



State of Utah

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Governor

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Lieutenant Governor

Department of Administrative Services

KIMBERLY K. HOOD
Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON
Director

ADDENDUM NO. 6

Date: March 22, 2011
To: Contractors
From: Brian Bales
Reference: Northern Utah Interagency Fire Dispatch Center
DNR – Draper, Utah
Project No.1001350

Subject: **Addendum No.6**

Pages	Addendum	1 Page
	<u>Architects Addendum</u>	<u>64 Pages</u>
	Total	65 Pages

Note: *This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.*

6.1 SCHEDULE CHANGES – There are no changes to the project schedule.

6.2 GENERAL – Please see attached sheets from Scott P. Evans Architect.

March 21st, 2011

PROJECT:

Northern Utah Interagency Fire Dispatch Center

OWNER:

State of Utah - DFCM
4110 State Office Building
Salt Lake City, Utah 84190

DFCM Project Number: 10013500

ADDENDUM NO. # 06

The data included herein is issued by the Architect as a clarification and addition to drawings, specifications, and contract documents relative to the above project. Except as effected by data herein, all other parts of the Contract Documents shall remain in full force and effect as issued by the Owner in the **January 17, 2011 Construction Bid Documents**. (This Date Applies to all Project Bid Documents). It shall be the sole responsibility of the bidder to appropriately disseminate this data to all concerned prior to the assigned bid date and time. **Receipt of the addendum shall be recorded by the bidder in the appropriate space on the proposal form included in the Contract Documents.**

I. GENERAL ITEMS

Item #1 – Prior Approvals

The following manufacturers, trade names and products are allowed to bid on a name-brand-only basis with the provision that they completely satisfy all and every requirement of the drawings, specifications and all addenda and shall conform to the design, quality and standards specified, established and required for the complete and satisfactory installation and performance of the building and all its respective parts.

Product	Manufacturer	Status
Audio Visual	General Communications	Approved
Roof Hatch / Safety Post / Safety Railing	Karp	Approved
Aluminum Entrances, Storefront and Windows	Manko Window Systems	Approved
Carpet Tiles	Interface (Cubic)	Approved
Access Doors / Roof Hatch	Elmdor	Approved
Insulating Concrete Forms	BB Build Block	Approved
Insulating Concrete Forms	Reward Wall Systems	Approved
Roofing	GAF (Everguard)	Not Approved
Operable Partitions	Hufcor	Approved

Item #2 - Utah Preference Laws

Q: On the bid form it has a line that states "Any request and information related to Utah Preference Laws". Where this is a federal funded project does the Utah Bidder Preference laws apply? If so, what would this entail?

A: This project is subject to "Preference for Resident Contractors" Utah Code 63G-6-405.

Item #3 - Commissioning Coordination

The Contractor shall coordinate with the Commissioning Agent (CxA) until the CxA accepts the commissioning process as complete. Substantial completion will not be awarded until the commissioning requirements are satisfied and acceptable by the CxA.

Item #4 - Temporary Power and Permanent Power

The Contractor is responsible to provide their own temporary power during construction up to the point that the permanent power is available and metered. When permanent, metered power is available, the Owner (DFCM) will then relieve the Contractor of these energy costs. Whether these costs are directly billed to the Owner or passed on through the Contractor, will be determined at a later date. Only temporary power cost are to be included in the bid.

II. ARCHITECTURAL

A. ARCHITECTURAL SPECIFICATION ITEMS

Item #1 - Specification Section 122413 - ROLLER WINDOW SHADES

Section 122413; 1.2 - Add paragraph E. Paragraph shall read:

LEED Submittals: 1. Provide documentation complying with requirements of SSc8, shading material to have less than or equal to 10% light transmittance. Roller shades should also be programmable to automatically close from the hours of 11pm - 5am. Coordinate with other trades.

Item #2 – Specification Section 105000 - CUSTOM WOOD LOCKERS

Q1: Could you give us some direction as to what type of hardware is to be used on the lockers in the passage area?

A1: Change 2.1.D to read as follows:

D. Hardware:

1. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening.

a. 3 hinges on doors over 42" high.

2. Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter.

3. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

a. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.

4. Coat Rod

5. Coat Hook(s)

6. Name Plate

7. Provide semi-recessed locking hardware compatible with individual pad locks. This is to be approved by the Architect in the submittal process.

Item #3 – Specification Section 064023 - INTERIOR ARCHITECTURAL WOODWORK

Eliminate 2.6.B.6, 2.6.B.7, 2.6.B.9, 2.6.B.15

Item #4 – Specification Section 102226 - OPERABLE PARTITIONS

a. Paragraph 2.2.A.1 - Change to read:

Basis-of-Design Product: Subject to compliance with requirements, provide Acousti-Seal 932 as manufactured by Modernfold, Inc. or comparable product by one of the following:

- b. Paragraph 2.2.B - Change to read:
Panel Operation: Manually operated paired panels
- c. Paragraph 2.2.H.1 - Change read:
Wall jamb per manufacturer's standard
- d. Paragraph 2.2.F - Change to read:
Panel Weight: 8 lbs per s.f maximum
- e. Paragraph 2.5.C - Delete
- f. Paragraphs 2.3.B.2 & 2.3.B.3 - Delete
- g. Paragraph 2.5 A & B - Change to read:

A. Suspension Tracks: Minimum 11-gauge, 0.12-inch (3.04mm) roll-formed steel track, suitable for either direct mounting to a wood header or supported by adjustable steel hanger brackets, supporting the load-bearing surface of the track, connected to structural support by pairs of 0.38-inch (10mm) diameter threaded rods. Aluminum track is not acceptable.

