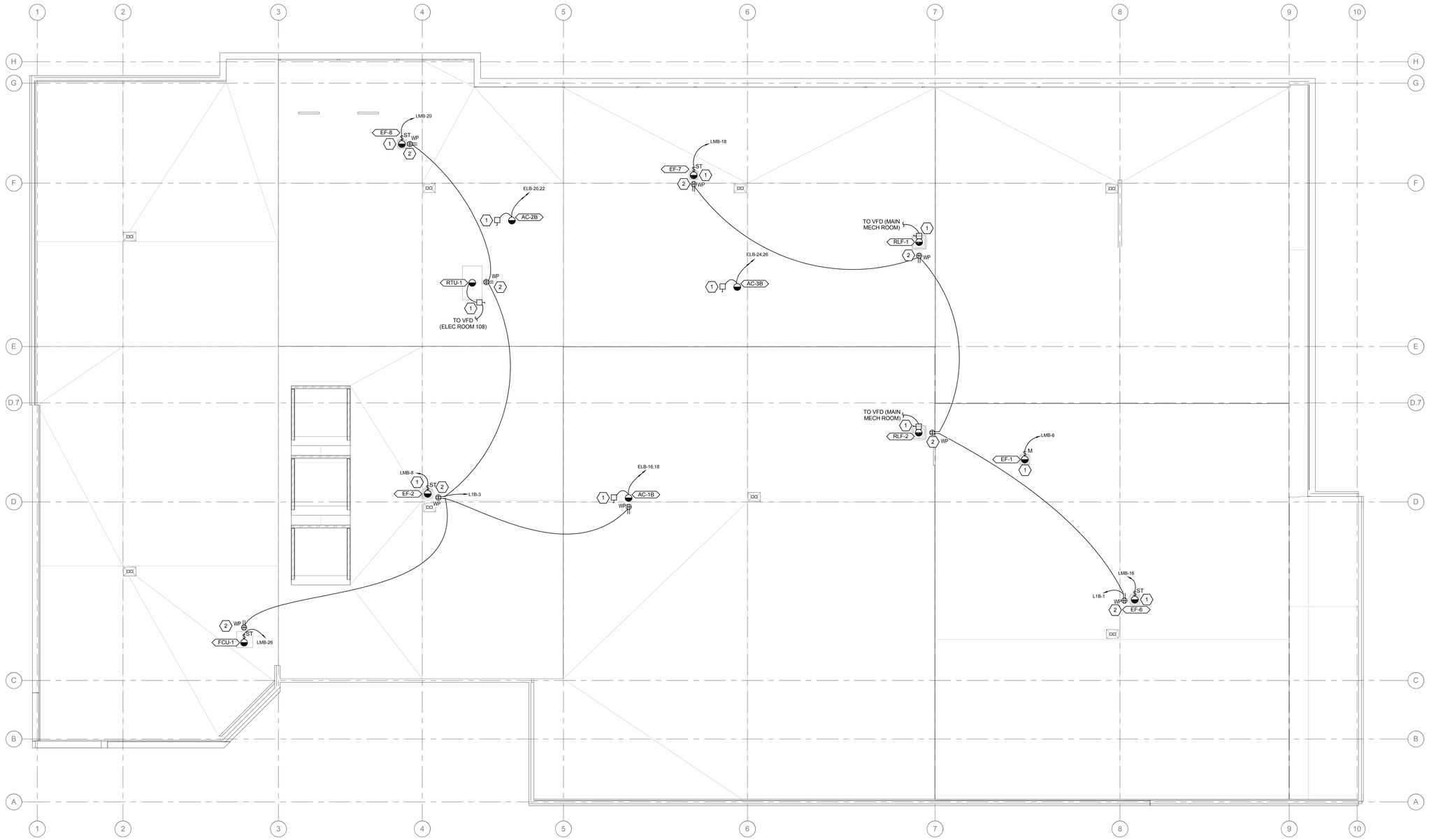
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LEVEL 1 POWER PLAN

EP101

9/7/2012 2:05:47 PM



A1 ROOF POWER PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PLAN

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

GENERAL SHEET NOTES

1 LOCATIONS OF MECHANICAL EQUIPMENT SHOWN IS APPROXIMATE. COORDINATE EXACT LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL INSTALLER PRIOR TO ROUGH-IN.

2 REFER TO EQUIPMENT SCHEDULE FOR CONDUCTOR, CONDUIT, AND DEVICE SIZES FOR MECHANICAL EQUIPMENT.

SHEET KEYNOTES

1 MOUNT DISCONNECT SWITCH IN ACCESSIBLE LOCATION ADJACENT TO UNIT.

2 MOUNT RECEPTACLE IN ACCESSIBLE LOCATION ADJACENT TO UNIT.

SPECTRUM
ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

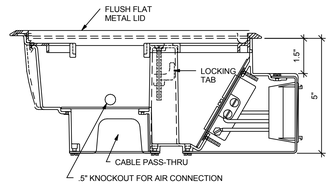
△	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

ROOF POWER PLAN

EP102

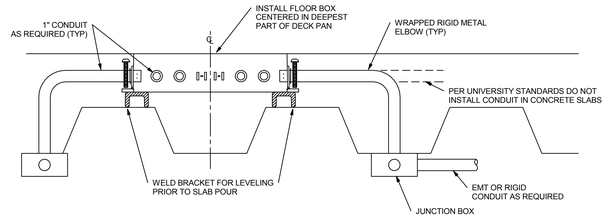
9/7/2012 2:05:48 PM



REF: SPEC SECTION 16145

E5 ACCESS FLOOR BOX SIDE VIEW

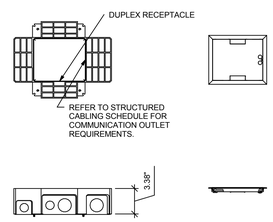
SCALE: NTS



D5 TYPICAL FLOOR BOX IN CONCRETE SLAB

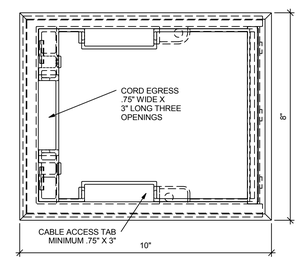
SCALE: NTS

COORDINATE COVERPLATE SELECTION WITH ARCHITECT.



C4 FLOOR BOX #4

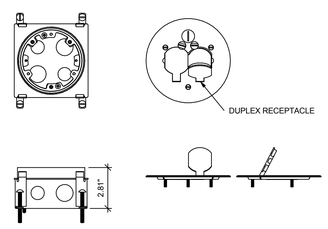
SCALE: NTS



REF: SPEC SECTION 16145

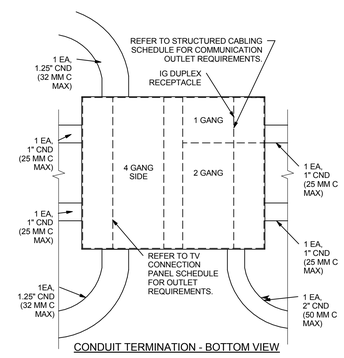
C5 ACCESS FLOOR BOX TOP VIEW

SCALE: NTS

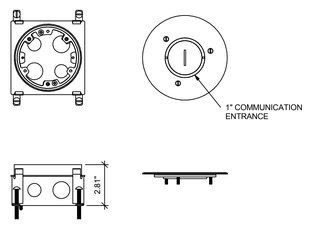


B4 FLOOR BOX #1

SCALE: NTS

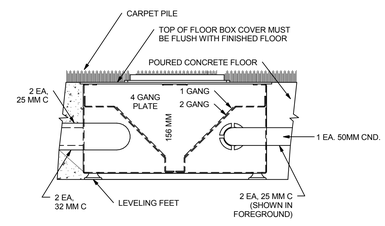


CONDUIT TERMINATION - BOTTOM VIEW



A4 FLOOR BOX #1S

SCALE: NTS



CONDUIT TERMINATION - SIDE VIEW

A5 FLOOR BOX #61

SCALE: NTS

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

SPECTRUM
ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH

09/12/2012

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

FLOOR BOX DETAILS

EP501

9/7/2012 2:05:50 PM

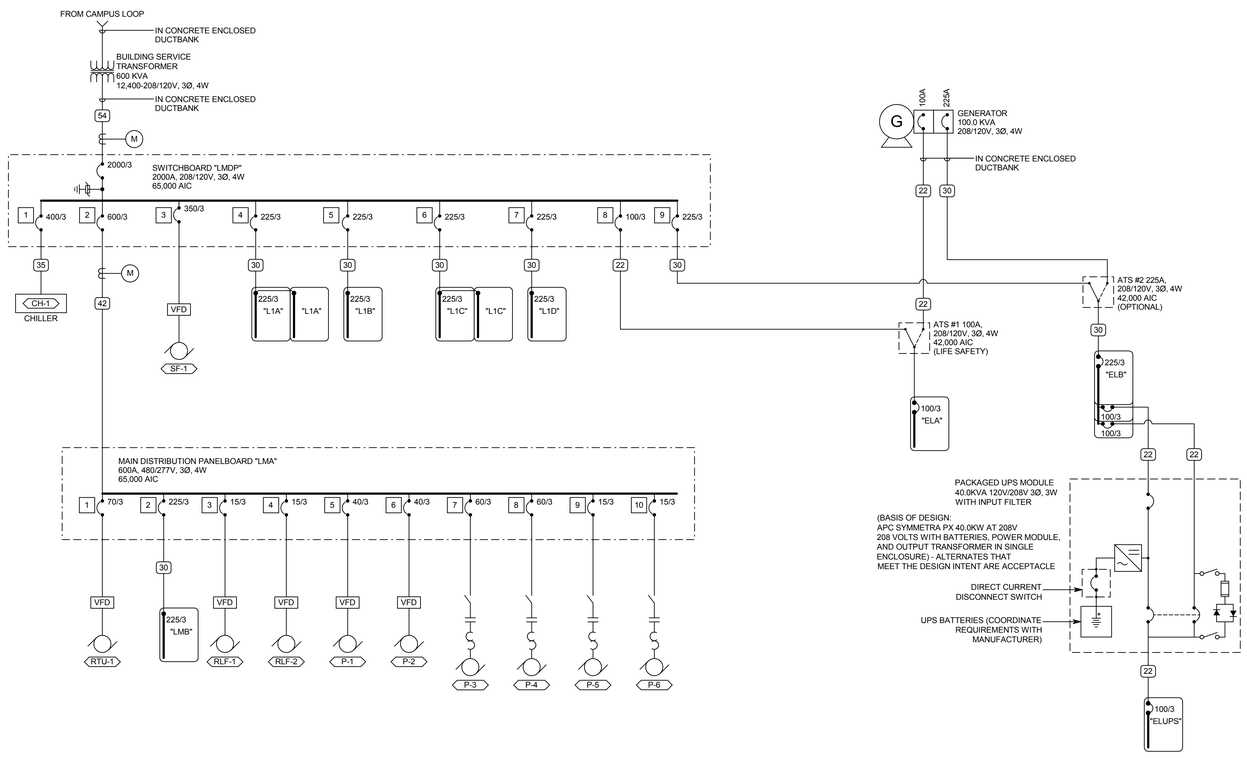
CONDUCTOR AND CONDUIT SCHEDULE

SCHEDULE NUMBER
SUBSCRIPT (NOTE 5)
(E.G.) 5 IG

SYM	AMP	CONDUIT SIZE	CONDUCTOR (NOTE 1) QTY	SIZE	G	IG	SE	NOTES
1	20	.75	2	12	12	12	8	2
2	20	.75	3	12	12	12	8	2,3
3	20	.75	4	12	12	12	8	2,3
4	30	.75	2	10	10	10	8	2
5	30	.75	3	10	10	10	8	2
6	30	.75	4	10	10	10	8	2
7	40	1	2	8	10	8	6	2
8	40	1	3	8	10	8	6	2
9	40	1	4	8	10	8	6	2
10	55	1	2	6	10	8	4	2
11	55	1	3	6	10	8	4	2
12	55	1.25	4	6	10	8	4	2
13	70	1	2	4	8	4	2	2
14	70	1.25	3	4	8	4	2	2
15	70	1.25	4	4	8	4	2	2
16	85	1.25	2	3	8	3	2	2
17	85	1.25	3	3	8	3	2	2
18	85	1.25	4	3	8	3	2	2
19	95	1.25	3	2	8	2	2	2
20	95	1.50	4	2	8	2	2	2
21	130	1.50	3	1	6	2	2	2
22	130	1.50	4	1	6	2	2	2
23	150	2	3	1/0	6	2	1/0	2
24	150	2	4	1/0	6	2	1/0	2
25	175	2	3	2/0	6	2	2/0	2
26	175	2	4	2/0	6	2	2/0	2
27	200	2	3	3/0	6	2	2/0	2
28	200	2.50	4	3/0	6	2	2/0	2
29	230	2.50	3	4/0	4	2	2/0	2
30	230	2.50	4	4/0	4	2	2/0	2
31	255	2.50	3	250	4	1	2/0	2
32	255	2.50	4	250	4	1	2/0	2
33	310	3	3	350	3	1/0	3/0	2
34	310	3	4	350	3	1/0	3/0	2
35	380	3.50	3	500	3	3/0	3/0	2
36	380	4	4	500	3	3/0	3/0	2
37	400	2 EA 2	3	3/0	3	3/0	3/0	2
38	400	2 EA 2.50	4	3/0	3	3/0	3/0	2
39	510	2 EA 2.50	3	250	1	4/0	3/0	2
40	510	2 EA 3	4	250	1	4/0	3/0	2
41	620	2 EA 3	3	350	1/0	4/0	3/0	2,4
42	620	2 EA 3	4	350	1/0	4/0	3/0	2,4
43	780	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
44	780	2 EA 4	4	500	1/0	4/0	3/0	2,4
45	855	3 EA 3	3	300	2/0	4/0	3/0	2,4
46	855	3 EA 3	4	300	2/0	4/0	3/0	2,4
47	1000	3 EA 3.50	3	400	2/0	4/0	3/0	4
48	1000	3 EA 3.50	4	400	2/0	4/0	3/0	4
49	1140	3 EA 4	3	500	3/0	4/0	3/0	4
50	1140	2 EA 4	4	500	3/0	4/0	3/0	4
51	1240	4 EA 3	3	350	3/0	4/0	3/0	4
52	1240	4 EA 3	4	350	3/0	4/0	3/0	4
53	1675	5 EA 3.50	4	400	4/0	4/0	4/0	4
54	2010	6 EA 3.50	4	400	250	250	250	4
55	2660	7 EA 4	4	500	350	350	350	4
56	3040	8 EA 4	4	500	500	500	500	4
57	4180	11 EA 4	4	500	500	500	500	4
58		5 EA 4						6
59		5						6
60		10 EA 4						6

CONDUCTOR AND CONDUIT SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4. GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
5. WHEN SYMBOL SUBSCRIPT INDICATES "IG", INCLUDE "IG" OR INSULATED GROUND CONDUCTOR SCHEDULED ALONG WITH GROUND OR EQUIPMENT GROUND CONDUCTOR. WHEN SYMBOL SUBSCRIPT INDICATES "SE", SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEMS.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.



A2 ONE-LINE DIAGRAM
SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

GENERAL SHEET NOTES

1. PROVIDE NEMA 3R ENCLOSURES FOR EQUIPMENT LOCATED OUTDOORS. REFER TO PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.
3. ALL EQUIPMENT SHALL BE CONSTRUCTED AND BRACED FOR THE SEISMIC CONDITIONS OF THE PROJECT. REFER TO SPECIFICATIONS SECTION 16071 FOR REQUIREMENTS.

SHEET KEYNOTES

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

ONE-LINE DIAGRAM

EP601

9/7/2012 2:05:51 PM

EQUIPMENT SCHEDULE

MARK	QTY	ITEM DESCRIPTION	LOAD DATA							WIRE AND CONDUIT SIZE	OVERCURRENT PROTECTION			DISCONNECT			STARTER DATA														NOTES	MARK
			HP	kW	MCA	FLA	VOLT	PH	Hz		FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	SIZE	SPEED	CTRL VOLT	SELECTOR SWITCH	PUSH BUTTON	PILOT LAMP	NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	PHASE FAILURE RELAY	SCHEMATIC REFERENCE	REMOTE CTRL		
AC-1A	1	SPLIT SYSTEM (INDOOR UNIT)			1.0		208	1	60	CC #1	E	20A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	Q															AC-1A
AC-1B	1	SPLIT SYSTEM (OUTDOOR UNIT)			17.0		208	1	60	CC #1	E	20A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	Q															AC-1B
AC-2A	1	SPLIT SYSTEM (INDOOR UNIT)			1.0		208	1	60	CC #1	E	20A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	Q															AC-2A
AC-2B	1	SPLIT SYSTEM (OUTDOOR UNIT)			18.0		208	1	60	CC #1	E	20A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	Q															AC-2B
AC-3A	1	SPLIT SYSTEM (INDOOR UNIT)			1.0		208	1	60	CC #1	E	15A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	Q															AC-3A
AC-3B	1	SPLIT SYSTEM (OUTDOOR UNIT)			12.0		208	1	60	CC #1	E	15A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	Q															AC-3B
ATC-1	1	CONTROLS				10.0	120	1	60	CC #1	E	20A C/B	PANEL	E																		ATC-1
ATC-2	1	CONTROLS				10.0	120	1	60	CC #1	E	20A C/B	PANEL	E																		ATC-2
CH-1	1	CHILLER			346.0		208	3	60	CC #35	E	400A C/B	PANEL	Q																		CH-1
DHX-1	1	DIRECT HEAT EXCHANGER				10.0	120	1	60	CC #1	E	20A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																DHX-1
EWC-1		WATER COOLER				10.0	120	1	60	CC #1	E	20A C/B	PANEL	E																	1	EWC-1
EF-1	1	EXHAUST FAN	0.33		9.0	7.2	120	1	60	CC #1	E	15A C/B	PANEL	E	MOTOR SWITCH	ADJ. TO UNIT	E	MOTOR SWITCH	ADJ. TO UNIT	0												EF-1
EF-2	1	EXHAUST FAN	0.25		7.3	5.8	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-2
EF-3	1	EXHAUST FAN	0.17		5.5	4.4	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-3
EF-4	1	EXHAUST FAN	0.17		5.5	4.4	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-4
EF-5	1	EXHAUST FAN	0.17		5.5	4.4	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-5
EF-6	1	EXHAUST FAN	0.25		7.3	5.8	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-6
EF-7	1	EXHAUST FAN	0.25		7.3	5.8	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-7
EF-8	1	EXHAUST FAN	0.25		7.3	5.8	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-8
EF-9	1	EXHAUST FAN	0.17		5.5	4.4	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-9
EF-10	1	EXHAUST FAN	0.17		5.5	4.4	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-10
EF-11	1	EXHAUST FAN	0.17		5.5	4.4	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																EF-11
FCU-1	1	FAN COIL UNIT	0.5		12.3	9.8	120	1	60	CC #1	E	20A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT	Q															FCU-1
GFU-1	1	GLYCOL FEED	0.3		9.0	7.2	120	1	60	CC #1	E	15A C/B	PANEL	E	MOTOR SWITCH	ADJ. TO UNIT	E	MOTOR SWITCH	ADJ. TO UNIT	0												GFU-1
GFU-2	1	GLYCOL FEED	0.3		9.0	7.2	120	1	60	CC #1	E	15A C/B	PANEL	E	MOTOR SWITCH	ADJ. TO UNIT	E	MOTOR SWITCH	ADJ. TO UNIT	0												GFU-2
HX-1	1	HEAT EXCHANGER				10.0	120	1	60	CC #1	E	20A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																HX-1
P-1	1	PUMP	5.0		20.9	16.7	208	3	60	CC #5	E	40A C/B	PANEL	E	60A D/S	ADJ. TO UNIT	E	VFD	ADJ. TO UNIT													P-1
P-2	1	PUMP	5.0		20.9	16.7	208	3	60	CC #5	E	40A C/B	PANEL	E	60A D/S	ADJ. TO UNIT	E	VFD	ADJ. TO UNIT													P-2
P-3	1	PUMP	7.5		30.3	24.2	208	3	60	CC #8	E	60A C/B	PANEL	E	60A D/S	ADJ. TO UNIT	E	FVNR	ADJ. TO UNIT	2		120	HOA		R/G	2	2					P-3
P-4	1	PUMP	7.5		30.3	24.2	208	3	60	CC #8	E	60A C/B	PANEL	E	60A D/S	ADJ. TO UNIT	E	FVNR	ADJ. TO UNIT	2		120	HOA		R/G	2	2					P-4
P-5	1	PUMP	2.0		9.4	7.5	208	3	60	CC #2	E	15A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	E	FVRN	ADJ. TO UNIT	0		120	HOA		R/G	2	2					P-5
P-6	1	PUMP	2.0		9.4	7.5	208	3	60	CC #2	E	15A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	E	FVRN	ADJ. TO UNIT	0		120	HOA		R/G	2	2					P-6
RCP-1	1	RECIRC PUMP	0.17		5.5	4.4	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																RCP-1
RLF-1	1	RELIEF FAN	1.5		8.3	6.6	208	3	60	CC #2	E	15A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	E	VFD	ADJ. TO UNIT													RLF-1
RLF-2	1	RELIEF FAN	1.5		8.3	6.6	208	3	60	CC #2	E	15A C/B	PANEL	E	30A D/S	ADJ. TO UNIT	E	VFD	ADJ. TO UNIT													RLF-2
RTU-1	1	ROOF TOP UNIT			70.0	55.0	208	3	60	CC #11	E	70A C/B	PANEL	E	100A D/S	ADJ. TO UNIT	Q	VFD	ADJ. TO UNIT													RTU-1
SF-1	1	SUPPLY FAN	50.0		178.8	143.0	208	3	60	CC #27	E	350A C/B	PANEL	E	VFD	ADJ. TO UNIT	E	VFD	ADJ. TO UNIT													SF-1
TP-1		TRAP PRIMER				2.0	120	1	60	CC #1	E	20A C/B	PANEL																		1	TP-1
UH-1	1	UNIT HEATER	0.1		2.8	2.2	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																UH-1
UH-2	1	UNIT HEATER	0.1		2.8	2.2	120	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT																UH-2

NOTES LEGEND:

1. REFER TO PLANS FOR EXACT QUANTITY.

EQUIPMENT SCHEDULE KEY

E	DIVISION 16
Q	FURNISHED WITH THE EQUIPMENT
*	COORDINATE WITH THE DIVISION 15 TEMPERATURE CONTROL INSTALLER
**	AUTOMATIC CONTROL WIRING BY DIVISION 15

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH

09/12/2012

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

EQUIPMENT SCHEDULE

EP602

9/7/2012 2:05:52 PM

DISTRIBUTION PANELBOARD "LMDP"

VOLTS/PHASE/WIRE:	MAIN SIZE & TYPE:	LOCATION:	NOTES:
120/208 V ,3 PH, 4 WIRE	2000 AMPERE MAIN CIRCUIT BREAKER		

ACCESSORIES: IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SERVICE ENTRANCE, 65,000 A.I.C.

CKT	OCP					PANEL / EQUIPMENT	PHASE LOAD		
NO	AMP	POLE	LTG	PWR	CO		A	B	C
1	400	3	0.0	124.5	0.0	CHILLER - (CH-1)	41.5	41.5	41.5
2	600	3	0.5	79.3	0.0	PANEL "LMA"	27.5	26.4	25.8
3	350	3	0.0	51.5	0.0	SUPPLY FAN - (SF-1)	17.2	17.2	17.2
4	225	3	0.0	28.8	41.8	PANEL "L1A"	22.4	25.0	24.5
5	225	3	18.4	13.5	1.8	PANEL "L1B"	13.0	10.7	10.1
6	225	3	2.0	34.1	27.0	PANEL "L1C"	24.1	21.9	18.3
7	225	3	9.0	3.9	0.0	PANEL "L1D"	4.6	5.1	3.2
8	100	3	5.9	17.1	1.2	PANEL "ELA" (VIA TRANSFER SWITCH)	6.7	10.2	7.4
9	225	3	3.7	27.1	10.4	PANEL "ELB" (VIA TRANSFER SWITCH)	14.1	15.6	11.5
10	--	--	--	--	--	SPACE	0.0		
11	--	--	--	--	--	SPACE	0.0		
12	--	--	--	--	--	SPACE	0.0		
13	--	--	--	--	--	SPACE	0.0		
14	--	--	--	--	--	SPACE	0.0		
15	--	--	--	--	--	SPACE	0.0		
16	--	--	--	--	--	SPACE	0.0		
TOTALS:						CONNECTED kVA PER PHASE	**171**	**173.4**	**159.4**
						CONNECTED AMPS PER PHASE	**1441**	**1460**	**1329**
								CONNECTED TOTAL kVA=	**504.0**
								CONNECTED AVERAGE AMPS PER PHASE=	**1399**

Load Classification	TOTAL LOAD	DEMAND FACTOR	EST. DEMAND	Panel Totals	
CO	82.2	56%	46.1	**TOTAL EST. DEMAND=**	**490.7**
POWER	250.9	100%	250.9	**TOTAL EST. DEMAND CURRENT=**	**1362**
LIGHTING	39.6	125%	49.5		
Motor	128.8	110%	141.7		

Notes:

DISTRIBUTION PANELBOARD "LMA"

VOLTS/PHASE/WIRE:	MAIN SIZE & TYPE:	LOCATION:	NOTES:
120/208 V ,3 PH, 4 WIRE	600 AMPERE MAIN LUGS	MECHANICAL 144	

ACCESSORIES: IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, 65,000 A.I.C.

CKT	OCP					PANEL / EQUIPMENT	PHASE LOAD		
NO	AMP	POLE	LTG	PWR	CO		A	B	C
1	225	3	0.5	20.9	0.0	PANEL "LMB"	8.1	6.9	6.4
2	70	3	0.0	19.8	0.0	ROOF TOP UNIT (RTU-1)	6.6	6.6	6.6
3	15	3	0.0	2.7	0.0	RELIEF FAN - (RFL-1)	0.9	0.9	0.9
4	15	3	0.0	2.7	0.0	RELIEF FAN - (RLF-2)	0.9	0.9	0.9
5	40	3	0.0	6.0	0.0	PUMP - (P-1)	2.0	2.0	2.0
6	40	3	0.0	6.0	0.0	PUMP - (P-2)	2.0	2.0	2.0
7	60	3	0.0	7.9	0.0	PUMP - (P-3)	2.6	2.6	2.6
8	60	3	0.0	7.9	0.0	PUMP - (P-4)	2.6	2.6	2.6
9	15	3	0.0	2.7	0.0	PUMP - (P-5)	0.9	0.9	0.9
10	15	3	0.0	2.7	0.0	PUMP - (P-6)	0.9	0.9	0.9
11	--	--	--	--	--	SPACE	0.0		
12	--	--	--	--	--	SPACE	0.0		
13	--	--	--	--	--	SPACE	0.0		
14	--	--	--	--	--	SPACE	0.0		
15	--	--	--	--	--	SPACE	0.0		
16	--	--	--	--	--	SPACE	0.0		
TOTALS:						CONNECTED kVA PER PHASE	**28**	**26.4**	**25.8**
						CONNECTED AMPS PER PHASE	**230**	**221**	**215**
								CONNECTED TOTAL kVA=	**79.8**
								CONNECTED AVERAGE AMPS PER PHASE=	**221**

Load Classification	TOTAL LOAD	DEMAND FACTOR	EST. DEMAND	Panel Totals	
CO	0.0	0%	0.0	**TOTAL EST. DEMAND=**	**84.8**
POWER	12.5	100%	12.5	**TOTAL EST. DEMAND CURRENT=**	**235**
LIGHTING	0.5	125%	0.6		
Motor	66.7	107%	71.7		

Notes:

PANEL "LMB"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS	ELEC ROOM 145	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	15	1	0.0	0.3	0.0	UNIT HEATER - (UH-1)	0.3 0.9			GLYCOL PUMP - (GFU-1)	0.0	0.9	0.0	1	15	2
3	15	1	0.0	0.3	0.0	UNIT HEATER - (UH-2)		0.3 0.9		GLYCOL PUMP - (GFU-2)	0.0	0.9	0.0	1	15	4
5	20	1	0.0	1.2	0.0	DIRECT HEAT EXCHANGER (DHX-1)			1.2 0.9	EXHAUST FAN (EF-1)	0.0	0.9	0.0	1	15	6
7	20	1	0.0	1.2	0.0	HEAT EXCHANGER - (HX-1)	1.2 0.7			EXHAUST FAN (EF-2)	0.0	0.7	0.0	1	15	8
9	20	1	0.5	0.5	0.0	PWR/LTG: (AH-1)		1.0 0.5		EXHAUST FAN (EF-3)	0.0	0.5	0.0	1	15	10
11	15	1	0.0	0.5	0.0	INLINE PUMP - (DCP-1)			0.5 0.5	EXHAUST FAN (EF-4)	0.0	0.5	0.0	1	15	12
13	20	1	0.0	0.2	0.0	TRAP PRIMER (TP-1)	0.2 0.5			EXHAUST FAN (EF-5)	0.0	0.5	0.0	1	15	14
15	20	1	0.0	1.0	0.0	PWR: VAV CNTLS		1.0 0.7		EXHAUST FAN (EF-6)	0.0	0.7	0.0	1	15	16
17	20	1	0.0	1.0	0.0	PWR: VAV CNTLS			1.0 0.7	EXHAUST FAN (EF-7)	0.0	0.7	0.0	1	15	18
19	20	1	0.0	1.0	0.0	PWR: VAV CNTLS	1.0 0.7			EXHAUST FAN (EF-8)	0.0	0.7	0.0	1	15	20
21	20	1	0.0	1.0	0.0	PWR: VAV CNTLS		1.0 0.5		EXHAUST FAN (EF-9)	0.0	0.5	0.0	1	15	22
23	20	1	0.0	1.0	0.0	PWR: VAV CNTLS			1.0 0.5	EXHAUST FAN (EF-10)	0.0	0.5	0.0	1	15	24
25	20	1	0.0	1.0	0.0	PWR: VAV CNTLS	1.0 1.5			FAN COIL UNIT (FCU-1)	0.0	1.5	0.0	1	20	26
27	20	1	0.0	0.5	0.0	ATC POWER		0.5 0.5		ATC POWER	0.0	0.5	0.0	1	20	28
29	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	30
31	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	32
33	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	34
35	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	36
37	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	38
39	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	40
41	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	42
TOTALS:						CONNECTED kVA PER PHASE	**8**	**7**	**6**	CONNECTED TOTAL kVA					**21.4**	
						CONNECTED AMPS PER PHASE	**68**	**59**	**53**	CONNECTED AVERAGE AMPS PER PHASE					**59**	

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING **0.5kVA @ 125% = 0.6kVA** ALL OTHER LOADS @100%= **13 kVA** DIVERSIFIED TOTAL kVA = **22**

RECEPTACLES 25% OF LARGEST MOTOR= **9 kVA** AVERAGE AMPS PER PHASE = **61**

PANEL "ELA"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	100 AMPERE MAIN C.B.	EM ELEC 146	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	20	1	0.2	0.0	0.0	LTG: UTILITY ENCLOSURE	0.2 0.5			FA PANEL - FACP	0.0	0.5	0.0	1	20	2
3	20	1	1.2	0.0	0.0	LTG: CORR/OFFICE/CLASS RM		1.2 0.5		SEC PANEL - ACS-1	0.0	0.5	0.0	1	20	4
5	20	1	0.6	0.0	0.0	LTG: MAIN LOBBY/ENTRY			0.6 0.6	SEC PANEL - VSS-1	0.0	0.5	0.0	1	20	6
7	20	1	0.7	0.0	0.0	LTG: CORR./VEST/COMM	0.7 0.5			FA PANEL "NAC"	0.0	0.5	0.0	1	20	8
9	20	1	1.5	0.0	0.0	LTG: CORR./WORKSTATIONS		1.5 1.2		CO: UTILITIES ENCLOSURE	1.2	0.0	0.0	1	20	10
11	20	1	0.9	0.0	0.0	LTG: CORR./WORKROOM			0.9 1.5	PWR: GENERATOR CNTLS	0.0	1.5	0.0	1	20	12
13	20	1	0.8	0.0	0.0	LTG: CORR./MECH/ELEC RMS	0.8 1.5			PWR: GENERATOR CNTLS	0.0	1.5	0.0	1	20	14
15	20	1	0.0	0.5	0.0	PWR: VEST. ADA ACCESS DOORS		0.5 3.3		PWR: GEN. COOLANT HTR	0.0	6.6	0.0	2	35	16
17	20	1	0.0	0.5	0.0	PWR: LAV ADA ACCESS DOORS			0.5 3.3	--	--	--	--	--	--	18
19	20	1	0.0	0.5	0.0	PWR: VEST. ADA ACCESS DOORS	0.5 2.0			PWR: GEN BLOCK HTR	0.0	4.0	0.0	2	30	20
21	20	1	--	--	--	SPARE		0.0 2.0		--	--	--	--	--	--	22
23	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	24
25	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	26
27	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	28
29	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	30
31	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	32
33	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	34
35	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	36
37	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	38
39	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	40
41	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	42
TOTALS:						CONNECTED kVA PER PHASE	**7**	**10**	**7**	CONNECTED TOTAL kVA					**24.4**	
						CONNECTED AMPS PER PHASE	**56**	**86**	**63**	CONNECTED AVERAGE AMPS PER PHASE					**68**	

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING **5.9kVA @ 125% = 7.4kVA** ALL OTHER LOADS @100%= **17 kVA** DIVERSIFIED TOTAL kVA = **26**

RECEPTACLES **1.2kVA @ 100% = 1.2kVA** 25% OF LARGEST MOTOR= AVERAGE AMPS PER PHASE = **72**

PANEL "ELB"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN C.B.	EM ELEC 146	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	20	1	0.0	0.0	1.6	CO: OFFICES	1.6 0.8			LTG: OFFICES	0.0	0.0	0.8	1	20	2
3	20	1	0.0	0.0	1.8	CO: OFFICES		1.8 1.0		LTG: COPY/ PRINT/FAX A255	0.0	0.0	1.0	1	20	4
5	20	1	0.0	1.5	0.0	PWR: COPY/ PRINT/FAX A255			1.5 1.6	LTG: SUPPLY/CONF RM/STOR.	0.0	0.0	1.6	1	20	6
7	20	1	0.0	1.0	0.0	PWR: AUTOMED AUTOMED A259	1.0 0.3			LTG: SUPPLY STORAGE 109	0.0	0.0	0.3	1	20	8
9	20	1	0.0	1.0	0.0	PWR: AUTOMED AUTOMED A259		1.0 1.5		PWR: REF ENTRY/INTERVIEW A311	0.0	1.5	0.0	1	20	10
11	20	1	0.0	0.0	1.2	CO: ROOM A260			1.2 0.2	CO COMM 1143	0.2	0.0	0.0	1	20	12
13	20	1	0.0	0.0	1.6	CO: PHARMACY/ AUTOMED	1.6 0.4			CO EM ELEC 1131	0.4	0.0	0.0	1	20	14
15	20	1	0.0	0.0	1.6	CO: CONF. ROOM A262		1.6 1.9		SPLIT SYSTEM (AC-1)	0.0	3.8	0.0	2	20	16
17	20	1	0.0	0.5	0.0	PWR: TV MONITOR			0.5 1.9	--	--	--	--	--	--	18
19	20	1	0.0	0.0	0.4	CO: WORK ROOM A287	0.4 2.0			SPLIT SYSTEM (AC-2)	0.0	4.0	0.0	2	20	20
21	20	1	0.0	0.0	0.4	CO: WORK ROOM A287		0.4 2.0		--	--	--	--	--	--	22
23	20	1	0.0	0.0	0.2	CO: TEMP CONT. STOR A286			0.2 1.4	SPLIT SYSTEM (AC-3)	0.0	2.8	0.0	2	15	24
25	20	1	0.0	0.0	0.6	CO: SUPPLY STORAGE 122	0.6 1.4			--	--	--	--	--	--	26
27	20	1	0.0	0.0	0.4	CO: SUPPLY STORAGE 122		0.4 0.0		SPARE	--	--	--	1	20	28
29	0	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	30
31	0	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	32
33	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	34
35	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	36
37	100	3	0.0	11.0	0.0	UPS (MAIN FEED)	4.0 0.0			UPS (BYPASS FEED)	--	--	--	3	100	38
39	--	--	--	--	--	--		4.0 0.0		--	--	--	--	--	--	40
41	--	--	--	--	--	--			3.0 0.0	--	--	--	--	--	--	42
43	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	44
45	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	46
47	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	48
49	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	50
51	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	52
53	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	54
55	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	56
57	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	58
59	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	60
61	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	62
63	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	64
65	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	66
67	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	68
69	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	70
71	--	--	--	--	--	SPACE			0.0 0.0	SPACE	--	--	--	--	--	72
73	--	--	--	--	--	SPACE	0.0 0.0			SPACE	--	--	--	--	--	74
75	--	--	--	--	--	SPACE		0.0 0.0		SPACE	--	--	--	--	--	76
77	--	--	--	--	--	SPACE			0.0 0.0	SPACE	--	--	--	--	--	78
79	--	--	--	--	--	SPACE	0.0 0.0			SPACE	--	--	--	--	--	80
81	--	--	--	--	--	SPACE		0.0 0.0		SPACE	--	--	--	--	--	82
83	--	--	--	--	--	SPACE			0.0 0.0	SPACE	--	--	--	--	--	84
TOTALS:						CONNECTED kVA PER PHASE	**14**	**16**	**12**	CONNECTED TOTAL kVA					**41.2**	
						CONNECTED AMPS PER PHASE	**120**	**133**	**96**	CONNECTED AVERAGE AMPS PER PHASE					**114**	