- 1. Head Closure Trim: As required for acoustical performance; with factory applied, decorative, and protective finish.

B. Carriers: One all-steel trolley with steel tired ball bearing wheels per panel (except hinged panels). Non-steel tires are not acceptable.

- 1. Multidirectional Carriers: Capable of negotiating 90-degree L,T and X intersections without track switches.

Item #5 – Specification Section 083323 - OVERHEAD COILING DOORS

- Q1: Door Schedule on sheet AE-601 is calling for an aluminum door. Section 083323 2.8.C is calling for stainless steel. Please clarify which door material is correct.
- A1: Change all references of stainless steel to aluminum within this specification section. 2.8.J.1 shall read: Aluminum Finish: Clear Anodized
- Q2: The door schedule does not list a fire rating, but section 083323 makes reference to a fire rating on page 5. Is this door fire rated?
- A2: This door is not fire rated. Ignore references to fire ratings.
- Q3: Section 083323 2.8.I.1 lists a through wall shaft operation. Standard crank is operable on the coil side of the wall (inside Serving 105). What you are asking for is the crank to be operational on the opposite coil side of the wall (or through wall in the Multi-Purpose 106C area). If you want the crank operable inside serving 105, a through wall shaft is not necessary. Please clarify.
- A3: The intent is to have all operable components of the system located in Serving 105 and not through wall.

1. Modify specification section 083323 as follows:
 - a. Delete - 2.1.D.1
 - b. Delete - 2.3
 - c. Delete - 2.4.C&D
 - d. Delete - 2.5.A
 - e. Delete - 2.8.F&G

Item #6 – Specification Section 092423 - PORTLAND CEMENT STUCCO

Delete/Remove the Portland Cement Stucco specification section.

Item #7 – Specification Section 332700 - GEOTHERMAL LOOP HEAT EXCHANGER (GLHE)

The Geothermal Loop Heat Exchanger (GLHE) section is out of order in the specification document.

Item #8 – Bonded Subcontractors

As clarification to Addendum #05, the asphalt subcontractor is not required to be bonded.

Item #9 - Specification Section 323113 - CHAIN LINK FENCES AND GATES

Add the Chain Link Fences and Gate specification section. (See VIII. ARCHITECTURAL SUPPLEMENTAL SPECIFICATIONS)

Item #10 - Specification Section 129300 - SITE FURNISHINGS

Replace the existing Site Furnishings specification section with the revised version attached (See VIII. ARCHITECTURAL SUPPLEMENTAL SPECIFICATIONS)

Item#11 - Specification Section 096900 - ACCESS FLOORING

- a. Section 096900; 2.2.B – Paragraph shall read:
Cementitious-Core Steel Panels: Fabricated from cold-rolled steel sheet, with the die-cut flat top sheet and die-formed and stiffened bottom pan welded together, and with metal surfaces protected against corrosion by manufacturer's standard factory-applied finish. Fully grout internal spaces of completed units with manufacturer's standard cementitious fill.
- b. Section 096900; 2.2.B.1 - Paragraph shall read:
Basis-of-Design Product: Subject to compliance with requirements, provide ConCore 1000 as manufactured by Tate Access Floor, Inc., or comparable product by one of the following:

Item #12 - Specification Section 096813 - TILE CARPETING

Paragraph 2.1.A shall read:

Basis-of-Design Product: Subject to compliance with requirements of the State of Utah Contract for Carpet , provide Shaw carpet or a comparable product by one of the following (Shaw is the Basis-of-Design):

Item #13 - Specification Section 087000 - DOOR HARDWARE

Replace the existing Door Hardware specification section with the revised version attached (See VIII. ARCHITECTURAL SUPPLEMENTAL SPECIFICATIONS)

Item #14 - Specification Section 072419 - WATER-DRAINAGE EXTERIOR INSULATION AND FINISH SYSTEM

Delete this section from the specifications.

Item #15 - Specification Section 072413 - POLYMER-BASED EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

This new section shall be inserted into the specification documents (See VIII. ARCHITECTURAL SUPPLEMENTARY SPECIFICATIONS)

Item #16 - Specification Section 000110 - TABLE OF CONTENTS

The Table of Content will be revised and provided to the bidding contractors as part of the final addendum.

Item #17 - Specification Section 019113 - GENERAL COMMISSIONING REQUIREMENTS

Section 019113 1.2.A - Paragraph shall read:

The Owner shall retain a Building Envelope Testing Agency (BETA) to perform the testing identified below. The BETA may be and is often the same entity as the Building Envelope Commissioning Authority (BECA). BECA/BETA qualifications as identified in Section 019115.

Item #18 - Specification Section 051200 - STRUCTURAL STEEL FRAMING - GENERAL

- a. Section 051200; 2.6.A – Paragraph shall read:
 - 1. Fabricator Qualifications: Qualified fabricator that is approved by DFCM and listed on the current approved fabricator list.