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING **3.7kVA @ 125% = 4.6kVA** ALL OTHER LOADS @100%= **17 kVA** DIVERSIFIED TOTAL kVA = **43**

RECEPTACLES **10.4kVA @ 98% = 10.2kVA** 25% OF LARGEST MOTOR= **12 kVA** AVERAGE AMPS PER PHASE = **119**

PANEL "ELUPS"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	100 AMPERE MAIN C.B.	EM ELEC 146	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	30	2	0.0	3.0	0.0	PWR: SERVER EQ COMM 1143	1.5 1.0			PWR: TTB COMM 1143	0.0	1.0	0.0	1	20	2
3	--	--	--	--	--	--		1.5 1.0		PWR: TTB COMM 1143	0.0	1.0	0.0	1	20	4
5	30	2	0.0	3.0	0.0	PWR: SERVER EQ COMM 1143			1.5 0.0	SPARE	--	--	--	1	20	6
7	--	--	--	--	--	--	1.5 0.0			SPARE	--	--	--	1	20	8
9	30	2	0.0	3.0	0.0	PWR: SERVER EQ COMM 1143		1.5 0.0		SPARE	--	--	--	1	20	10
11	--	--	--	--	--	--			1.5 0.0	SPARE	--	--	--	1	20	12
13	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	14
15	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	16
17	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	18
19	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	20
21	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	22
23	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	24
25	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	26
27	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	28
29	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	30
31	--	--	--	--	--	SPACE	0.0 0.0			SPACE	--	--	--	--	--	32
33	--	--	--	--	--	SPACE		0.0 0.0		SPACE	--	--	--	--	--	34
35	--	--	--	--	--	SPACE			0.0 0.0	SPACE	--	--	--	--	--	36
37	--	--	--	--	--	SPACE	0.0 0.0			SPACE	--	--	--	--	--	38
39	--	--	--	--	--	SPACE		0.0 0.0		SPACE	--	--	--	--	--	40
41	--	--	--	--	--	SPACE			0.0 0.0	SPACE	--	--	--	--	--	42
TOTALS:						CONNECTED kVA PER PHASE	**4**	**4**	**3**	CONNECTED TOTAL kVA					**11.0**	
						CONNECTED AMPS PER PHASE	**35**	**35**	**25**	CONNECTED AVERAGE AMPS PER PHASE					**31**	

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING ALL OTHER LOADS @100%= **11 kVA** DIVERSIFIED TOTAL kVA = **11**

RECEPTACLES 25% OF LARGEST MOTOR= AVERAGE AMPS PER PHASE = **31**

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY WRT
CHECKED BY CAG
SCALE

PANEL SCHEDULES

EP603

9/7/2012 2:05:53 PM

PANEL "L1A"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS	ELEC ROOM 145	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	20	1	0.0	1.0	0.0	PWR: PROJ SCREEN CLASSROOM	1.0 1.6			CO: ROOM A295	1.6	0.0	0.0	1	20	2
3	20	1	0.0	1.5	0.0	PWR: PROJ/INTEL BRD CLASSROOM		1.5 1.4		CO: ROOM A295, A220	1.4	0.0	0.0	1	20	4
5	20	1	0.0	0.0	1.2	CO: CLASSROOM A1104			1.2 1.6	CO: ROOM A216, A218	1.6	0.0	0.0	1	20	6
7	20	1	0.0	1.0	0.0	PWR: PROJ SCREEN CLASSROOM	1.0 1.5			PWR: COPIER E-CHART SUPPORT A219	0.0	1.5	0.0	1	20	8
9	20	1	0.0	1.5	0.0	PWR: PROJ/INTEL BRD CLASSROOM		1.5 1.6		CO: ROOM A212, A217	1.6	0.0	0.0	1	20	10
11	20	1	0.0	0.0	1.2	CO CLASSROOM A1104.1			1.2 1.2	CO: E-CHART SUPPORT A219	1.2	0.0	0.0	1	20	12
13	20	1	0.0	0.0	0.2	CO COMM 1143	0.2 1.2			CO ROOM 110, 115	1.2	0.0	0.0	1	20	14
15	20	1	0.0	0.0	0.6	CO ROOM 1153		0.6 0.8		PWR: TV MONITOR	0.0	0.8	0.0	1	20	16
17	20	1	0.0	0.0	1.2	CO CORRIDOR 115			1.2 0.8	CO: DESKTOP SUPPORT A215	0.8	0.0	0.0	1	20	18
19	20	1	0.0	1.5	0.0	PWR: COPIER WORK RM/ STORAGE	1.5 1.2			CO: DESKTOP SUPPORT A215	1.2	0.0	0.0	1	20	20
21	20	1	0.0	0.0	2.0	CO ROOM A1103		2.0 1.0		PWR: PROJ SMALL CONF. 110	0.0	1.0	0.0	1	20	22
23	20	1	0.0	1.5	0.0	PWR: COPIER COMPUTER TRAINING			1.5 1.0	PWR: PROJ SCREEN CONF. 110	0.0	1.0	0.0	1	20	24
25	20	1	0.0	0.0	0.8	PWR COMPUTER TRAINING 1105	0.8 1.0			CO: WORKSTATIONS A213	1.0	0.0	0.0	1	20	26
27	20	1	0.0	0.0	1.6	CO COMPUTER TRAINING 1105		1.6 1.0		CO: WORKSTATIONS A213	1.0	0.0	0.0	1	20	28
29	20	1	0.0	0.0	1.2	CO COMPUTER TRAINING 1105			1.2 1.0	CO: WORKSTATIONS A213	1.0	0.0	0.0	1	20	30
31	20	1	0.0	0.9	0.0	PWR: MECHSHADES ROOM 170	0.9 1.0			CO: WORKSTATIONS A213	1.0	0.0	0.0	1	20	32
33	20	1	0.0	0.9	0.0	PWR: MECHSHADES ROOM 169		0.9 1.5		PWR: COPIER QR WORK RM 166	0.0	1.5	0.0	1	20	34
35	20	1	0.0	0.9	0.0	PWR: MECHSHADES ROOM 168			0.9 1.0	PWR: MECH ELEC ROOM 1132	0.0	1.0	0.0	1	20	36
37	20	1	0.0	1.0	0.0	PWR: PROJ TRAINING 1105	1.0 1.0			PWR: MECH ELEC ROOM 1132	0.0	1.0	0.0	1	20	38
39	20	1	0.0	0.5	0.0	PWR: SMART BOARD TRAINING 1105		0.5 0.4		CO: ROOM 1131, 1132	0.4	0.0	0.0	1	20	40
41	20	1	0.0	1.0	0.0	PWR: PROJ SCREEN TRAINING 1105			1.0 1.6	CO: ROOM 1188	1.6	0.0	0.0	1	20	42
43	20	1	0.0	0.0	0.0	PWR: DRINK FOUNT. CORR. 115	1.2 1.6			CO: OFFICE 1181	1.6	0.0	0.0	1	20	44
45	20	1	0.0	0.0	1.2	CO ROOM 1175, 115		1.2 1.6		CO: ROOM 1183, 1184	1.6	0.0	0.0	1	20	46
47	20	1	0.0	0.0	1.0	CO RR A300			1.0 1.2	CO: ROOM 1187, 115, 1191	1.2	0.0	0.0	1	20	48
49	20	1	0.0	0.7	0.0	PWR: SINK/TOILET SENSORS RR	0.7 0.4			CO: STAFF BREAK ROOM 1188	0.4	0.0	0.0	1	20	50
51	20	1	0.0	0.0	1.6	CO ROOM A319, A324, A322		1.6 0.2		CO: STAFF BREAK ROOM 1188	0.2	0.0	0.0	1	20	52
53	20	1	0.0	0.0	1.6	CO RECEPTION/SEC./			1.6 1.5	PWR: FRIDGE BREAK ROOM 1188	0.0	1.5	0.0	1	20	54
55	20	1	0.0	0.0	1.2	CO ROOM A310, A323	1.2 0.8			PWR: TV MONITOR ROOM 170	0.0	0.8	0.0	1	20	56
57	20	1	0.0	1.5	0.0	PWR WORKROOM A317		1.5 1.1		PWR: MICROWAVE ROOM 170	0.0	1.1	0.0	1	20	58
59	20	1	0.0	0.0	0.8	CO WORKROOM A317			0.8 2.0	EXHAUST FAN (EF-11)	1.2	0.8	0.0	1	15	60
61	20	1	0.0	0.0	1.4	CO: OFFICES	1.4 0.2			CO: DOC'S RR 1189	0.2	0.0	0.0	1	20	62
63	20	1	0.0	1.5	0.0	PWR: COPIER PRINT SHOP		1.5 0.0		SPARE	--	--	--	1	20	64
65	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	66
67	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	68
69	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	70
71	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	72
73	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	74
75	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	76
77	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	78
79	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	80
81	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	82
83	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	84
TOTALS:						CONNECTED kVA PER PHASE	22	25	24	CONNECTED TOTAL kVA	71.8					
						CONNECTED AMPS PER PHASE	187	211	207	CONNECTED AVERAGE AMPS PER PHASE	200					

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING — ALL OTHER LOADS @100%= **29 kVA** — DIVERSIFIED TOTAL kVA = **56**

RECEPTACLES **41.8kVA @ 62% = 25.9kVA** — 25% OF LARGEST MOTOR= — AVERAGE AMPS PER PHASE = **155**

PANEL "L1B"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS	ELEC ROOM 145	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	20	1	0.0	0.0	0.8	CO: ROOF TOP	0.8 0.9			SITE LIGHTING	0.0	0.0	1.8	2	20	2
3	20	1	0.0	0.0	1.0	CO: ROOF TOP		1.0 0.9		--	--	--	--	--	--	4
5	20	1	0.0	1.5	0.0	PWR: HEAT TRACE			1.5 0.9	SITE LIGHTING	0.0	0.0	1.8	2	20	6
7	20	1	0.0	1.5	0.0	PWR: HEAT TRACE	1.5 0.9			--	--	--	--	--	--	8
9	20	1	0.0	1.5	0.0	PWR: IRR. CONTROLLER		1.5 0.3		SITE BOLLARDS	0.0	0.0	0.3	1	20	10
11	30	2	0.0	3.0	0.0	PWR: SERVER EQ COMM 1143			1.5 0.3	SITE BOLLARDS	0.0	0.0	0.3	1	20	12
13	--	--	--	--	--	--	1.5 0.9			LTG: CANOPY	0.0	0.0	0.9	1	20	14
15	30	2	0.0	3.0	0.0	PWR: SERVER EQ COMM 1143		1.5 0.9		LTG: MECH/PAT. TOILET	0.0	0.0	0.9	1	20	16
17	--	--	--	--	--	--			1.5 1.4	LTG: OFFICES	0.0	0.0	1.4	1	20	18
19	30	2	0.0	3.0	0.0	PWR: SERVER EQ COMM 1143	1.5 1.2			LTG: CONF./WORKSTATIONS	0.0	0.0	1.2	1	20	20
21	--	--	--	--	--	--		1.5 1.1		LTG: WORK RM/TRAINING	0.0	0.0	1.1	1	20	22
23	20	1	--	--	--	SPARE			0.0 0.6	LTG: CLASSROOM 168	0.0	0.0	0.6	1	20	24
25	20	1	--	--	--	SPARE	0.0 0.6			LTG: CLASSROOM 169	0.0	0.0	0.6	1	20	26
27	20	1	--	--	--	SPARE		0.0 0.5		LTG: RR 147/148	0.0	0.0	0.5	1	20	28
29	20	1	--	--	--	SPARE			0.0 1.2	LTG: OFFICE/BRK/DOCS BED	0.0	0.0	1.2	1	20	30
31	20	1	--	--	--	SPARE	0.0 1.7			LTG: WORK STATIONS/STOR.	0.0	0.0	1.7	1	20	32
33	20	1	--	--	--	SPARE		0.0 1.4		LTG: OFFICES/CORR.	0.0	0.0	1.4	1	20	34
35	20	1	--	--	--	SPARE			0.0 1.2	LTG: LOBBY/CORR.	0.0	0.0	1.2	1	20	36
37	20	1	--	--	--	SPARE	0.0 1.6			LTG: CORR./RR	0.0	0.0	1.6	1	20	38
39	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	40
41	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	42
TOTALS:						CONNECTED kVA PER PHASE	13	11	10	CONNECTED TOTAL kVA	33.7					
						CONNECTED AMPS PER PHASE	109	90	84	CONNECTED AVERAGE AMPS PER PHASE	94					

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING **18.4kVA @ 125% = 23.1kVA** — ALL OTHER LOADS @100%= **14 kVA** — DIVERSIFIED TOTAL kVA = **38**

RECEPTACLES **1.8kVA @ 100% = 1.8kVA** — 25% OF LARGEST MOTOR= — AVERAGE AMPS PER PHASE = **106**

PANEL "L1C"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS	ELEC RM 108	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	20	1	0.0	0.0	0.4	CO: ROOM A297	0.4 3.0			PWR: DRYER LAUNDRY A288	0.0	6.0	0.0	2	30	2
3	20	1	0.0	0.0	1.4	CO: QUILTING ROOM A289		1.4 3.0		--	--	--	--	--	--	4
5	20	1	0.0	0.0	1.2	CO: Room A299, 112			1.2 1.5	PWR: COPIER STAFF OFFICE A223	0.0	1.5	0.0	1	20	6
7	20	1	0.0	0.0	1.2	CO: CHANGING ROOM A290	1.2 1.5			PWR: FRIDGE KITCHENETTE A231	0.0	1.5	0.0	1	20	8
9	20	1	0.0	0.0	0.8	CO: CLOTH SORT/LAUNDRY A288		0.8 0.2		CO: KITCHENETTE A231	0.2	0.0	0.0	1	20	10
11	20	1	0.0	1.0	0.0	PWR: WASHER CLOTHING			1.0 0.2	CO: KITCHENETTE A231	0.2	0.0	0.0	1	20	12
13	20	1	0.0	0.0	1.4	CO: STAFF OFFICE A223	1.4 0.2			CO: KITCHENETTE A231	0.2	0.0	0.0	1	20	14
15	20	1	0.0	0.0	0.8	CO: DIRECTOR'S OFFICE 1107		0.8 1.1		PWR: MICROWAVE ROOM 104A	0.0	1.1	0.0	1	20	16
17	20	1	0.0	0.0	1.6	CO: ROOM A227, A226, A230, 1106			1.6 0.2	CO: KITCHENETTE A326	0.2	0.0	0.0	1	20	18
19	20	1	0.0	1.5	0.0	PWR: COPIER WORK ROOM A318	1.5 0.2			CO: KITCHENETTE A326	0.2	0.0	0.0	1	20	20
21	20	1	0.0	1.5	0.0	PWR: COPIER WORK ROOM A318		1.5 0.2		CO: KITCHENETTE A326	0.2	0.0	0.0	1	20	22
23	20	1	0.0	0.0	1.6	CO: ROOM A312, A316			1.6 1.1	PWR: MICROWAVE KITCH. 129A	0.0	1.1	0.0	1	20	24
25	20	1	0.0	0.0	1.6	CO: ROOM A314, A315	1.6 1.2			PWR: DRINK FOUNT. MAIN LOBBY	0.0	0.0	0.0	1	20	26
27	20	1	0.0	0.0	0.8	CO: DIRECTOR'S OFFICE A313		0.8 0.8		CO: ROOM 112, A303, A304	0.8	0.0	0.0	1	20	28
29	20	1	0.0	0.0	1.2	CO: OFFICES			1.2 1.0	CO: EXERCISE 104C	1.0	0.0	0.0	1	20	30
31	20	1	0.0	0.8	0.0	PWR: TV MULTIFUNC. EXERCISE	0.8 1.0			CO: ROOM 107A, 107B	1.0	0.0	0.0	1	20	32
33	20	1	0.0	0.9	0.0	PWR: MECHSHADES ROOM 107A		0.9 0.8		PWR: TV MUSIC/GROUP 107A	0.0	0.8	0.0	1	20	34
35	20	1	0.0	0.9	0.0	PWR: MECHSHADES ROOM 107B			0.9 0.8	PWR: TV CLASSROOM 104A	0.0	0.8	0.0	1	20	36
37	20	1	0.0	1.1	0.0	PWR: MECHSHADES ROOM 101	1.1 1.1			PWR: MECHSHADES ROOM 101	0.0	1.1	0.0	1	20	38
39	20	1	0.0	0.7	0.0	PWR: MECHSHADES ROOM 104C		0.7 0.4		PWR: MECHSHADES ROOM 101	0.0	0.4	0.0	1	20	40
41	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	42
43	20	1	0.0	1.5	0.0	PWR: COPIER OFFICE A246	1.5 0.8			CO PODIATRY EXAM A242	0.8	0.0	0.0	1	20	44
45	20	1	0.0	0.0	0.8	CO: NEURO OFFICE/ EXAM A252		0.8 1.6		PWR: DENTAL OPERATORY A244	0.6	1.0	0.0	1	20	46
47	20	1	0.0	0.0	1.2	CO: OFFICE A246			1.2 1.6	PWR: DENTAL OPERATORY 114	0.6	1.0	0.0	1	20	48
49	20	1	0.0	0.0	1.2	CO: STAFF TOILET/ SHOWER A237	1.2 1.0			PWR: DENTAL OPERATORY 114	0.0	1.0	0.0	1	20	50
51	20	1	0.0	0.0	0.8	CO: CLINIC WAITING A234		0.8 1.0		LTG: EXAM LIGHT DENTAL OPER.	0.0	0.0	1.0	1	20	52
53	20	1	0.0	0.0	1.0	CO: ROOM A247			1.0 1.0	PWR: DENTAL OPERATORY 116	0.0	1.0	0.0	1	20	54
55	20	1	0.0	1.1	0.0	PWR: DENTAL XRAY XRAY C-01A	1.1 1.0			LTG: EXAM LIGHT DENTAL OPER.	0.0	0.0	1.0	1	20	56
57	20	1	0.0	1.3	0.0	PWR: EQUIP. STER. 115		1.3 0.8		CO: STER. AND STORAGE A239	0.8	0.0	0.0	1	20	58
59	20	1	--	--	--	SPARE			0.0 1.2	CO: ROOM A249, A250	1.2	0.0	0.0	1	20	60
61	20	1	--	--	--	SPARE	0.0 1.3			PWR: EQUIP. STER. 115	0.0	1.3	0.0	1	20	62
63	20	1	--	--	--	SPARE		0.0 2.2		PWR: EQUIP. STER. 115	0.0	2.2	0.0	1	30	64
65	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	66
67	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	68
69	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	70
71	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	72
73	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	74
75	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	76
77	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	78
79	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	80
81	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	82
83	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	84
TOTALS:						CONNECTED kVA PER PHASE	24	22	18	CONNECTED TOTAL kVA	64.3					
						CONNECTED AMPS PER PHASE	205	187	152	CONNECTED AVERAGE AMPS PER PHASE	179					

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING **2.0kVA @ 125% = 2.5kVA** — ALL OTHER LOADS @100%= **34 kVA** — DIVERSIFIED TOTAL kVA = **56**

RECEPTACLES **27.0kVA @ 69% = 18.5kVA** — 25% OF LARGEST MOTOR= — AVERAGE AMPS PER PHASE = **156**

PANEL "L1D"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	LOCATION:	CABINET:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS	ELEC RM 108	SURFACE	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, 22,000 A.I.C.

CKT NO	AMP	POLE	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	POLE	AMP	CKT NO
1	20	1	1.3	0.0	0.0	LTG: OFFICES/STOR.	1.3 0.5			LTG CNTL PANEL "LCP1"	0.0	0.5	0.0	1	20	2
3	20	1	0.8	0.0	0.0	LTG: QUILTING/PUMP RM		0.8 0.6		PWR: TREE LIGHTING	0.0	0.6	0.0	1	20	4
5	20	1	1.2	0.0	0.0	LTG: CLTH DISP./LAUNDRY			1.2 0.4	PWR: TREE LIGHTING	0.0	0.4	0.0	1	20	6
7	20	1	1.0	0.0	0.0	LTG: EXERCISE/CLASSROOM	1.0 0.6			PWR: TREE LIGHTING	0.0	0.6	0.0	1	20	8
9	20	1	1.8	0.0	0.0	LTG: OFFICES/TOILETS		1.8 0.6		PWR: TREE LIGHTING	0.0	0.6	0.0	1	20	10
11	20	1	1.0	0.0	0.0	LTG: CORR./OFFICE/LAB			1.0 0.6	PWR: TREE LIGHTING	0.0	0.6	0.0	1	20	12
13	20	1	0.6	0.0	0.0	LTG: MAIN LOBBY	0.6 0.6			PWR: TREE LIGHTING	0.0	0.6	0.0	1	20	14
15	20	1	1.3	0.0	0.0	LTG: OFFICES/INTERVIEW		1.3 0.0		SPARE	--	--	--	1	20	16
17	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	18
19	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	20
21	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	22
23	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	24
25	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	26
27	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	28
29	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	30
31	20	1	--	--	--	SPARE	0.0 0.0			SPARE	--	--	--	1	20	32
33	20	1	--	--	--	SPARE		0.0 0.0		SPARE	--	--	--	1	20	34
35	20	1	--	--	--	SPARE			0.0 0.0	SPARE	--	--	--	1	20	36
37	--	--	--	--	--	SPACE	0.0 0.0			SPACE	--	--	--	--	--	38
39	--	--	--	--	--	SPACE		0.0 0.0		SPACE	--	--	--	--	--	40
41	--	--	--	--	--	SPACE			0.0 0.0	SPACE	--	--	--	--	--	42
TOTALS:						CONNECTED kVA PER PHASE	5	5	3	CONNECTED TOTAL kVA	12.9					
						CONNECTED AMPS PER PHASE	41	44	26	CONNECTED AVERAGE AMPS PER PHASE	36					

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING **9.0kVA @ 125% = 11.2kVA** — ALL OTHER LOADS @100%= **4 kVA** — DIVERSIFIED TOTAL kVA = **15**

RECEPTACLES — 25% OF LARGEST MOTOR= — AVERAGE AMPS PER PHASE = **42**

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

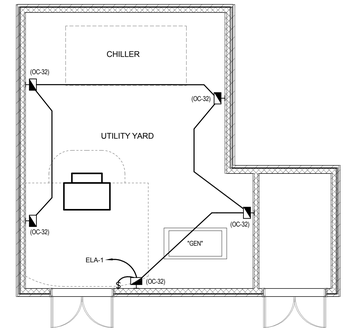
	DATE	REVISION

PROJECT NUMBER 11111
FILE 11111 USH Payne
DRAWN BY WRT
CHECKED BY CAG
SCALE

PANEL SCHEDULES

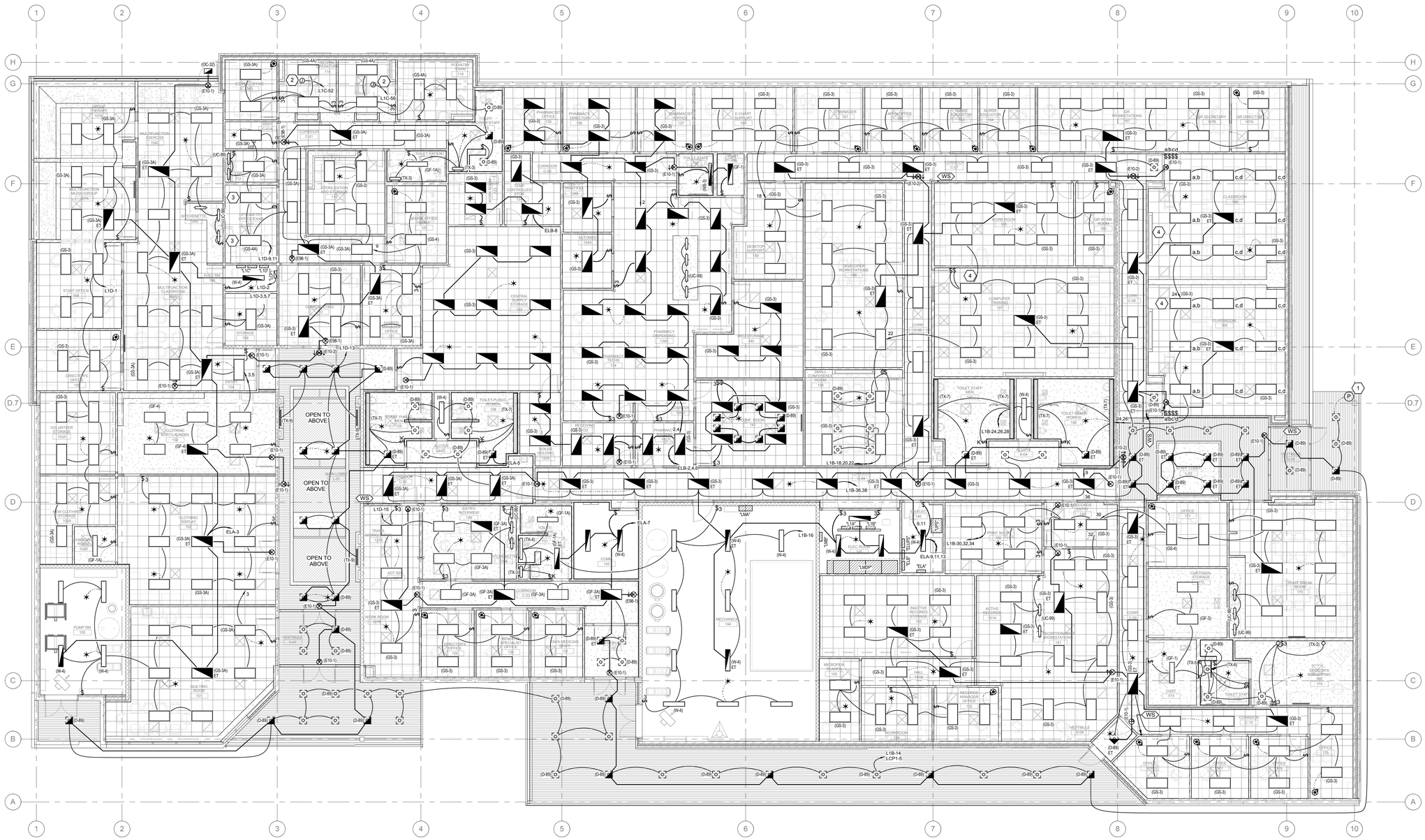
EP604

9/7/2012 2:05:54 PM



D5 UTILITY ENCLOSURE LIGHTING PLAN

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



A1 LEVEL 01 LIGHTING PLAN

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

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

GENERAL SHEET NOTES

1 PROVIDE GENERATOR TRANSFER DEVICES IN EACH EMERGENCY FIXTURE, EXCEPT THOSE CONNECTED TO PANEL "ELB", IN TELECOM ROOMS, AND ELECTRICAL ROOMS.

SHEET KEYNOTES

1 MOUNT PHOTOCELL ON CANOPY ROOF FOR LIGHTING CONTROL SYSTEM.

2 JUNCTION BOX FOR POWER CONNECTION TO DENTAL EXAMINATION LIGHT. COORDINATE EXACT LOCATION WITH EQUIPMENT AND REQUIREMENTS WITH MANUFACTURER'S WRITTEN SPECIFICATION PRIOR TO ROUGH-IN.

3 PROVIDE FIXTURE WITH DIMMING BALLAST.

4 PROVIDE EACH FIXTURE WITH TWO BALLASTS FOR DUAL LEVEL SWITCHING (INBOARD/OUTBOARD).

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL: LICENSED PROFESSIONAL ENGINEER No. 7057918 CARLTON A. GETZ STATE OF UTAH 09/12/2012

DATE	STATUS

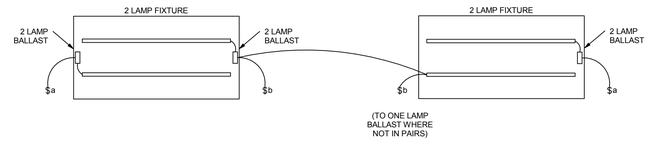
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LEVEL 1 LIGHTING PLAN

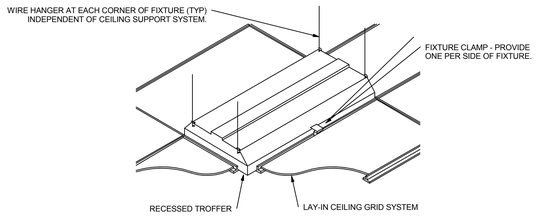
EL101

9/7/2012 2:05:39 PM



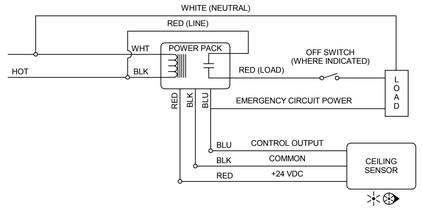
E5 2 LEVEL SWITCHING DETAIL 2 LAMP

SCALE: NTS



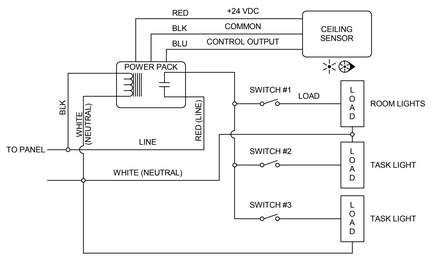
D5 RECESSED FIXTURE MOUNTING DETAIL

SCALE: NTS



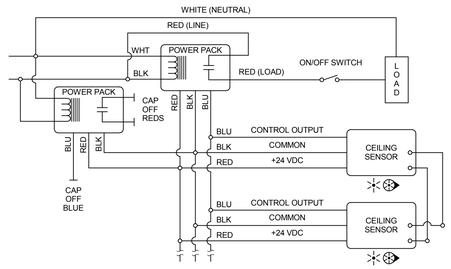
C5 TYPICAL ROOM WITH ONE CEILING SENSOR, WITH OR WITHOUT WALL SWITCH

SCALE: NTS



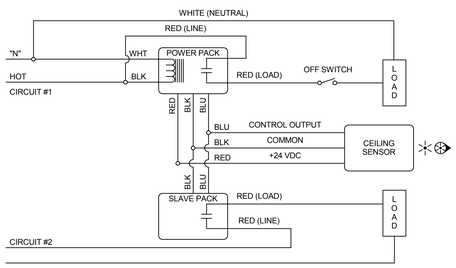
B3 TYPICAL ROOM WITH ONE CEILING SENSOR, ONE CIRCUIT AND MULTIPLE SWITCHED LOADS

SCALE: NTS



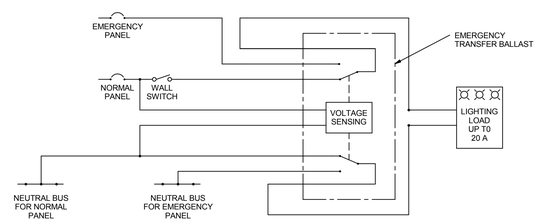
B5 TYPICAL ROOM WITH MULTIPLE CEILING SENSORS

SCALE: NTS



A3 TYPICAL ROOM WITH ONE CEILING SENSOR, CONTROLLING TWO CIRCUITS

SCALE: NTS



NORMAL OPERATION
LIGHTING LOAD CONTROLLED BY LOCAL SWITCHING MEANS.

EMERGENCY OPERATION
LIGHTING LOAD IS INDEPENDENT OF LOCAL SWITCHING MEANS.

A5 EMERGENCY LIGHTING TRANSFER DEVICE DETAIL

SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LIGHTING DETAILS

EL501

9/7/2012 2:05:40 PM

LIGHTING FIXTURE SCHEDULE

REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT, HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRANDS SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED. CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES. UNIVERSAL VOLTAGE (120/277) BALLASTS REQUIRED UNLESS NOTED OTHERWISE. DIMENSION SEQUENCE = (LENGTH X WIDTH X DEPTH) IN INCHES.