Item #19 - Specification Section 075419 - POLYVINYL-CHLORIDE (PVC) ROOFING

- a. Section 075419; 2.1.A.2.a – Paragraph shall read:
60 mils nominal reinforced, with minimum 28 mils above reinforcing for flat roof area.
- b. Section 075419; 2.1.A.2.b – Paragraph shall read:
80 mils reinforced with felt backing, with minimum 38 mils above reinforcing for sloped roof area.
- c. There was (2) PVC roofing specification sections provided to the bidding contractors. One had 8 pages and the other had 9 pages. Delete the section that had only 8 pages. The difference between the two was the addition of 3.4.C.

Item #20 - Specification Section 019118 - BUILDING ENVELOPE TESTING PROTOCOLS

Section 019113 1.4.B - Paragraph shall read:

Unless specifically noted below, all costs to complete the testing shall be borne by the Owner.

Item #21 - Specification Section 095113 - ACOUSTICAL PANEL CEILINGS

Q: Would you please clarify in specification section 095113, 2.3.B - Panel Type 1 specifies Armstrong Cirrus Open Plan #558 which is cut for 9/16" grid. Is that correct, or did you wanted #556 which is cut for 15/16" grid? Section 2.4.B would also be affected.

A: Use Armstrong Cirrus Open Plan#556 in lieu of #558 for 2.3.B. For 2.4.B change the word "narrow" to "standard", and change "9/16" to 15/16" .

Item #22 - Specification Section 031150 - INSULATING CONCRETE FORMS (ICF'S)

Q: Reference 031150 2.2.C. Makes reference to specification section 032000 for reinforcing steel. This specification is not part of the bid documents. Please clarify.

A: Section 031150 2.2.C should read as follows:

Reinforcing steel shall be as specified under section 033000 and as required by the design engineer.

Item #23 - Specification Section 122113 - HORIZONTAL LOUVER BLINDS

Modify specification section 083323 as follows:

1. Delete - 2.1.C.2
2. Delete - 2.1.J
3. Delete - 3.1.C

B. ARCHITECTURAL DRAWING ITEMS

Item #1 - ANCHOR BOLT SIZES AND SPACES AT PARAPET CAPS.

Q: Please define anchor bolt size and spacing at the parapet cap?

A: 1/2" anchor bolts at 24" o.c.

Item #2 - RECEPTION DESK CORRUGATED METAL WALL PANEL

Q: Who is responsible for the corrugated metal wall panel system on the reception desk?

A: The subcontractor who is providing the corrugated metal panels at other locations will also provide the metal panels at the reception desk. This work should be well coordinated between trades.

Q: Reference C2/AE-205 & Keyed Note #26 called out at detail C appears to be incorrect. A1 & A2/AE-515 show metal wall panel. Please clarify.

A: See wall type #11 on AF-601.

Item #3 - FIRE TREATED SHEATHING

- Q: The structural drawings indicate 7/16" fire treated plywood at the shear walls. Is fire treated material required for type II-B construction, and if not could this requirement be removed?
- A: Fire treated plywood is a requirement of type II-B construction.

Item #4 - STAMPED COLORED CONCRETE LOCATIONS

- Q: Reference SB-101 and AE-106. SB-101 indicates stamped colored concrete at the vestibule and AE-106 does not. Please clarify.
- A: Vestibules #101 & 107 will not have stamped colored concrete. Entrance mats will cover the concrete at these locations.

Item #5 - VESTIBULE ENTRANCE MATS

- Q: Finish schedule indicates floor mats at the vestibule. Please indicate size of mat required & recess slab if required?
- A: Floor mats will be the size of the floor space in each vestibule and without a frame. There are no recessed slabs. Refer to specification section 124813.

Item #6 - WALL TYPE #9 & 11 COORDINATION

- Q: Reference AE-203, 204, 205 & 206 - Keyed Note 26. Indicates 9/16" plywood. Wall type indicates 1/2" plywood. Please clarify.
- A: Plywood thickness is to be 9/16".

Item #7 - SERVING #105 - PLASTIC LAMINATE OR SOLID SURFACE

- Q: Reference A4/AE-311 and C4, D5/AE-203. A4 indicates solid surface and C4/D5 indicate plastic laminate. Please clarify.
- A: Use solid surface at this location.
- Q: Who provides the metal wall panel at the reception desk?
- A: The subcontractor who is providing the corrugated metal panels at other locations will also provide the metal panels at the reception desk. This work should be well coordinated between trades.

Item #8 - ACOUSTICAL PANEL CEILINGS

- Q1: Are we going to use 2" wall molding, or molding with Berc Clips?
- A1: Referencing sheet B1/AE-501. Change wall molding from 2" to 1" wall molding with a Berc Clip.
- Q2: Radio Room #119 and Storage #120 show on the reflected ceiling plan as being 2x4 ceilings which are not addressed in the specification section 095113.
- A2: Change these to a 2x2 acoustical panel in these two rooms.

C. ARCHITECTURAL GENERAL ITEMS

None

III. CIVIL

A. CIVIL SPECIFICATION ITEMS

Item #1 - Specification Section 321723 - PAVEMENT MARKINGS

Q: Regarding parking lot paint striping, which product is to be used?