SYMBOL	MARK	FIXTURE CHARACTERISTICS BODY / AIR / MOUNTING / DOOR LENS/LOUVER/REFLECTOR/OTHER	LAMP	WATTS	VOLTS	MANUFACTURER	CATALOG NUMBER	NOTES
	B	BOLLARD; ALUMINUM HOUSING						
	B-1	BOLLARD, CONCRETE FORM, CLEAR LENS	1-50MH	50W	120V	ARCH. AREA	CB18R-23-CUTOFF-50MH-MSB-RAL7023-INT (OR APPROVED EQUAL PRIOR TO BID)	
	D	DOWNLIGHT; THERMALLY PROTECTED HOUSING; TO ACCOMMODATE MULTIPLE ALUMINUM TRIMS AND REFLECTOR ASSEMBLIES AS LISTED BELOW; MAX 8" DEEP, NON-IC HOUSINGS EXCEPT AS NOTED.						
	D-89	LED DOWNLIGHT, SELF-FLANGED TRIM, PHOSPHOR LENS, DIMMABLE WHERE INDICATED BY SWITCHING, 1500 LUMENS (6" APERTURE)	LED 3500K	30W 3500K	120V	LIGHTOLIER LITHONIA GOTHAM	C6L1520DL-CCL-W / C6L15-N-1 (OR APPROVED EQUAL PRIOR TO BID)	
	E	EXIT SIGNS, LED						
	E10-1	SINGLE FACE:	LED	20W	120/277V	DUAL-LITE HUBBELL MCPHILBEN EELP ISOLITE LITHONIA LIGHTOLIER	LECSGWA CVER-1-G-N-E 45VL-1-GC-XX EDG 1 GC W EM EDGL-S-S-G-BK (BLACK HOUSING) EDGR-W-1-GMR LGA1GMW	
	E10-2	DUAL FACE:	LED	20W	120/277V	DUAL-LITE HUBBELL MCPHILBEN EELP ISOLITE LITHONIA LIGHTOLIER	LECDGWA CVER-2-G-N-E 45VL-2-GM-XX EDG 2 GC W EM EDGL-D-S-G-BK (BLACK HOUSING) EDGR-W-2-G LGA2GMW	
	GF	TROFFERS: RECESSED FOR FLANGE MOUNTED CEILING; STATIC; HINGED AND LATCHED STEEL DOOR; .125 ACRYLIC PRISMATIC LENS, MINIMUN 1/8"; PRORGAM START ELECTRONIC BALLASTS; T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS. MAX 5" DEEP. SPECIFICATION GRADE.						
	GF-1A	1X4, 2 LAMP, WITH MAXIMUM SECURITY ENCLOSURE (SOLITARY CONFINEMENT)	2-F32T8 RE835	65W	277/120V	KIRLIN MORLITE CD LIGHTING KENALL	VRT-12028-58-47 SMAX-FDPH-14-2-T8-EB10IS-5-A-FS-PF-UNV DFA-14-F-2-32-UNV-EB-25CP/15PP-SHP-SFP (OR APPROVED EQUAL PRIOR TO BID)	
	GF-3	2X4, 2 LAMP (TER VALUE: ~75)	2-F32T8 RE835	95W	277/120V	LITHONIA METALUX DAYBRITE COLUMBIA LSI LIGHTOLIER	2SP8F 232 A12125 1/3 MVOLT 2FP-232A125-UNV-EB81-PROGRAM 2DPF232-FS21-UNV-1/3EB-SPEC ST824-232F-FSA12.125-3EB8LHPRUNV FLA125 232 SD SSO10PS UE XT2FVI232-U-03P	
	GF-4	2X4, 3 LAMP (TER VALUE: ~75)	3-F32T8 RE835	95W	277/120V	LITHONIA METALUX DAYBRITE COLUMBIA LSI LIGHTOLIER	2SP8F 332 A12125 1/3 MVOLT 2FP-332A125-UNV-EB81-PROGRAM 2DPF332-FS21-UNV-1/3EB-SPEC ST824-332F-FSA12.125-3EB8LHPRUNV FLA125 332 SD SSO10PS UE XT2FVI332-U-03P	
	GS	TROFFERS: RECESSED FOR LAY-IN GRID; STATIC; HINGED AND LATCHED STEEL DOOR; .125 ACRYLIC PRISMATIC LENS, MINIMUN 1/8"; EARTHQUAKE CLIPS; MAX 5" DEEP; SPECIFICATION GRADE; PROGRAM START ELECTRONIC BALLASTS, T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
	GS-3	2X4, 2 LAMP. (TER VALUE: ~75)	2-F32T8 RE835	65W	277/120V	LITHONIA METALUX DAYBRITE LSI LIGHTOLIER COLUMBIA	2 SP8G 232 A12125 MVOLT TUBRHP 2GP-232A125-UNV-EB81-PROGRAM START 2DPG232-FS21-UNV-1/2EB-SPEC LA125 232 SD SSO10PS UE XT2GVI232-UNV-SOP ST824-232G-FSA12.125-EB8LHPRUNV	
	GS-4	2X4, 3 LAMP. (TER VALUE: ~75)	3-F32T8 RE835	95W	277/120V	LITHONIA METALUX DAYBRITE COLUMBIA LIGHTOLIER LSI	2 SP8G 332 A12125 1/3 MVOLT TUBRHP 2GP-332A125-UNV-EB81-PROGRAM START 2DPG332-FS21-UNV-1/3EB-SPEC ST824-332G-FSA12.125-3EB8LHPRUNV XT2GVI332-UNV-03P LA125 332 SD SSO10PS UE	
	OC	WALL PACK: ADJUSTABLE CUT OFF; FULL PERIMETER GASKETING: WET LOCATION; STAINLESS STEEL HINGES AND LATCHES; PROJECTING LENS; LED; SEE ELEVATION FOR MOUNTING HEIGHT, COLOR AS SPECIFIED BY ARCHITECT.						
	OC-32	LED, RECESSED J BOX, MEDIUM THROW, SHAPED; DECORATIVE, PROVIDE INTEGRAL PHOTOCELL	LED	40W	277/120V	LITHONIA	CSXW LED-1-30B530/40K-SR3-MVOLT-PE-DBLXD	
	TX	SPECIAL FIXTURES AS INDICATED. MEET ALL REQUIREMENTS OF SPECIFICATIONS AND FIXTURE SCHEDULE. VISUAL AND FINISH APPROVAL REQUIRED.						
	TX-1	NOT USED						
	TX-2	INCANDESCENT WALL SCONCE DOCTOR'S ROOM BED FIXTURE	1-60W	60W	120V	FORECAST	FB1844-36 / F1849	
	TX-3	SURFACE MOUNTED FLUORESCENT FIXTURE, HIGH ABUSE (PATIENT ROOM DESK AND PATIENT BATH)	2-F40BX RE835	95W	120V	KENALL FAILSAFE CD LIGHTING KIRLIN	WCBU-2-3/3-1/1-40B-RS-1-120-2/9-1-IH4 (OR APPROVED EQUAL PRIOR TO BID)	
	TX-4	SURFACE MOUNTED CORNER FLUORESCENT FIXTURE, HIGH ABUSE (PATIENT ROOM BATH)	2-F32T8 RE835	65W	120V	KENALL FAILSAFE KIRLIN CD LIGHTING	CD-4-3/3-2-32-RS-1-120-2/9-1-IH4 FCC-X-232-UNV-80/87-EB81-VRSD (OR APPROVED EQUAL PRIOR TO BID)	
	TX-5	INCANDESCENT WALL SCONCE DOCTOR'S ROOM BATH FIXTURE	1-60W CAND	60A	120V	FORECAST	FB1844-36 / F1857	
	TX-6	LED SURFACE MOUNTED STRIP FIXTURE DOCTOR'S ROOM BATH FIXTURE	LED	24W	120V	WALDMANN JESCO	MUAL-4-S-112-571-035 / 209-585-030 DL-RS-24-27 / DL-PS-20/24	
	TX-7	RECESSED LINEAR FLUORECENT; PROVIDE LENGTHS AS INDICATED ON PLANS	1-F32T8 RE835	35W	120V	MARK ARCH PMC LIGHTING	MP-X-1-T8S-EBPR-120-EBB SPS-CD-FL-1-T8-XX-PBL-WHT-UNV (OR APPROVED EQUAL PRIOR TO BID)	
	TX-8	NOT USED						
	TX-9	RECESSED LINEAR LED FIXTURE, 2700 LUMENS, INTEGRAL DIMMING, 3500K	LED	45W	120V	NEORAY FINELITE	22DR HP4-R-4-LED-HO-3500K-120-SC-XX	
	UC	UNDERCABINET LIGHT: LOW PROFILE X 5 1/4"DEEP X LENGTH AS NOTED; HIGH IMPACT RESISTANT ACRYLIC DIFFUSER.						
	UC-99	18" NOMINAL LENGTH WITH ROCKER SWITCH; LED; PROVIDE POWER PACKS AS REQUIRED	LED 4100K	18W	120V	KENALL LIGHTOLIER DECO LTG. PHILIPS	MAUCLED-X-M-18-120-SW LLP20XBK DUS-LED-24-42-SP-MC 523-000027-52	
	W	LOW PROFILE WRAPAROUND: SURFACE MOUNTED SUITABLE FOR MOUNTING ON LOW DENSITY CEILINGS WRAPAROUND ACRYLIC PRISMATIC DIFFUSER; WHITE ENAMEL ENDPLATES; MINIMUM CU OF 70 @ 80/50/20 AND RCR=1; PROGRAM START ELECTRONIC BALLASTS; T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
	W-4	WIDE BODY WRAPAROUND; 2-LAMP, APPROX; 3" X 16" X 48".	2-F32T8 RE835	65W	277/120V	LITHONIA DAYBRITE METALUX LIGHTOLIER LSI COLUMBIA	2LB232-MVOLT-TUBPHP CAW232-UNV-1/2-EB-SPEC WSA-232A-UNV-PROGRAM START WB232-U-SOP PR 232 SSO10PRS W UE WCW4-232-EBPS120/277	
	WB	WALL MOUNTED FLUORESCENT LOCATED ABOVE WALL ELEMENT (MIRROR/WHITEBOARD, ETC.); AS INDICATED ON DRAWINGS; WITH ACRYLIC INJECTION MOLDED; PROGRAM START ELECTRONIC BALLASTS; T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
	WB-3	2-LAMP, WALL MOUNT 48", STEEL ENCLOSURE, DOWNLIGHT ONLY; ACRYLIC INJECTION MOLDED PRISMATIC DIFFUSER.	2-F32T8 RE835	65W	277/120V	DAYBRITE LIGHTOLIER METALUX L.A.L. COLUMBIA LITHONIA LSI	CD232W-UNV-1/2-EB-SPEC CWB232-WB-U-SOP BI-232-UNV-PROGRAM START BSQ100-2-4R-INJ-WHT-T8EB-120/277-UPS WAL4-232-EBPS120/277 WP 232 DO MVOLT-TUBPHP WB 232 SSO10PRS UE	
	ZW	LIGHT POLES: TOTALLY ENCLOSED RAINTIGHT, DUST-TIGHT AND CORROSION RESISTANT; POLE AS SHOWN IN DETAIL WITH HANDHOLE, COVER, BOLT COVER, AND BASE; PAINTED (COLOR TO BE SELECTED BY ARCHITECT / ENGINEER WHICH MAY DIFFER FROM CATALOG NUMBER SHOWN). PROVIDE MULTI-TAP VOLTAGE FIXTURE.						
	ZW-1	LED SITE LIGHTING FIXTURE, DIRECTIONAL REMOVABLE LED SOCKET BOARDS, TYPE III DISTRIBUTION, HEAD CONFIGURATION AS SHOWN ON DRAWINGS	LED	140W	208V	KIM LIGHTING	XSA-WP9-L-E-3-L-5K-208-SG-DB-A-30 CONTRACTOR ALLOWANCE: $1,475.00 (EXCLUDING POLE)	

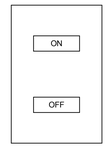
LIGHTING CONTROL GROUPS	
A	CORRIDOR AND COMMON AREAS
B	LOBBY AREA
C	CANOPY AREA
D	OUTDOOR AREAS

LIGHTING CONTROL METHODS	
1	ON/OFF WITH OCCUPIED/UNOCCUPIED MODE, WITH WALLSTATION OVERRIDE
2	ON/OFF WITH EXTERIOR PHOTOCELL
3	ON W/ EXTERIOR PHOTOCELL, OFF W/ TIMECLOCK

RELAY PANEL SCHEDULE

RELAY CABINET: "LCP1"

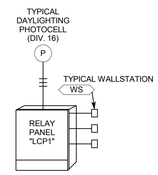
RELAY #	PANEL CIRCUIT #	CONTROL GROUP	CONTROL METHOD	LOAD DESCRIPTION
1	L1B-2,4	D	3	SITE LIGHTING
-	-	-	-	-
2	L1B-6,8	D	3	SITE LIGHTING
-	-	-	-	-
3	L1B-10	D	3	SITE LIGHTING - BOLLARDS
4	L1B-12	D	3	SITE LIGHTING - BOLLARDS
5	L1B-14	C	3	CANOPY LIGHTING
6	L1B-36	A	1	CORRIDOR LTG.
7	L1B-38	A	1	CORRIDOR LTG.
8	L1D-4	D	3	TREE LIGHTING RECEPT.
9	L1D-6	D	3	TREE LIGHTING RECEPT.
10	L1D-8	D	3	TREE LIGHTING RECEPT.
11	L1D-10	D	3	TREE LIGHTING RECEPT.
12	L1D-12	D	3	TREE LIGHTING RECEPT.
13	L1D-14	D	3	TREE LIGHTING RECEPT.
14	-	-	-	SPARE RELAY
15	-	-	-	SPARE RELAY
16	-	-	-	SPARE RELAY



PUSH-BUTTON WALL STATION. STATION FOR ON/OFF OVERRIDE CONTROL.

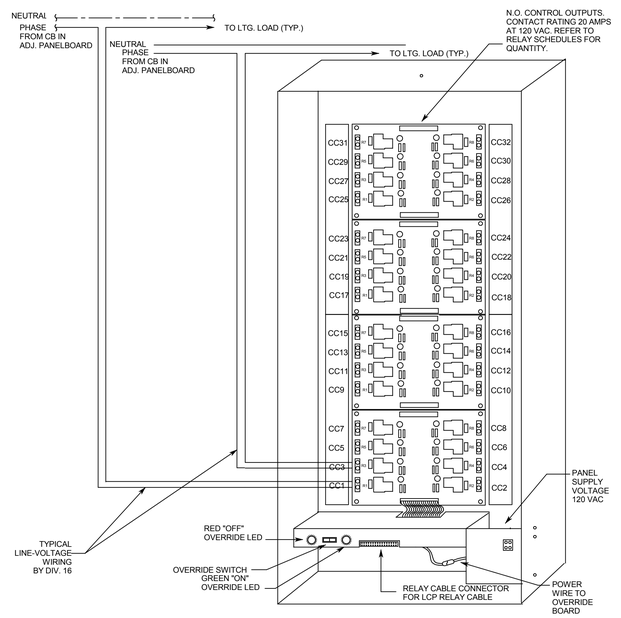
D6 WALL STATION

SCALE: NTS



C6 LIGHTING CONTROL SCHEMATIC

SCALE: NTS



A5 TYPICAL RELAY PANEL WIRING DIAGRAM

SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

GENERAL SHEET NOTES

1. CONTRACTOR SHALL PROGRAM LIGHTING CONTROL SYSTEM AND TIMECLOCK(S) PER SCHEDULE PROVIDED BY OWNER.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

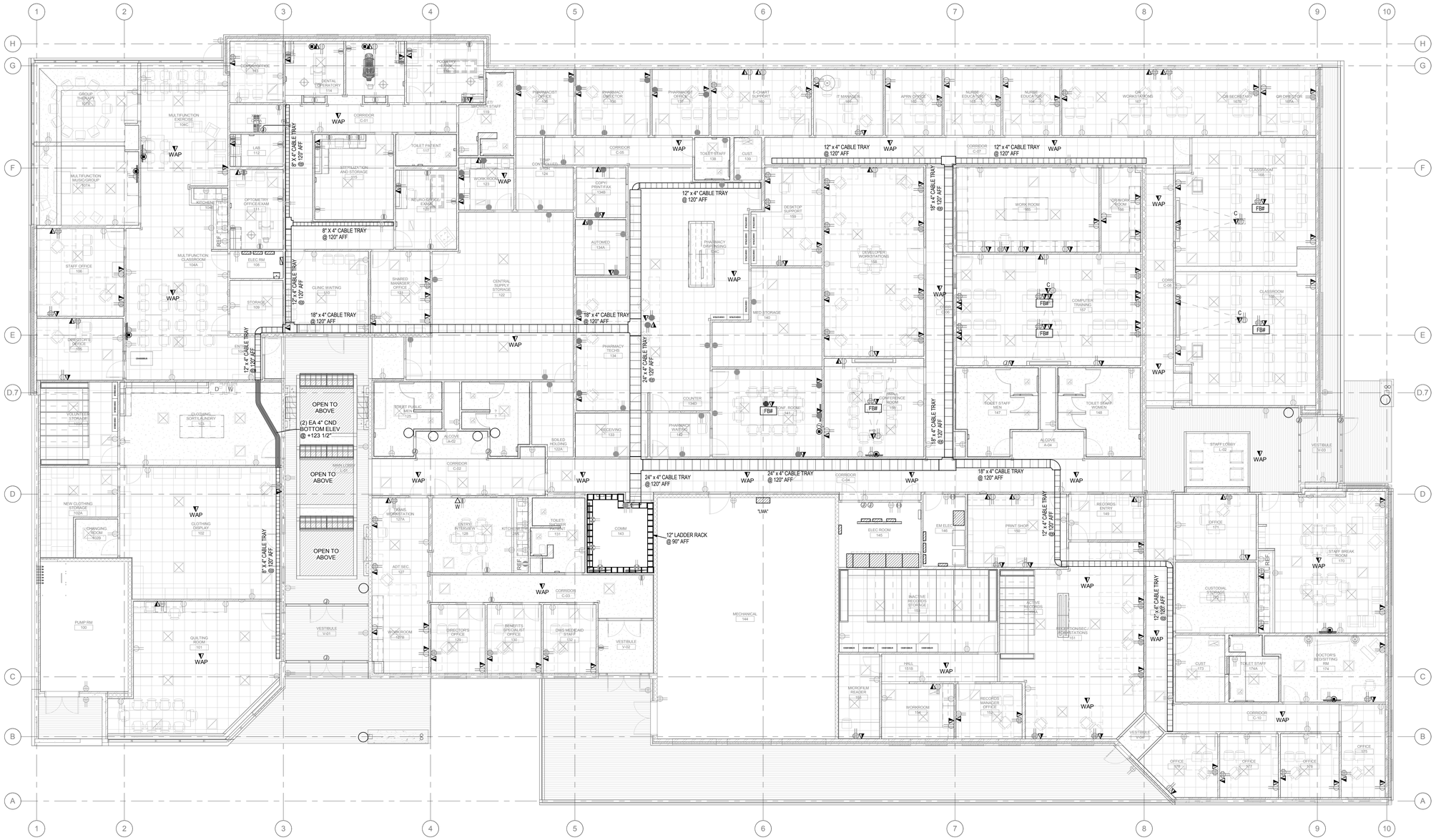
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LIGHTING SCHEDULES AND DIAGRAMS

EL601

9/7/2012 2:05:41 PM



A1 LEVEL 01 TELECOMMUNICATIONS PLAN

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

0 4' 8' 16'

TRUE PLAN

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

GENERAL SHEET NOTES

1 THE SCOPE OF WORK IS LIMITED TO ROUGH-IN ONLY FOR COMMUNICATIONS AND DATA CABLING, INCLUDING ALL CONDUITS, BOXES, CABLE TRAY, AND FITTINGS. CABLING WILL BE INSTALLED UNDER A SEPARATE CONTRACT.

SHEET KEYNOTES

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH

09/12/2012

DATE	STATUS

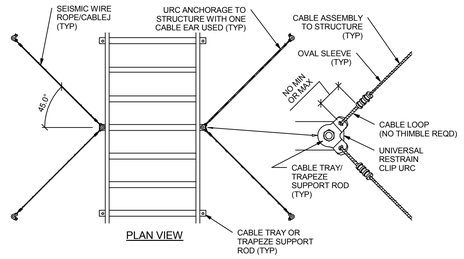
DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LEVEL 1 TELECOM PLAN

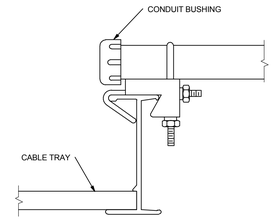
ET101

9/7/2012 2:05:59 PM



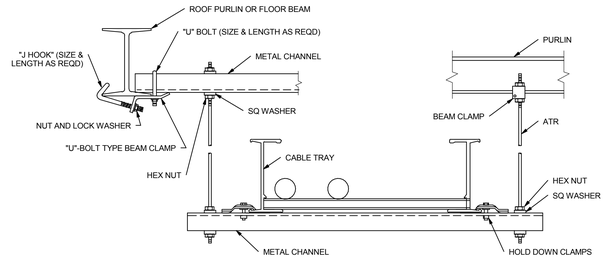
E4 SEISMIC WIRE ROPE/CABLE BRACING

SCALE: NTS



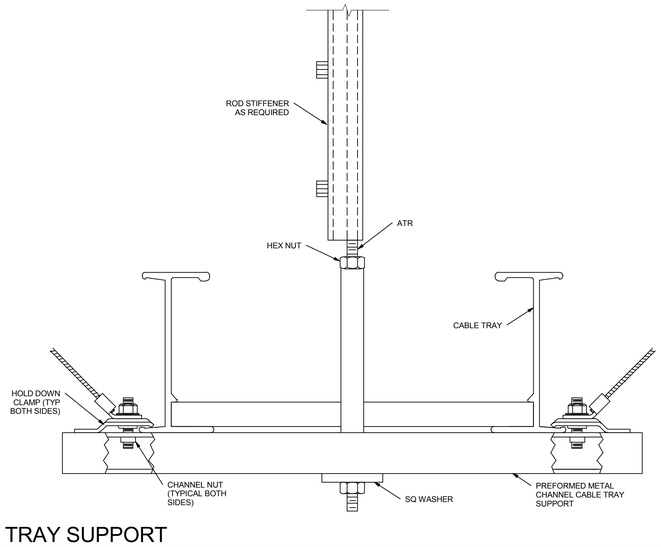
E6 CONDUIT TO TRAY ADAPTER

SCALE: NTS



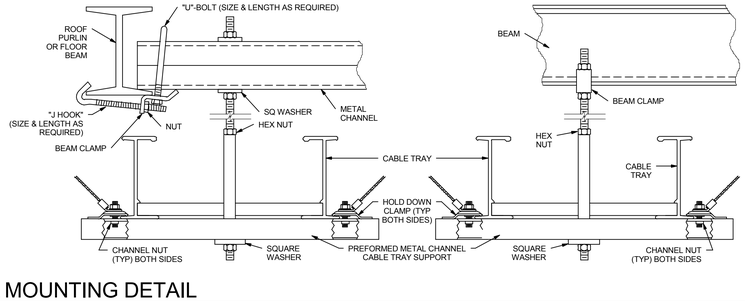
D4 TYPICAL INDOOR CABLE TRAY MOUNTING DETAIL

SCALE: NTS



B4 CENTER HUNG TRAY SUPPORT

SCALE: NTS



A4 INDOOR MOUNTING DETAIL

SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH

09/12/2012

DATE	STATUS

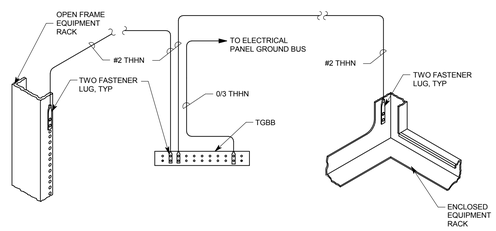
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

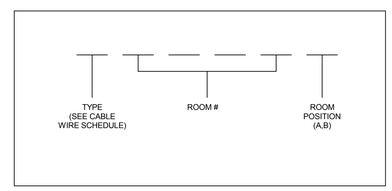
CABLE TRAY DETAILS

ET501

9/7/2012 2:06:00 PM



C3 TYPICAL RACK GROUNDING DETAIL
SCALE: NTS

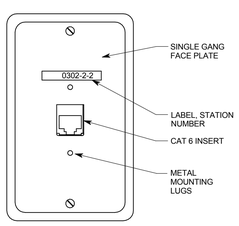


NOTES:

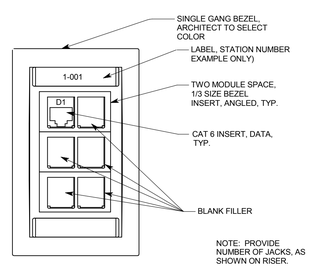
1. ALL CABLE/WIRE, REGARDLESS OF LENGTH, SHALL BE LABELED WITH A UNIQUE IDENTIFYING CODE. LABEL SHALL BE PERMANENT AND SHALL BE MACHINE PRINTED (NOT HAND PRINTED). SUBMIT PROPOSED LABEL MATERIAL FOR APPROVAL.

2. PRIOR TO LABEL CREATION, SUBMIT FOR APPROVAL PROPOSED ROOM NUMBER SCHEME FOR CABLE LABELS.

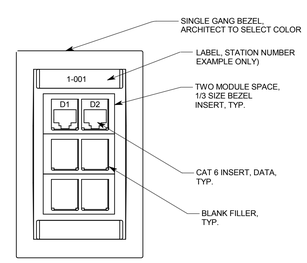
C5 CABLE LABEL DETAIL
SCALE: NTS



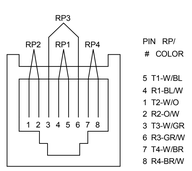
B1 WALL MOUNTED PHONE PLATE DETAIL
SCALE: NTS



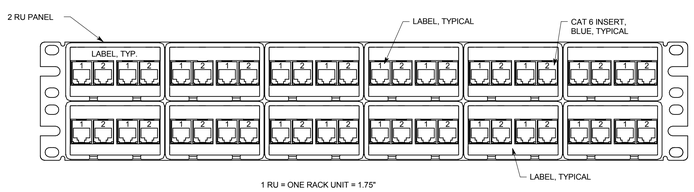
B3 TYPICAL DATA OUTLET DETAIL
SCALE: NTS



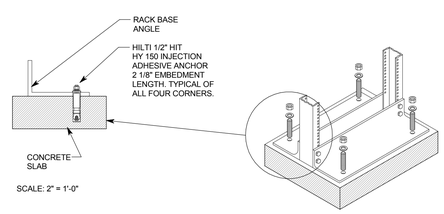
B5 TYPICAL VOICE-DATA OUTLET DETAIL
SCALE: NTS



A1 VOICE-DATA OUTLET (T568B) PINNING DETAIL
SCALE: NTS



A2 PATCH PANEL DETAIL (PP), 48-PORT, TYPICAL
SCALE: NTS



A5 EQUIPMENT RACK ANCHORAGE DETAIL
SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

GENERAL VOICE-DATA-TV NOTES

1. ELECTRICAL CONTRACTOR IS TO PROVIDE ALL ROUGH-IN FOR VOICE-DATA CABLING.
2. INSTALL NYLON PULL STRINGS IN ALL EMPTY CONDUIT. LABEL IN STRICT COMPLIANCE WITH THE SPECIFICATIONS.
3. ALL VOICE-DATA ROUGH-IN IS TO BE IN COMPLIANCE WITH ANSI/TIA/EIA 569-A.
4. VERIFY EXACT MOUNTING LOCATION OF ALL OUTLETS WITH ARCHITECTURAL DETAILS AND ELEVATIONS.
5. PROVIDE 20 FEET OF ADDITIONAL CABLE COILED ABOVE THE ACCESSIBLE CEILING AT EACH WIRELESS ACCESS POINT LOCATION.
6. PROVIDE PLENUM RATED CABLE IN ALL AIR PLENUMS. IF A PLENUM RATED CABLE IS NOT SPECIFIED, PROVIDE THE PLENUM RATED EQUIVALENT TO THE SPECIFIED CABLE.
7. ALL CABLE, REGARDLESS OF LENGTH, INSTALLED UNDER THIS CONTRACT ARE TO BE LABELED.
8. THE EQUIPMENT LABELING IDENTIFIED ON DETAILS IN THESE DRAWINGS ARE EXAMPLES ONLY OF THE ACTUAL LABELING WHICH IS REQUIRED AS PART OF THIS CONTRACT. PRIOR TO FABRICATION, SUBMIT THE NOMENCLATURE FOR ALL LABELS TO THE OWNER FOR REVIEW. THIS REQUIREMENT INCLUDES BUT IS NOT LIMITED TO ALL CABLE LABELING, AND ALL EQUIPMENT LABELING.
9. UNLESS OTHERWISE NOTED, INSTALL ALL CABLE INSIDE RACEWAY SYSTEMS. WHERE RACEWAY SYSTEMS HAVE NOT BEEN PROVIDED OR SPECIFIED, INSTALL CABLE THROUGH THE SPECIFIED "CADDY" CLIPS INSTALLED ABOVE ACCESSIBLE CEILINGS AT THE MINIMUM INTERVALS IDENTIFIED IN THE SPECIFICATIONS. SUPPORT "CADDY" CLIPS DIRECTLY FROM THE BUILDING STRUCTURE, NOT FROM OTHER BUILDING SYSTEM SUPPORT WIRES OR CABLE.
10. GROUND ALL EQUIPMENT RACKS AS DETAILED.
11. ALL CABLE, FIBER, AND UTP TO TERMINATE ON BOTH ENDS.
12. COORDINATE RACK LAYOUTS WITH OWNER PRIOR TO INSTALLATION.
13. WELL IN ADVANCE OF INSTALLATION, COORDINATE WORK WITH ALL OTHER TRADES SO THAT ELECTRICAL EQUIPMENT, OR ITS INTENDED USE, IS NOT OBSTRUCTED BY EQUIPMENT BEING PROVIDED BY OTHER DIVISIONS.
14. INSTALL ALL ELECTRONIC SYSTEMS EQUIPMENT IN COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, SEISMIC CODES, AND INDUSTRY WIDE ACCEPTED PRACTICES. SUPPORT EQUIPMENT WEIGHT FROM BUILDING STRUCTURE. DURING THE SUBMITTAL PROCESS, PROVIDE SHOP DRAWINGS WHICH DETAIL PROPOSED MOUNTING FOR ALL SUCH EQUIPMENT.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

TELECOM DETAILS

ET502

9/7/2012 2:06:02 PM

VOICE-DATA & TV ROUGH-IN EQUIPMENT SCHEDULE

ELECTRONIC SYSTEMS: REFER TO SECTION 16724, 16741, AND WIRING DEVICE SCHEDULES FOR INSTALLATION REQUIREMENTS. MOUNTING HEIGHTS SHOWN ARE TYPICAL HEIGHTS. REFER TO DIVISION 16 DRAWINGS, ARCHITECTURAL ELEVATIONS, DRAWINGS AND SPECIFICATIONS FOR ACTUAL MOUNTING HEIGHTS.

SYMBOL	MOUNTING	DESCRIPTION	ROUGH-IN MATERIALS
▽	WALL	PHONE OUTLET	4" SQUARE, DEEP JUNCTION BOX WITH SINGLE GANG MUD RING MOUNT AT ELECTRICAL OUTLET HEIGHT OR AS NOTED
▽W	WALL	WALL PHONE OUTLET	4" SQUARE, DEEP JUNCTION BOX WITH SINGLE GANG MUD RING MOUNT AT ELECTRICAL SWITCH HEIGHT OR AS NOTED
▼	WALL	DATA OUTLET	4" SQUARE, DEEP JUNCTION BOX WITH SINGLE GANG MUD RING MOUNT AT ELECTRICAL OUTLET HEIGHT OR AS NOTED PER ARCHITECTS ELEVATIONS
▽	WALL	VOICE/DATA OUTLET ("A," MOUNT ABOVE COUNTER NEXT TO POWER OUTLET)	4" SQUARE, DEEP JUNCTION BOX WITH SINGLE GANG MUD RING MOUNT AT ELECTRICAL OUTLET HEIGHT OR AS NOTED
▽WAP	CEILING	DATA OUTLET MOUNTED IN CEILING (WIRELESS POINTS, PROJECTOR)	4" SQUARE, DEEP JUNCTION BOX WITH SINGLE GANG MUD RING MOUNTED ABOVE ACCESSIBLE CEILING
	FLOOR	OPEN RAIL DATA EQUIPMENT RACK	
	WALL	TELEPHONE BOARD	.75"x4'x8' PLYWOOD, FIREPROOFED, PAINTED WHITE
		WIRE BASKET CABLE TRAY SIZE AS SHOWN ON PLANS	

TV DISTRIBUTION SYSTEM EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	QUANTITY	ACCEPTABLE TYPES
◉	TV OUTLET	OFP	BLONDER TONGUE MODEL V-1GF-FT WITH COVER PLATE

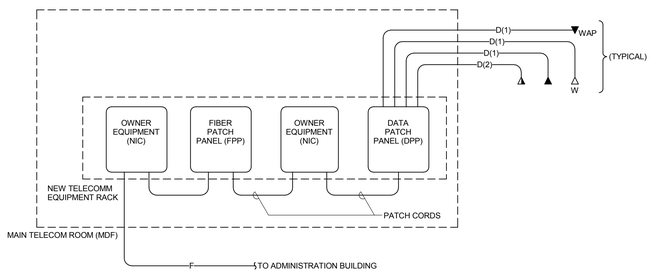
A/R = AS REQUIRED. OFP = OBTAIN FROM PLANS.

VOICE-DATA EQUIPMENT/CABLE LIST

THE ITEMS INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS OF SIGNIFICANCE USED DURING THE DESIGN OF THE CABLING INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE ENTIRE ASSEMBLY SHALL BE PROVIDED UNLESS SPECIFIED OTHERWISE. PROVIDE ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED HERE, FOR A COMPLETE INSTALLATION. COMPARE CATALOG NUMBERS WITH DESCRIPTIONS AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID. IF CATALOG NUMBERS DO NOT MATCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SYMBOL	DESCRIPTION	ACCEPTABLE TYPES
	50 PAIR CATEGORY 5 RISER RATED CABLE	SEE SPECIFICATIONS
	100 PAIR CATEGORY 5 RISER RATED CABLE	SEE SPECIFICATIONS
	FIBER OPTIC PATCH PANEL - 48 PORT, BLACK, (QUANTITIES OF PORTS AS REQUIRED +25%)	SEE SPECIFICATIONS
	6 PORT DUPLEX LC FIBER PANEL CARD, BLACK	SEE SPECIFICATIONS
	BLANK FIBER PANEL CARD, BLACK	SEE SPECIFICATIONS
	PATCH PANEL, DATA, 48 PORT W/ CAT 6 INSERT, BLUE (QUANTITIES OF PORTS AS REQUIRED +25%)	SEE SPECIFICATIONS
110	110 PUNCH DOWN BLOCK	SEE SPECIFICATIONS
	BUS BAR, 10", 20", W/ LUGS, AND MOUNTING ACCESSORIES	CHATSWORTH 10622-010/020
D(#)	STATION CABLE, DATA-CATEGORY 6, BLUE, DATA, PLENUM	SEE SPECIFICATIONS
F(#)	FIBER CABLE, HYBRID MULTI-MODE, 50 MICRON, 6 STRAND SINGLE-MODE	SEE SPECIFICATIONS
▽W	VOICE OUTLET, WALL (W) SINGLE GANG BEZEL	SEE SPECIFICATIONS
	BEZEL INSERTS	SEE SPECIFICATIONS
	CATEGORY 6 JACK-VOICE	SEE SPECIFICATIONS
▼ ▼WAP	DATA OUTLET SINGLE GANG BEZEL (WAP = WIRELESS ACCESS POINT)	SEE SPECIFICATIONS
	BEZEL INSERTS	SEE SPECIFICATIONS
	CATEGORY 6 JACK-DATA (1) (2) (3)	SEE SPECIFICATIONS
▽	VOICE-DATA OUTLET SINGLE GANG BEZEL	SEE SPECIFICATIONS
	BEZEL INSERTS	SEE SPECIFICATIONS
	CATEGORY 6 JACK-DATA (2)	SEE SPECIFICATIONS
	TELEPHONE BOARD, 8' HIGH, FIRE TREATED, PAINTED WHITE	SEE SPECIFICATIONS
	EQUIPMENT RACK, OPEN FRAME 19", BLACK	CHATSWORTH 55053-703
	EQUIPMENT RACK POWER STRIP, 20A	LEVITON 5500-192
	VERTICAL WIRE MANAGERS, BLACK, SIDE & CENTER	SEE SPECIFICATIONS
	HORIZONTAL WIRE MANAGERS, BLACK, 2 RU	SEE SPECIFICATIONS
	COPPER CATEGORY 6 PATCH CABLES	SEE SPECIFICATIONS
	CAT 6 J-HOOKS	CADDY CAT32Z34
	FIBER CONNECTOR, LC, MULTI-MODE	SEE SPECIFICATIONS
	FIBER OPTIC PATCH CABLES, MULTI-MODE, LC TO LC	SEE SPECIFICATIONS
	1" INNERDUCT-PLENUM RATED	SEE SPECIFICATIONS
	1.25" INNERDUCT-PLENUM RATED	SEE SPECIFICATIONS

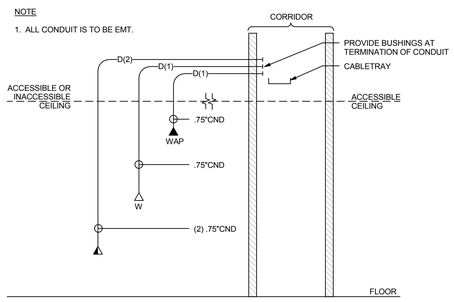
NOTE: ALL RACKS, LADDER, PATCH PANELS, AND ACCESSORIES SHALL BE BLACK IN COLOR.



A3 VOICE-DATA RISER DIAGRAM
SCALE: NTS

NOTE

1. ALL CONDUIT IS TO BE EMT.



A5 VOICE-DATA & TV OUTLET ROUGH-IN RISER DIAGRAM
SCALE: NTS

DFCM APPROVAL STAMP

GENERAL SHEET NOTES

1 THE SCOPE OF WORK INCLUDED IN THE PROJECT DOCUMENTS IS LIMITED TO ROUGH-IN FOR COMMUNICATIONS AND DATA CABLING. THE DETAILS PROVIDED ARE INTENDED TO ASSIST THE CONTRACTOR IN UNDERSTANDING THE SCOPE OF ROUGH-IN REQUIRED FOR CABLING TO BE INSTALLED UNDER A SEPARATE CONTRACT.

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

TELECOM ROUGH-IN/ RISER DIAGRAMS & SCHEDULES

ET601

9/7/2012 2:06:03 PM

DFCM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

GENERAL SHEET NOTES

1. TERMINATE ALL UNUSED PORTS WITH 75 OHM TERMINATING CONNECTORS.
2. SELECT DIRECTIONAL COUPLER ATTENUATION VALUES TO PROVIDE AT LEAST +2dBmv OF VIDEO SIGNAL AT ALL TV OUTLETS.
3. PROVIDE TAMPER RESISTANT CORNER PLATES AND SCREWS FOR ALL LOCATIONS INSTALLED WITHIN PATIENT UNITS.

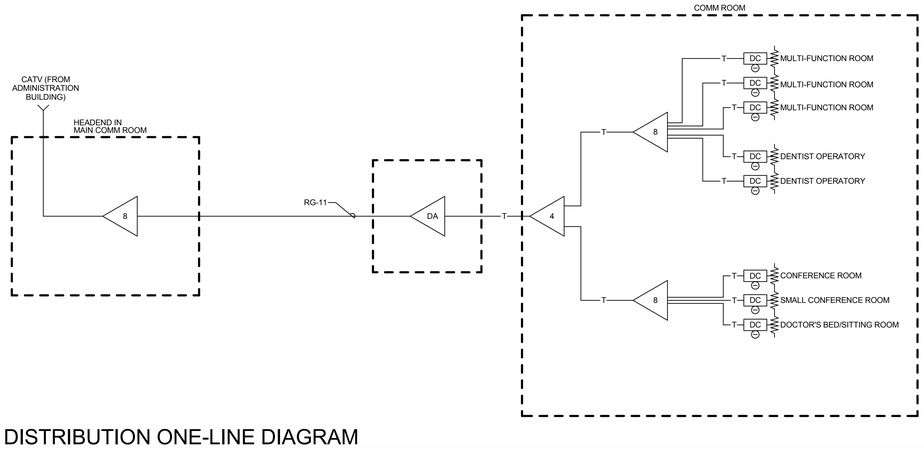
SPECTRUM
ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

TV DISTRIBUTION SYSTEM EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	QUANTITY	ACCEPTABLE TYPES
8	MULTI PORT SPLITTER, 8 PORT	OFP	8-PORT BLONDER TONGUE SXRS-8
4	MULTI PORT SPLITTER, 4 PORT	OFP	4-PORT BLONDER TONGUE SXRS-4
DA	AMPLIFIER	OFP	BLONDER TONGUE BIPA 750-30
DC	DIRECTIONAL COUPLER W/TAPOFF. PROVIDE WITH FACEPLATE.	OFP	BLONDER TONGUE SCW SERIES
	TV OUTLET	OFP	BLONDER TONGUE MODEL V-1GF-FT WITH COVER PLATE
DC 2	DIRECTIONAL COUPLER - MULTI-TAP	OFP	BLONDER TONGUE SRT SERIES
	RF TERMINATOR	OFP	75 OHM TERMINATOR
T	COAXIAL CABLE	A/R	RG-6 (SEE SPECIFICATIONS)

MANUFACTURER'S NAMES AND TELEPHONE NUMBERS ARE LISTED IN THE SPECIFICATIONS.
A/R = AS REQUIRED. OFP = OBTAIN FROM PLANS.