A: In the Pavement Marking Specification 321723, the contractor may choose which pavement marking method to apply the pavement markings as shown on the site plan. The contractor may ignore the parts of the specification that are not shown on the site plan.

Item #2 - Excavation Spoils

Q: Reference 320510 3.9.A&B - Civil drawings indicate leaving spoils on site as directed by the Site Construction Manager. Please clarify.

A: Section 320510 3.9 A&B spoils should be spread out, stock piled or formed into berms on site as directed by the Architect or DFCM site construction manager. The Architect or DFCM manager may choose to use one or all of these options to relocate spoils. This work should be carefully coordinated between trades. As an option, the contractor may remove and legally dispose of off site the soils that are being removed.

B. CIVIL DRAWING ITEMS

Item #1 - Soils Note on sheet CE-113, details A, D & F

Replace the existing sheet CE-113 with the attached revised sheet CE-113.

Item #2 - Sewer pipe sizes

Q: Referring to sheet CE-107 - Utility plan note #1. What is the type and size of this sewer pipe?

A: CE-107 Note #1 has been revised to state that this pipe will be a 4" SDR-35 PVC pipe. Replace the existing sheet with the revised CE-107. (See attached)

Item #3 - Fencing around Radio Tower

Delete key note #27 from sheet CE-103. This fencing will be provided by the Owner at a later date. Replace the existing CE-103 with the revised CE-103 (See attached)

Item #4 - Sheet CE-104 - Note #1

Q: Reference CE-104 Note #1 - Please identify where this happens.

A: CE-104 Note #1 occurs at the west end of the 24" storm water line. The note was hidden a little before but has been revised to be clearer. Replace the existing sheet with the revised CE-104 which clarifies this location. (See attached)

Item #5 - Grinder/Cutter Sewage System

- Q: Reference CE-116 - NA0052P05 - Indicates a concrete anchor is required for this model. Please provide details.
- A: A detail has been added to sheet CE-116 for this concrete anchor. Replace the existing sheet with the revised CE-116. Also see the additional details following the revised sheet CE-116.

Item #6 - CE-107 - Note #18

- Q: Reference CE-107, Note #18. Detail callout appears to be incorrect. Please clarify.
- A: CE-107, Note #18 has been revised to call out detail 3060 instead of 3040. Replace the existing sheet with the revised CE-107. (See attached)

Item #7 - CE-107 - Note #40 & CE-108

- Q: Reference CE-107 & 108 - Note #40. Callout for detail "B" is missing. Please clarify.
- A: CE-107 & CE-108 Detail B has been added to revised sheet CE-107. CE-108 has been revised to refer to detail B on sheet CE-107. Both revised sheets are attached.

Item #8 - Utility Locating

- Q: Reference CE-101, Utility Note #10 and CE-108 Utility location note. Will Blue Stakes be able to locate existing utilities as per CE-108 or will a private entity be required per CE-101?
- A: Blue Stakes will stake all their utilities outside of the fence. Private entities will likely be required inside of the fence.

Item #9 - Acceptable method for crossing street entrance

- Q: Reference CE-109 - As per the pre-bid meeting will jack & bore be the only acceptable method for crossing the street entrance?
- A: No. The note on CE-109 gives you the option to choose what you want to do. Either one is okay as long as vehicle access to the Genesis Youth Center is maintained at all times.

Item #10 - Sub grade prep for paving

- Q: Reference CE-113. The sub grade prep notes for paving do not appear to reflect the methods specified in 012300. Please clarify that structural fill, if used, will not be required to natural sub grade soils.
- A: These changes are shown on revised sheet CE-113 attached.

Item #11 - Revised Civil Drawings

1. See revised Civil Drawings attached.

Item #12 - Hydrovac

- Q: Sheet CE-109 general note indicates hydrovac or pot hole method to locate utilities, whereas on the same sheet note inside the plan indicates for the Genesis Youth Center that "Contractor must hydrovac to locate these laterals and loop proposed sewer line under each lateral with a minimum clearance of 12 inches". Please clarify if hydrovac or pot holing is acceptable.
- A: For the hatched area indicated the intent is to locate all the existing utilities in the 70 foot section of the trench. The contractor should hydrovac an investigative trench for this 70 foot section of trench to the depths necessary for the new waste line. Once the utilities are located the contractor may widen the trench by other means so long as there is no damage to the existing utilities . The contractor will bear all costs to repair damaged utilities for this section of the trench .