A4 TV DISTRIBUTION ONE-LINE DIAGRAM
SCALE: NTS

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

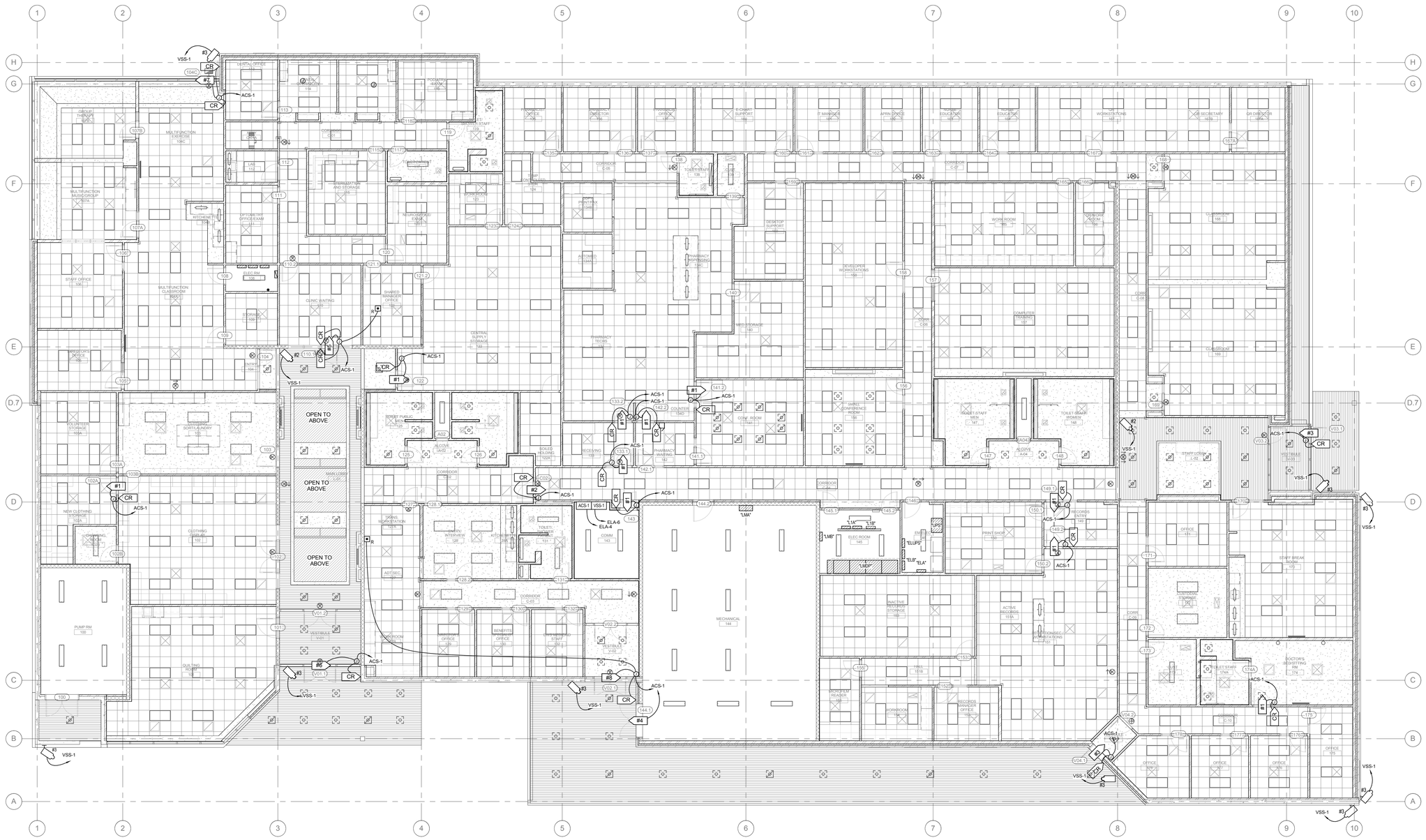
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

TV DIST. ONE-LINE DIAGRAM

ET602

9/7/2012 2:06:03 PM



A1 LEVEL 01 AUXILIARY PLAN

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

0 4' 8' 16'

TRUE PLAN

DFCM APPROVAL STAMP

GENERAL SHEET NOTES

SHEET KEYNOTES

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LEVEL 1 AUXILIARY PLAN

EY101

9/7/2012 2:06:08 PM

SECURITY EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MOUNTING *	ROUGH-IN	QTY	ACCEPTABLE TYPES
CR	CARD READER	40"	4SQ W/ 1G RING	OFP	SEE SECTION 281300
#1	CARD ACCESS DOOR TYPE, TYPICAL. REFER TO CARD ACCESS DOOR TYPE SCHEDULE.	SEE SCHEDULE	SEE SCHEDULE	OFP	REFER TO CARD ACCESS DOOR TYPE SCHEDULE & SECTION 281300
CI	DOOR MONITOR - CONTACT INDICATOR SWITCH	SEE SCHEDULE	SEE SCHEDULE	OFP	SEE SECTION 281300
1	VSS CAMERA/ENCLOSURE TYPE, TYPICAL. REFER TO VSS CAMERA/ENCLOSURE TYPE SCHEDULE.	SEE SCHEDULE	SEE SCHEDULE	OFP	SEE VSS CAMERA/ENCLOSURE TYPE SCHEDULE
ACS	CARD ACCESS CONTROLLERS & PWR SUPPLIES	72"	4"x4" GUTTER & STUBS A/R	A/R	SEE SECTION 281300
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER "TVSS"	AS NOTED	A/R	A/R	
VSS	VIDEO SURVEILLANCE SYSTEM	RACK MOUNTED			COORDINATE WITH OWNER

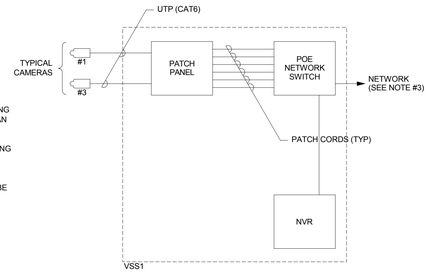
* COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATIONS BEFORE INSTALLATION.

VSS CAMERA/ENCLOSURE TYPE SCHEDULE

CAMERA TYPE NUMBER	SYMBOL	DESCRIPTION	INCLUDES
TYPE 1	#1 VSS	INTERIOR CAMERA - FIXED DOME (CEILING MOUNTED)	* JUNCTION BOX ABOVE ACCESSIBLE CEILING WITH 1" CONDUIT TO VSS
TYPE 2	#2 VSS	INTERIOR CAMERA - FIXED DOME (WALL MOUNTED)	* JUNCTION BOX AT +90" ABOVE FINISHED FLOOR, WITH 1" CONDUIT BACK TO VSS
TYPE 3	#3 VSS	EXTERIOR CAMERA - FIXED DOME (WALL MOUNTED)	* JUNCTION BOX AT +120" ABOVE FINISHED FLOOR, WITH 1" CONDUIT BACK TO VSS

NOTE:

1. PATCH PANEL FOR VIDEO SURVEILLANCE CABLING SHALL BE A SEPARATE PANEL FROM REST OF LAN SYSTEM.
2. CABLE, PATCH PANEL, TERMINATION, AND TESTING SHALL BE PER ANSI/TIA 568C STANDARDS.
3. THE OPTION TO TIE THE VIDEO SURVEILLANCE SWITCH NETWORK TO THE BUILDING LAN IS TO BE DETERMINED BY THE OWNER.

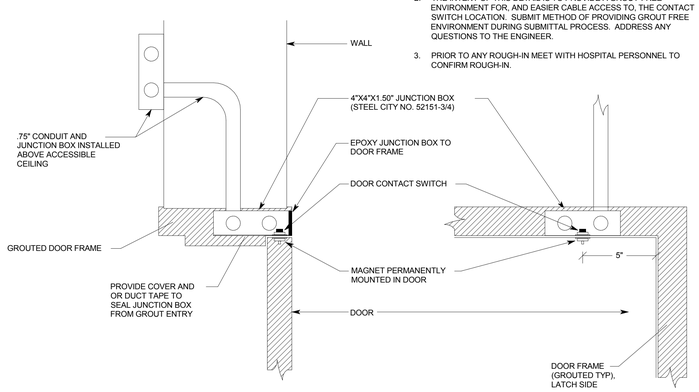


C1 VIDEO SURVEILLANCE SYSTEM DIAGRAM

SCALE: NTS

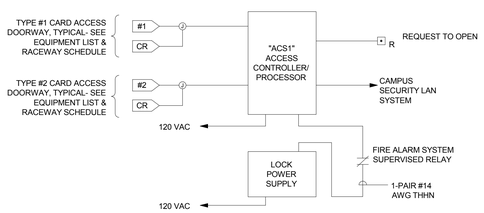
NOTES:

1. DRILL .125" HOLE TO INDICATE SWITCH LOCATION AND IDENTIFY WHERE JUNCTION BOX IS.
2. THE INTENT OF THIS DETAIL IS TO PROVIDE A GROUT-FREE ENVIRONMENT FOR, AND EASIER CABLE ACCESS TO, THE CONTACT SWITCH LOCATION. SUBMIT METHOD OF PROVIDING GROUT FREE ENVIRONMENT DURING SUBMITTAL PROCESS. ADDRESS ANY QUESTIONS TO THE ENGINEER.
3. PRIOR TO ANY ROUGH-IN MEET WITH HOSPITAL PERSONNEL TO CONFIRM ROUGH-IN.



B1 DOOR CONTACT SWITCH DETAILS

SCALE: NTS



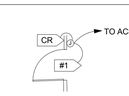
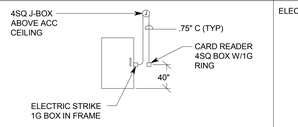
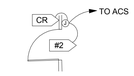
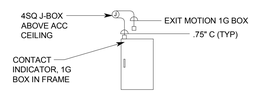
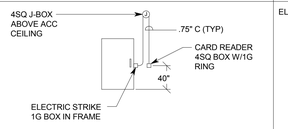
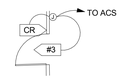
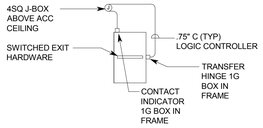
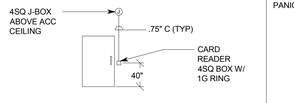
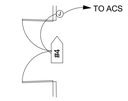
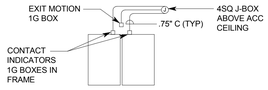
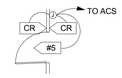
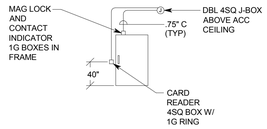
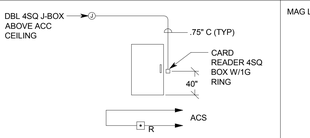
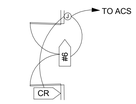
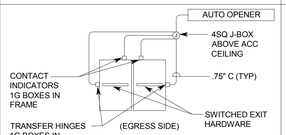
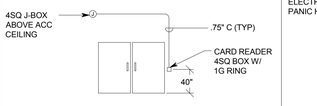
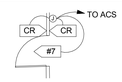
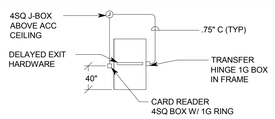
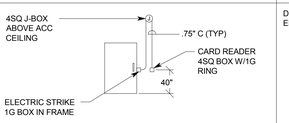
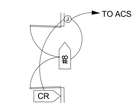
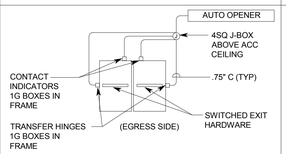
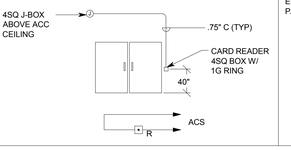
NOTES:

1. ACCESS CONTROL SYSTEM BASED UPON MULTIPLE CARD READERS PER ACCESS CONTROLLER/PROCESSOR. ALTERNATE CONFIGURATIONS ACCEPTABLE PROVIDED CONTRACTOR ALLOWS FOR ANY INCREASED WIRING OR EQUIPMENT AND PROVIDES SUBMITTAL DRAWINGS SHOWING NEW CONFIGURATION.
2. ACCESS CONTROLLER "ACS" INDICATED SHALL INCLUDE ANY ISOLATION MODULES, BUFFER MODULES, EXTERNAL POWER SUPPLIES, INPUT/OUTPUT MODULES, OR FORMAT CONVERTER MODULES (NOT SHOWN) REQUIRED TO SUPPORT CARD READER OR KEYPAD TYPES INDICATED, FOR COMPLETE AND FUNCTIONING CARD READER AND DOOR CONTROL.
3. PROVIDE SEPARATE WIRE PAIRS FOR REQUEST TO EXIT AND DOOR CONTACT INDICATOR, FROM ACCESS DOOR TO ACCESS CONTROLLER "ACS" PANEL. SINGLE PAIR, FROM ACCESS DOOR TO CONTROLLER PANEL, FOR REQUEST TO EXIT AND DOOR CONTACT INDICATOR, NOT ACCEPTABLE.
4. REQUEST TO EXIT AND DOOR CONTACT INDICATOR CIRCUITS SHALL BE SUPERVISED FOR OPEN CIRCUIT OR SHORT CIRCUIT FAULTS BETWEEN THE DEVICE CONTACTS AND ACCESS CONTROLLER.

A1 CARD ACCESS SYSTEM RISER DIAGRAM

SCALE: NTS

CARD ACCESS DOOR TYPE SCHEDULE

DOOR TYPE #	SYMBOL	DESCRIPTION	PROTECTED SIDE ELEVATION	UNPROTECTED SIDE ELEVATION	LOCK TYPE(S)	DIVISION OF WORK AND COMMENTS:
TYPE 1:	 HARDWARE SETS: 07.1, 08, 09	SINGLE DOOR, 1 CARD READER, (FREE EGRESS)			ELECTRIC STRIKE	SECURITY CONTRACTOR PROVIDES: CR, L/PS HARDWARE CONTRACTOR PROVIDES: ES LOCK CONTROLLED BY: CR
TYPE 2:	 HARDWARE SETS: 03	SINGLE DOOR, 1 CARD READER, (FREE EGRESS)			ELECTRIC STRIKE	SECURITY CONTRACTOR PROVIDES: CR, L/PS HARDWARE CONTRACTOR PROVIDES: ES, CI LOCK CONTROLLED BY: CR
TYPE 3:	 HARDWARE SETS: AL-03	SINGLE DOOR, 1 CARD READERS MAG LOCKS ARE PRIMARY LOCK, NO LOCK DOWN FUNCTION, PANIC HARDWARE USED FOR EXIT NOTIFICATION			ELECTRICFIED PANIC HARDWARE	SECURITY CONTRACTOR PROVIDES: CR HARDWARE CONTRACTOR PROVIDES: EPT, PH, L/PS LOCK CONTROLLED BY: CR, TLC
TYPE 4:	 HARDWARE SETS: 01	DOUBLE DOOR, NO CARD READER,			MONITORED DOOR	SECURITY CONTRACTOR PROVIDES: HARDWARE CONTRACTOR PROVIDES: LOCK CONTROLLED BY: NOTES: CARD READER IS EXTERIOR ADA ACTUATOR.
TYPE 5:	 HARDWARE SETS: 12	SINGLE DOOR, 2 CARD READERS, REMOTE RELEASE BUTTON			MAG LOCK	SECURITY CONTRACTOR PROVIDES: 2 CR, L/PS, RS HARDWARE CONTRACTOR PROVIDES: ML LOCK CONTROLLED BY: CR, RS NOTES: PROVIDE MULLION STYLE CARD READERS.
TYPE 6:	 HARDWARE SETS: AL-01	DOUBLE DOOR, 1 CARD READER AUTO OPENER, DOORS ARE DOGGED DURING NORMAL HOURS (SEE DOOR OPERATION DESCRIPTION IN HARDWARE SPECIFICATIONS)			ELECTRICFIED PANIC HARDWARE	SECURITY CONTRACTOR PROVIDES: CR HARDWARE CONTRACTOR PROVIDES: EPT, PH, L/IS, CI LOCK CONTROLLED BY: CR, TLC NOTES: 1. EXIT ACTUATOR TURNED ON/OFF BY ACS TLC. 2. EXTERIOR ACTUATOR WIRED THROUGH "LX" SWITCH IN PANIC HARDWARE.
TYPE 7:	 HARDWARE SETS: AL-07	SINGLE DOOR, 2 CARD READERS DELAYED EXIT WITH CARD READER OVERRIDE			DELAYED EXIT W/ ELECTRIC STRIKE	SECURITY CONTRACTOR PROVIDES: CR HARDWARE CONTRACTOR PROVIDES: ES, EPT, PH, L/PS LOCK CONTROLLED BY: CR
TYPE 8:	 HARDWARE SETS: AL-05	DOUBLE DOOR, 1 CARD READER AUTO OPENER, DOORS ARE DOGGED DURING NORMAL HOURS (SEE DOOR OPERATION DESCRIPTION IN HARDWARE SPECIFICATIONS)			ELECTRICFIED PANIC HARDWARE	SECURITY CONTRACTOR PROVIDES: CR HARDWARE CONTRACTOR PROVIDES: EPT, PH, L/IS, CI LOCK CONTROLLED BY: CR, TLC NOTES: 1. EXIT ACTUATOR TURNED ON/OFF BY ACS TLC. 2. EXTERIOR ACTUATOR WIRED THROUGH "LX" SWITCH IN PANIC HARDWARE.

ABBREVIATIONS

1G	=	1 GANG
4SQ	=	FOUR SQUARE
ACC	=	ACCESSIBLE
ACS	=	ACCESS CONTROL SYSTEM
AO	=	AUTOMATIC OPERATOR
C	=	CONDUIT
CI	=	DOOR CONTACT INDICATOR
CR	=	CARD READER
DBL	=	DOUBLE
DIR	=	DIRECTION
EL	=	ELECTRIC LOCKSET
ELC	=	EMERGENCY LOCK CONTROL
EPT	=	ELECTRIC POWER TRANSFER
ES	=	ELECTRIC STRIKE
FA	=	FIRE ALARM
HDWR	=	HARDWARE
IDS	=	INTRUSION DETECTION SYSTEM
KS	=	KEY SWITCH
LD	=	LOCKDOWN CIRCUIT
L/PS	=	LOCK POWER SUPPLY
MD	=	MOTION DETECTOR
ML	=	ELECTROMAGNETIC LOCK
OCC	=	OCCUPANCY
PB	=	PUSH BUTTON
PH	=	PANIC HARDWARE
PWR	=	POWER
RS	=	REMOTE SWITCH
TLC	=	TIME/SYSTEM LOCK CONTROL
TYP	=	TYPICAL
W/	=	WITH

DFCM APPROVAL STAMP

CARD ACCESS NOTES

1. THIS SYSTEM DIAGRAM IS SHOWN FOR REFERENCE ONLY. THE SCOPE OF WORK IS LIMITED TO ROUGH-IN OF THE SYSTEM INFRASTRUCTURE (CONDUITS, BOXES, PULL STRINGS, ETC). SECURITY SYSTEM EQUIPMENT AND CABLING INSTALLATION IS BY OTHERS. COORDINATE ROUGH-IN WITH SELECTED SECURITY SYSTEM INSTALLER.
2. PROVIDE CONCEALED .75" C TYPICAL FOR LINES SHOWN TO DEVICE BOXES ON PROTECTED SIDE AND UNPROTECTED SIDE ELEVATIONS.
3. LOCATE CARD READER BOX AS INDICATED ON FLOOR PLANS. RACEWAY AND BOXES BY DIV. 26.
4. DOUBLE 4SQ J-BOX ON PROTECTED SIDE OF DOORWAY (SIDE OPPOSITE OF CARD READER) ABOVE ACCESSIBLE CEILING OR IN OTHER ACCESSIBLE LOCATION. PROVIDE COVER FOR J-BOX.