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PROFESSIONAL STAMP:

PROJECT NAME:

NORTHERN UTAH INTERAGENCY
FIRE DISPATCH CENTER

14224 PONY EXPRESS ROAD
DRAPER CITY, UTAH 84020

REVISIONS:
NO. DATE DESCRIPTION

1 03/21/11 SVSD NOTES ADDED

ISSUED:	NO.	DATE	DESCRIPTION
	1	8/17	CLIENT REVIEW
	1	10/05	DD CLIENT REVIEW
	1	1/03/11	85% SUBMITTAL
	3	1/17/11	CONSTRUCTION BID DOCUMENTS
	4	2/21/11	FINAL CONSTRUCTION DOCUMENTS

OWNER PROJECT #:
SPE PROJECT #: 09-12
DRAWN BY: NOLTE - CMW
CHECKED BY: NOLTE - CMW
DESIGNED BY: NOLTE - CMW

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SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
CE-101

SHEET INDEX

- CE-101 GENERAL NOTES
- CE-102 DEMOLITION PLAN
- CE-103 SITE PLAN
- CE-104 GRADING AND DRAINAGE PLAN
- CE-105 EROSION CONTROL PLAN
- CE-106 DETENTION POND DETAILS
- CE-107 UTILITY PLAN
- CE-108 SEWER PLAN AND PROFILE
- CE-109 SEWER PLAN PLAN AND PROFILE
- CE-110 APWA DETAILS VARIOUS
- CE-111 APWA DETAILS VARIOUS
- CE-112 APWA DETAILS VARIOUS
- CE-113 MISCELLANEOUS DETAILS
- CE-114 DRAPER CITY WATER DETAILS
- CE-115 DRAPER CITY WATER DETAILS
- CE-116 MISCELLANEOUS DETAILS

LEGEND:

	EXIST. CURB & GUTTER
	EXIST. SIDEWALK
	EXIST. EDGE OF ASPHALT
	EXIST. CENTERLINE
	EXIST. RIGHT-OF-WAY LINE
	EXIST. FENCE
	EXIST. TREE
	EXIST. CHAIN LINK FENCE
	EXIST. CONTOUR
	EXIST. FIRE HYDRANT
	EXIST. WATER VALVE
	EXIST. WATER MANHOLE/VAULT
	EXIST. WATER RISER
	EXIST. WATER AIR VALVE & RELEASE
	EXIST. WATER LINE
	EXIST. IRRIGATION BOX
	EXIST. IRRIGATION VALVE
	EXIST. IRRIGATION
	EXIST. SEWER M.H.
	EXIST. SEWER LINE
	EXIST. CURB INLET BOX
	EXIST. STORM DRAIN INLET
	EXIST. STORM DRAIN HEADWALL
	EXIST. MANHOLE/CLEANOUT
	EXIST. STORM DRAIN LINE
	EXIST. GAS
	EXIST. GAS METER
	EXIST. GAS RISER
	EXIST. LIGHT POLE
	EXIST. ELECTRICAL BOX
	EXIST. ELECTRICAL MANHOLE
	PROPOSED SIDEWALK
	PROPOSED CURB & GUTTER
	PROPOSED EDGE OF ASPHALT
	PROPOSED CENTERLINE
	PROPOSED FENCE
	DEMOLITION AND REMOVAL AREAS FOR NEW IMPROVEMENTS
	PROPOSED FIRE HYDRANT
	PROPOSED WATER VALVE
	PROPOSED WATER LINE AND LATERAL
	PROPOSED SEWER M.H.
	PROPOSED SEWER LINE AND LATERAL
	PROPOSED STORM DRAIN INLET
	PROPOSED STREET LIGHT

ABBREVIATIONS:

APWA	AMERICAN PUBLIC WORKS ASSOC.
AC	ASPHALTIC CONCRETE
&	AND
APPR.	APPROXIMATELY
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
@	AT
BDRY	BOUNDARY
BW	BOTTOM OF WALL
C.B.	CATCH BASIN
C	CENTERLINE
CL	CLASS
CONC	CONCRETE
DET	DETAIL
DIA	DIAMETER
D.I.P.	DUCTILE IRON PIPE
EA	EDGE OF EXISTING ASPHALT
EG	EXISTING GRADE
EO	EDGE OF OIL
EP	EDGE OF PAVEMENT
ELEV	ELEVATION
ESMT	EASEMENT
EX	EXISTING
FF	FINISH FLOOR
FH	FIRE HYDRANT
FG	FINISH GRADE
FL	FLOW LINE
FT	FEET
GB	GRADE BREAK
HP	HIGH POINT
INV.	INVERT
IE	INVERT ELEVATION
IRR	IRRIGATION
L	LENGTH
LAT	LATERAL
L.F.	LINEAR FEET
LG	LIP OF GUTTER
LP	LOW POINT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N	NORTH
NG	NATURAL GRADE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O.C.	ON CENTER
PL	PROPERTY LINE
PCC	POINT ON CURVE
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PUE	PUBLIC UTILITY EASEMENT
RCP	REINFORCED CONCRETE PIPE
R	RADIUS
R.O.W.	RIGHT-OF-WAY
SS	SANITARY SEWER
SD	STORM DRAIN
SW	SIDEWALK
SCH	SCHEDULE
S.F.	SQUARE FEET
SHT	SHEET
STA	STATION
STD	STANDARD
TA	TOP OF ASPHALT
T.G.	TOP OF GRATE
TBC	TOP BACK OF CURB
TC	TOP OF CONCRETE
TD	TOP OF DOCK FLOOR
TW	TOP OF WALL
TYP	TYPICAL
VAR	VARIES
W	WATER
W/	WITH

GENERAL NOTES:

1. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE FOLLOWING: CURRENT REGULATORY AUTHORITIES STANDARDS AND SPECIFICATIONS, AND THE UTAH CHAPTER OF THE 2007 EDITION AMERICAN PUBLIC WORKS ASSOCIATION MANUAL OF STANDARD PLANS AND SPECIFICATIONS IN ITS LATEST EDITION (APWA), WHERE APPLICABLE.
2. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES. DFCM WILL PAY FOR ALL NON-REFUNDABLE PERMITS. ANY REFUNDABLE FEES FOR ROAD CUTS OR OTHER UTILITIES TO BE PAID BY THE CONTRACTOR.
3. SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE AND HAVE A TACK COAT APPLIED (DOES NOT INCLUDE UNTREATED BASE COURSE).
5. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ARCHITECT/ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE FOR COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
6. ALL DIMENSIONS, GRADES & UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
7. BIDDER/CONTRACTORS ARE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING BIDS TO MAKE THEMSELVES AWARE OF ANY POTENTIAL PROBLEMS WHILE CONSTRUCTING THE FACILITIES PER THE CONTRACT DOCUMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL AND BEST MANAGEMENT PRACTICES IN COMBINATION WITH OTHER ACCEPTED LOCAL PRACTICES, FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT.
9. CONTRACTOR SHALL MAKE THEMSELVES AWARE OF EXISTING SOIL CONDITIONS AS CONTAINED IN GEOTECHNICAL REPORTS DATED JULY 30, 2010 AND NOVEMBER 10, 2010.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FLAGGING, CAUTION SIGNS, LIGHTS, BARRICADES, FLAG MEN, AND ALL OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
11. CONTRACTOR TO CREATE AND FOLLOW STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND FILE A NOTICE OF INTENT (NOI) AS REQUIRED BY THE STATE OF UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). CONTRACTOR TO OBTAIN A GENERAL CONSTRUCTION PERMIT FROM THE STATE DEQ PRIOR TO ANY CONSTRUCTION.

UTILITY NOTES:

1. CONTRACTOR IS TO COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE SERVICE, GAS SERVICE, CABLE, POWER.
2. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT.
3. CONTRACTOR SHALL POT HOLE ALL UTILITIES TO DETERMINE IF CONFLICTS EXIST. NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR SHALL VERIFY LOCATION AND INVERTS OF EXISTING UTILITIES TO WHICH NEW UTILITIES WILL BE CONNECTED. PRIOR TO COMMENCING ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE REQUIRED PROCEDURES.
4. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT HIS EXPENSE.
5. ALL VALVES AND MANHOLES COVERS SHALL BE RAISED OR LOWERED TO MEET FINISHED GRADE. CONCRETE FOR UTILITY GRATE COVERS TO BE 1/4" MIN. TO 1/2" MAX. BELOW PAVEMENT LIP ALL AROUND, PER APWA STANDARD.
6. MAINTAIN A MINIMUM 18-INCH VERTICAL SEPARATION DISTANCE BETWEEN ALL UTILITY CROSSINGS.
7. CONTRACTOR MUST START INSTALLATION AT LOW END OF ALL NEW GRAVITY UTILITY LINES.
8. EVEN THOUGH ALL UTILITY SERVICES TO INDIVIDUAL STRUCTURES MAY NOT BE SHOWN FOR CLARITY, THEY DO EXIST AND SHALL BE KEPT IN SERVICE AT NO ADDITIONAL COST TO OWNER.
9. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF SIDEWALK AND ASPHALT PAVING.
10. THIS IS STATE PROPERTY. UTILITY LOCATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR USING MEANS DETERMINED BY THEM. PUBLIC LOCATORS WILL NOT STAKE THE PROPERTY. CONTRACTOR SHALL PROVIDE THEIR OWN PRIVATE UTILITY LOCATING SERVICES.
11. CONTRACTOR TO POT HOLE OR HYDROVAC FOR EXISTING UTILITIES WHERE NEW UTILITIES ARE TO BE LOCATED.
12. IF ANY CONFLICTS OCCUR BETWEEN THE SPECIFICATIONS PROVIDED AND DRAPER CITY STANDARDS FOR INSTALLATION OF WATER UTILITIES, DRAPER CITY'S STANDARD DRAWINGS AND SPECIFICATIONS GOVERN.