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL: LICENSED PROFESSIONAL ENGINEER No. 7057918 CARLTON A. GETZ STATE OF UTAH
09/12/2012

DATE	STATUS

DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

SECURITY DETAILS AND SCHEDULES

EY601

9/7/2012 2:06:09 PM

A1 LEVEL 01 AUDIO VISUAL PLAN

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

9/7/2012 2:05:32 PM

DFCM APPROVAL STAMP

GENERAL SHEET NOTES

SHEET KEYNOTES

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

801-521-6186
801-539-1916
ffkr.com

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

	DATE	REVISION

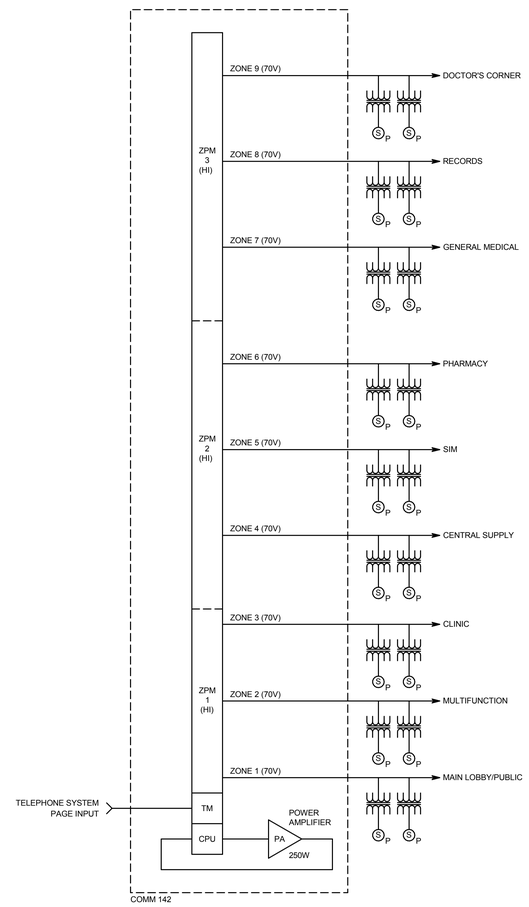
PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LEVEL 1 AUDIO VISUAL PLAN

EJ101

PAGING SYSTEM EQUIPMENT LIST

SYMBOL	DESCRIPTION	QUANTITY	ACCEPTABLE TYPES
AMP	70V AMPLIFIER, PROVIDE MULTIPLE AMPS AS INDICATED	A/R	BOGEN TPU-35B, 60B, 100B, 250 WALL MOUNTED
PAGE CONT	PAGING CONTROLLER W/ TIM, CPU, AND ZPM MODULES AS INDICATED	1	BOGEN PCM-2000 SYSTEM
S	8" SPEAKER, RECESSED, CEILING MOUNTED	OFP	SEE SPECIFICATIONS
LD	LINE DISTRIBUTION AMPLIFIER	OFP	RADIO DESIGN LABS RU-DA4D W/ POWER SUPPLY
XFMR	600 OHM/10K TRANSFORMER	OFP	BOGEN WMT1A
	LINE SIGNAL CABLE	A/R	1 TWISTED PAIR, SHIELDED, 18 GAUGE



PAGING ZONES

ZONES	DESCRIPTION	LOCATION
ZONE 1	MAIN LOBBY/PUBLIC	COMM 142
ZONE 2	MULTIFUNCTION	COMM 142
ZONE 3	CLINIC	COMM 142
ZONE 4	CENTRAL SUPPLY	COMM 142
ZONE 5	SIM	COMM 142
ZONE 6	PHARMACY	COMM 142
ZONE 7	GENERAL MEDICAL	COMM 142
ZONE 8	RECORDS	COMM 142
ZONE 9	DOCTOR'S CORNER	COMM 142

NOTES:

1. ZONE AMPLIFIERS ARE TO BE INSTALLED IN THE DESIGNATED COMM ROOMS ON THE APPROPRIATE FLOORS.
2. ALL SPEAKERS IN CORRIDORS AND LARGE AREAS ARE TO BE TAPPED AT 2 WATTS.
3. CONFIGURE SYSTEM FOR 10 ZONES AND "ALL CALL" TO ALL SPEAKERS, AS INDICATED.
4. CONNECT TO SPEAKER ZONE HOME RUNS AS SHOWN IN DRAWINGS. USING MULTIPLE HOME RUN CABLES PRESERVES THE POTENTIAL, IF DESIRED IN THE FUTURE, TO PROVIDE FOR SELECTIVE PAGE ZONES.
5. AMPLIFIERS IN COMM ROOMS ARE TO BE WALL MOUNTED AND NOT SHELF MOUNTED.

A4 OVERHEAD PAGING SYSTEM DIAGRAM

SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
o 801-521-6186
f 801-539-1916
ffkr.com

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

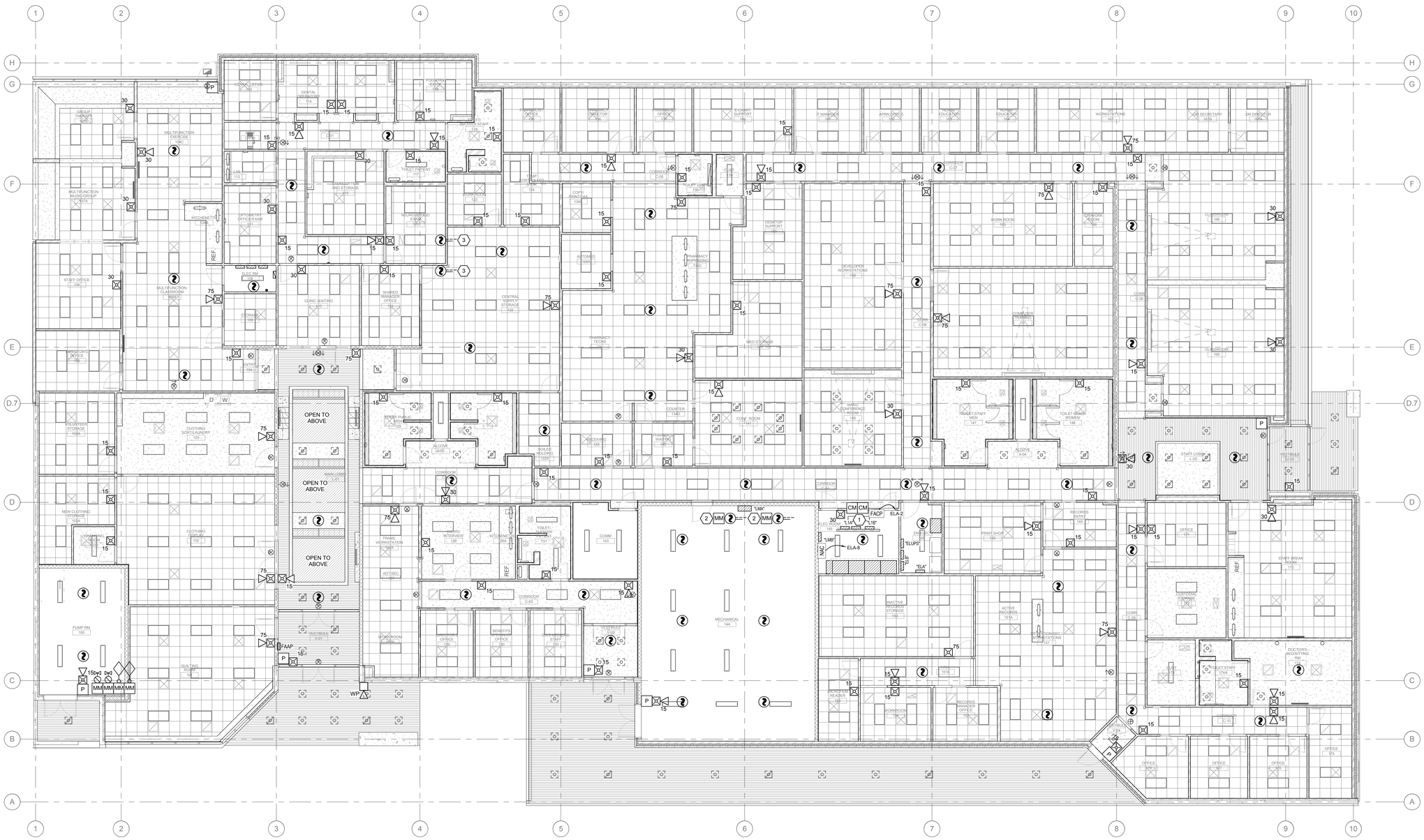
	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	1/8" = 1'-0"

AUDIO VISUAL DIAGRAMS AND SCHEDULES

EJ601

9/7/2012 2:05:32 PM



A1 LEVEL 01 FIRE ALARM PLAN

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

9/7/2012 2:06:13 PM

DFCM APPROVAL STAMP

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

o 801-521-6186
f 801-539-1916
ffkr.com

GENERAL SHEET NOTES

SHEET KEYNOTES

1 PROVIDE CONTROL MODULES FOR INTERCONNECTION WITH SECURITY SYSTEM.

2 PROVIDE DUCT SMOKE DETECTORS AT AIR HANDLER (AH-1).

3 PROVIDE DUCT SMOKE DETECTORS AT ROOF TOP UNIT (RTU-1).

SPECTRUM ENGINEERS

324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL

LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

LEVEL 1 FIRE ALARM PLAN

FA101

WIRING SCHEDULE

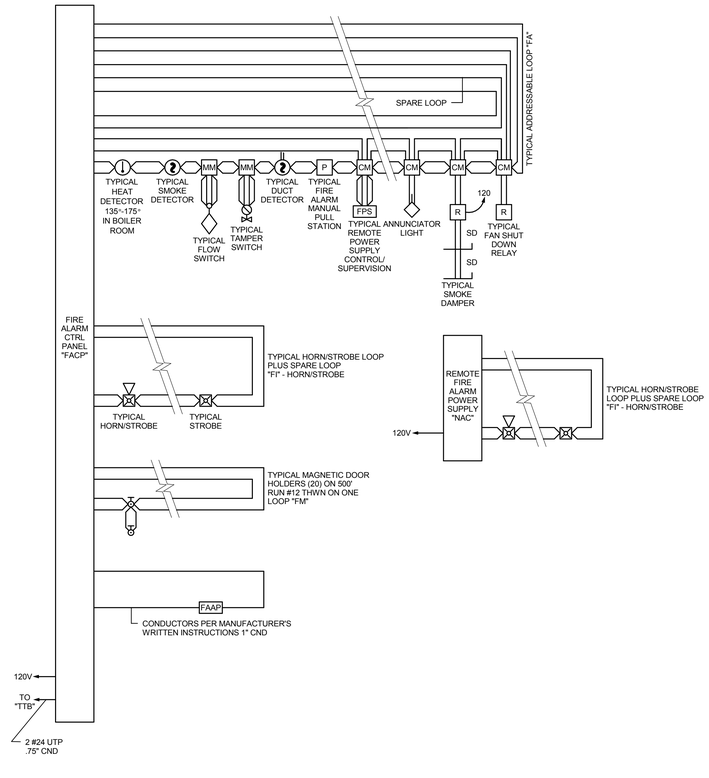
FUNCTION	< 500'	< 1000'	1000'-3000'	> 3000'
ADDRESSABLE LOOP	#18 TSP	#18 TSP	#16 TSP	#14 TSP
POWER LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN
SPARE LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN
STROBE HORNS	#14 THWN	#14 THWN	#12 THWN	#10 THWN
MAGNETIC DOOR HOLDER	#12 THWN	#10 THWN		
SPEAKERS	#16 TSP	#16 TSP	#14 TSP	#14 TSP

NOTIFICATION SCHEDULE

SYMBOL	STROBE SIZE	COVERAGE	AVERAGE CURRENT	MAXIMUM PER CIRCUIT ALONE
15	15 CD	20'x20'	.085A	17
30	30 CD	30'x30'	.135A	11
75	75 CD	40'x40'	.200A	7
110	110 CD	50'x50'	.225A	6

FIRE ALARM INPUT/OUTPUT MATRIX

	ZONE	GENERAL ALARM	CLOSE/ RELEASE DOOR HOLDER/ CLOSERS	FAN SHUTDOWN	CLOSE FIRE/SMOKE DAMPERS	TROUBLE SIGNAL	SUPERVISORY SIGNAL	RELEASE MAGNETIC LOCKS		NOTES
		OUTPUT DEVICES								
INITIATING DEVICES	1 MAIN FLOW	•	•					•		
	2 MAIN TAMPER						•			
	3 MAIN LEVEL FLOW	•	•					•		
	4 MAIN LEVEL TAMPER						•			
	5 INITIATING LOOP	•	•					•		
	6 DUCT DETECTOR			•	•					
	7 SYSTEM FAULT					•				
	8 PULL STATION	•	•					•		
	9 SMOKE DETECTOR	•	•	•	•			•		
	10 -									
	11 -									



A4 FIRE ALARM RISER
SCALE: NTS

DFCM APPROVAL STAMP

FFKR ARCHITECTS
bogue building
730 pacific avenue
salt lake city
Utah 84104
801-521-6186
801-539-1916
ffkr.com

GENERAL SHEET NOTES

1 PLANS ARE BASED UPON 99 MONITOR AND CONTROL DEVICES PER ADDRESSABLE LOOP. OTHER CONFIGURATIONS ARE ACCEPTABLE SUBJECT TO CONTRACTOR ALLOWING FOR INCREASED WIRING REQUIREMENTS AND SUBMITTAL DRAWINGS SHOWING NEW WIRING CONFIGURATION. MAXIMUM INITIAL DEVICES PER LOOP SHALL NOT EXCEED 75% MAXIMUM ALLOWABLE.

2 PLANS ARE BASED UPON THE WIRING SCHEDULE SHOWN. WHERE MANUFACTURER'S REQUIREMENTS EXCEED REQUIREMENTS SHOWN, INCLUDE ADDITIONAL ASSOCIATED COSTS AND SUBMITTAL DRAWINGS INDICATING NEW WIRING CONFIGURATION.

3 PLANS ARE BASED UPON 2 AMPS AT 24 VDC, NOT TO EXCEED 75% (1.50 AMPS AVAILABLE). POWER SUPPLY CAPACITY PER NOTIFICATION CIRCUIT. NOTIFICATION DEVICE LOADS ARE BASED UPON NOTIFICATION DEVICE SCHEDULE SHOWN. INCLUDE ADDITIONAL ASSOCIATED COSTS FOR INCREASED WIRING AND POWER SUPPLY CAPACITY IF LOADS OF ACTUAL DEVICES PROVIDED EXCEED CIRCUIT CAPACITY, OR IF LOAD OUTPUT OF ACTUAL POWER SUPPLIES PROVIDED IS SIZED DIFFERENTLY. PROVIDE SUBMITTAL DRAWINGS SHOWING NEW WIRING CONFIGURATION.

4 FLOW AND TAMPER CONFIGURATION BASED UPON FIRE SPRINKLER DESIGN CONCEPT. FIELD VERIFY ACTUAL REQUIREMENTS. INCLUDE ANY ADDITIONAL MONITOR MODULES REQUIRED BY ACTUAL DESIGN REQUIREMENTS.

5 HEAT DETECTORS WHEN INSTALLED IN ELEVATOR SHAFTS OR MECHANICAL ROOMS FOR ELEVATOR SHUT DOWN SHALL HAVE HEAT DETECTOR WITH LOWER RESPONSE TIME INDEX THAN SPRINKLER HEAD.

6 PROVIDE POWER SUPPLY CAPACITY AS REQUIRED FOR DOOR HOLD OPENS SHOWN.

7 BATTERY CAPACITY TO BE ADEQUATE TO OPERATE 15 MINUTES AFTER 24 HOURS PLUS 25% SPARE CAPACITY.

8 VFD REQUIRES TWO RELAYS, ONE FOR SMOKE CONTROL, ONE SPARE.

9 RUN SPARE LOOPS IN SAME CONDUIT. DO NOT EXCEED 40% AREA FILL OF CONDUITS.

10 PROVIDE DUCT DETECTORS FOR SUPPLY AND RETURN AIR SYSTEMS OVER 2000 CFM. INSTALL DUCT DETECTORS PER NFPA 72 REQUIREMENTS AND PROVIDE ADDITIONAL DUCT DETECTORS DEPENDING UPON FINAL DUCT ARRANGEMENT.

11 PROVIDE DUCT DETECTOR AT EACH FLOOR, PRIOR TO CONNECTION TO A COMMON RETURN AND PRIOR TO RECIRCULATING OR FRESH AIR INLET IN AIR RETURN SYSTEMS OVER 15,000 CFM CAPACITY AND SERVING MORE THAN ONE STORY.

12 PROVIDE MANUAL PULL STATIONS IN BOILER ROOMS AND KITCHENS.

13 PROVIDE ONE YEAR OFF SITE MONITORING INCLUDING ALL INTERFACE DEVICES AND MONITORING CHARGES. COORDINATE WITH BUILDING OWNER'S OFF SITE MONITORING COMPANY.

14 LOCATE SMOKE DETECTORS MINIMUM 3' FROM AIR SUPPLY AND RETURN LOUVERS.

15 PROVIDE SYNCHRONIZED STROBES THROUGHOUT FACILITY. PROVIDE SYNCHRONIZATION MODULES PER MANUFACTURER'S REQUIREMENTS. INCLUDE ADDITIONAL WIRING, IF REQUIRED.

16 INITIATING AND INDICATING LOOPS SHALL NOT SERVE AN AREA OF GREATER THAN 22,500 SQUARE FEET. PROVIDE ADDITIONAL LOOPS FOR AREAS LARGER THAN THIS.

17 ALL OUTPUT DEVICES ARE DESIGNED ON SYSTEMS WITH 2 AMP POWER SUPPLY.

18 HORN/STROBE BASED ON 120 MILLIAMPS, DOOR HOLDERS BASED ON 70 MILLIAMPS.

19 INSTALL DUCT DETECTORS PER NFPA 72 REQUIREMENTS AND PROVIDE ADDITIONAL DUCT DETECTORS DEPENDING UPON FINAL DUCT ARRANGEMENT.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH
09/12/2012

DATE	STATUS

	DATE	REVISION

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"

FIRE ALARM RISER

FA601

9/7/2012 2:06:14 PM