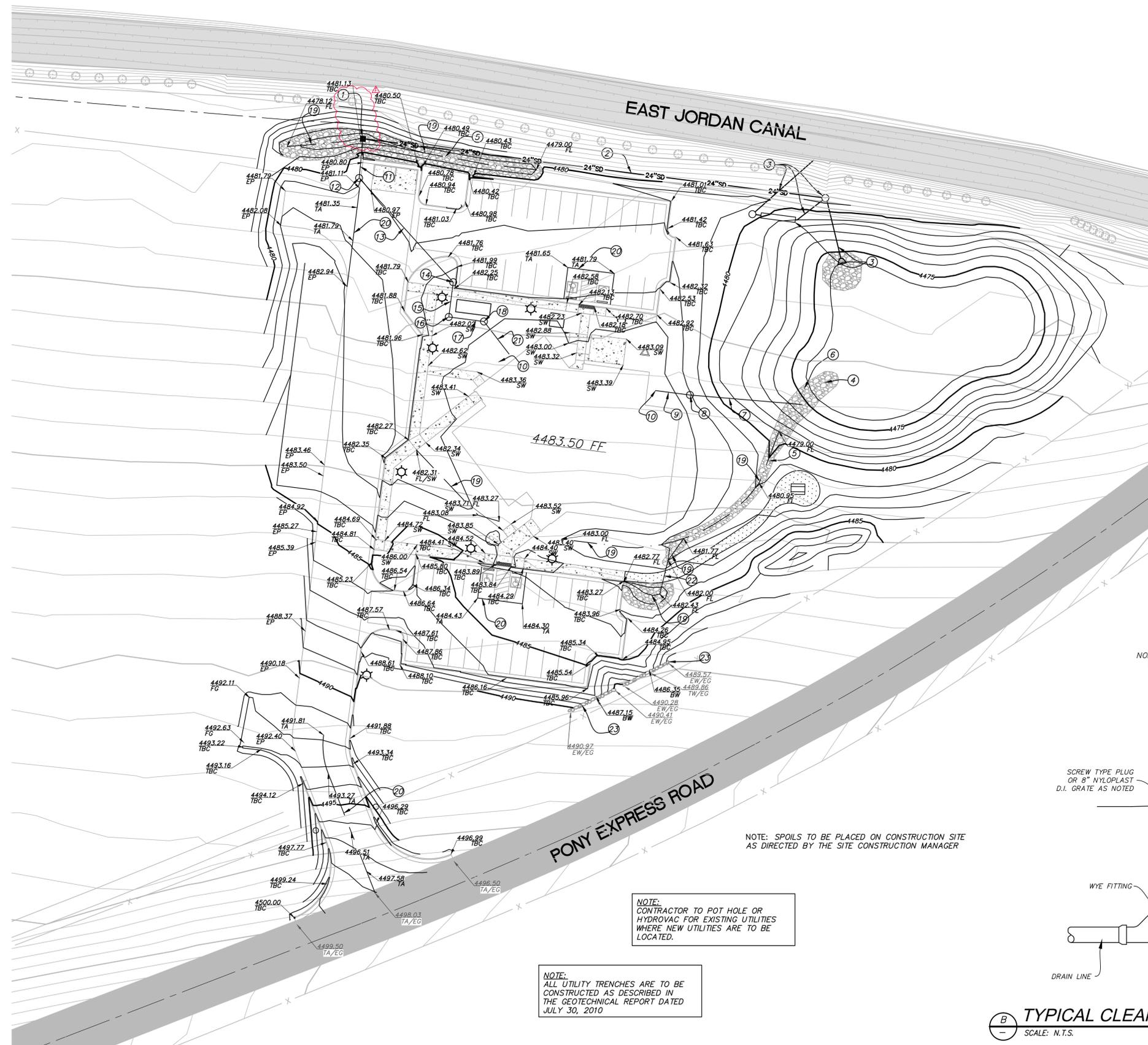
SOUTH VALLEY SEWER DISTRICT NOTES:

- A. ALL CONSTRUCTION SHALL COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN AND CONSTRUCTION SPECIFICATIONS.
- B. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW SEWER LINES.
- C. FOUR FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.

CONSTRUCTION NOTES:

1. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES, DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS OR NOT.
2. ALL NEW CULINARY WATER CONSTRUCTION TO BE DONE IN ACCORDANCE WITH REGULATORY AUTHORITIES AND APWA CURRENT EDITION STANDARDS & SPECIFICATIONS.
3. ALL NEW SANITARY SEWER CONSTRUCTION TO BE DONE IN ACCORDANCE WITH REGULATORY AUTHORITIES AND APWA CURRENT EDITION STANDARDS & SPECIFICATIONS.
4. ALL MATERIALS REMOVED FROM SITE DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS DESIGNATED BY THE CONSTRUCTION MANAGER.
5. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
6. SEE ARCHITECT'S PLANS FOR ADDITIONAL INFORMATION.
7. CONSTRUCT ASPHALT PAVING ONLY WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 50 DEGREES F AND UNDERLYING BASE IS FREE FROM MOISTURE. PERMIT NO VEHICULAR TRAFFIC FOR AT LEAST 24 HOURS AFTER LAYING ASPHALT IMPROVEMENTS (PER UTAH DFCM STANDARDS).
8. VARIATION IN THE FINISHED PAVEMENT SURFACE MUST NOT EXCEED 1/8" IN 10 FT IN ANY DIRECTION.
9. ASPHALT SHALL COMPLY WITH SPECIFICATIONS PROVIDED.
10. ALL EARTHWORK TO BE DONE ACCORDING TO THE GEOTECH REPORT DATED JULY 30, 2010.

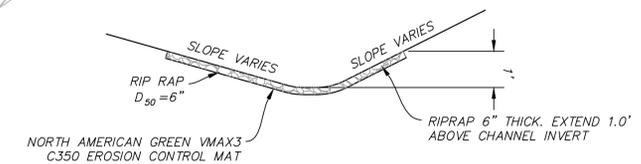
GRADING PLAN



GRADING AND DRAINAGE NOTES:

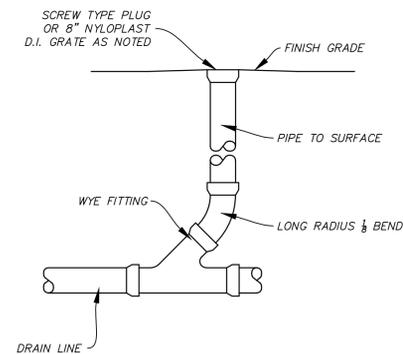
- 1 INSTALL 3'X3'X4' DURA-CRETE LANDSCAPE CATCH BASIN, RIM = 4477.49 INV. IN=4475.99, INV. OUT=4474.49.
- 2 INSTALL 265.3 L.F. 24" N-12 ADS STORM DRAIN PIPE @ 0.50% SLOPE
- 3 SEE SHEET CE-106 DETENTION POND DETAILS FOR REMAINING STORM DRAIN DESIGN.
- 4 INSTALL 12' WIDE 50' LONG RIP RAP OUTFALL PAD FROM END OF DITCH, ALONG THE SLOPE, AND INTO THE BOTTOM OF THE POND, D50=6" ON TOP OF NORTH AMERICAN GREEN VMAX3 C.350 EROSION CONTROL MAT
- 5 INSTALL RIP RAP CHANNEL PER DETAIL A THIS SHEET.
- 6 INVERT OUT = 4474.50
- 7 INSTALL 65 L.F. 6" N-12 ADS STORM DRAIN PIPE @ 4.54% SLOPE
- 8 INSTALL STORM WATER CLEANOUT PER DETAIL B THIS SHEET W/GRATE, INV.=4478.20
- 9 INSTALL 20 L.F. 4" N-12 ADS STORM DRAIN PIPE @ 6.00% SLOPE
- 10 SEE MECHANICAL PLANS FOR CONTINUATION
- 11 INSTALL 21 L.F. 6" N-12 ADS STORM DRAIN PIPE @ 2.00% SLOPE
- 12 INSTALL STORM WATER CLEANOUT PER DETAIL B THIS SHEET W/GRATE, INV.=4476.41
- 13 INSTALL 81 L.F. 6" N-12 ADS STORM DRAIN PIPE @ 2.00% SLOPE
- 14 INSTALL STORM WATER CLEANOUT PER DETAIL B THIS SHEET W/GRATE, INV.=4478.03
- 15 INSTALL 20 L.F. 6" N-12 ADS STORM DRAIN PIPE @ 2.00% SLOPE
- 16 INSTALL STORM WATER CLEANOUT PER DETAIL B THIS SHEET W/GRATE, INV.=4478.43
- 17 INSTALL 21 L.F. 6" N-12 ADS STORM DRAIN PIPE @ 2.00% SLOPE
- 18 INSTALL STORM WATER CLEANOUT PER DETAIL B THIS SHEET W/GRATE, INV.=4478.85
- 19 FLOW LINE
- 20 GRADE BREAK LINE
- 21 INSTALL 24 L.F. 4" N-12 ADS STORM DRAIN PIPE @ 2.00% SLOPE
- 22 INSTALL 20 L.F. 6" N-12 ADS STORM DRAIN PIPE @ 2.15% SLOPE
- 23 ROCK WALL, SEE LANDSCAPING PLANS

NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL AND BEST MANAGEMENT PRACTICES IN COMBINATION WITH OTHER ACCEPTED LOCAL PRACTICES, FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT.



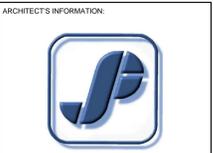
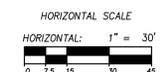
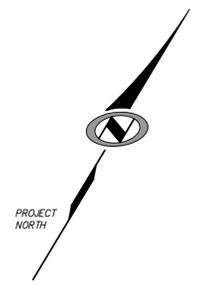
CHANNEL DETAIL

SCALE: N.T.S.



TYPICAL CLEANOUT DETAIL

SCALE: N.T.S.



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PROFESSIONAL STAMP:

PROJECT NAME:

**NORTHERN UTAH INTERAGENCY
FIRE DISPATCH CENTER**

14224 PONY EXPRESS ROAD
DRAPER CITY, UTAH 84020

REVISIONS:

NO.	DATE	DESCRIPTION
1	03/21/11	KEYNOTE VISIBILITY

ISSUED:

NO.	DATE	DESCRIPTION
1	8/17	CLIENT REVIEW
1	10/05	DD CLIENT REVIEW
1	1/03/11	85% SUBMITTAL
3	1/17/11	CONSTRUCTION BID DOCUMENTS
4	2/21/11	FINAL CONSTRUCTION DOCUMENTS

OWNER PROJECT #:
SPE PROJECT #: 09-12
DRAWN BY: NOLTE - CMW
CHECKED BY: NOLTE - CMW
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SHEET TITLE:
GRADING AND DRAINAGE PLAN

SHEET NUMBER:
CE-104

UTILITY PLAN



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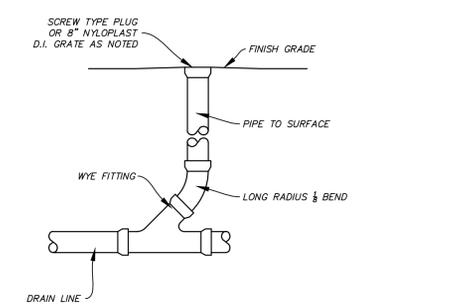
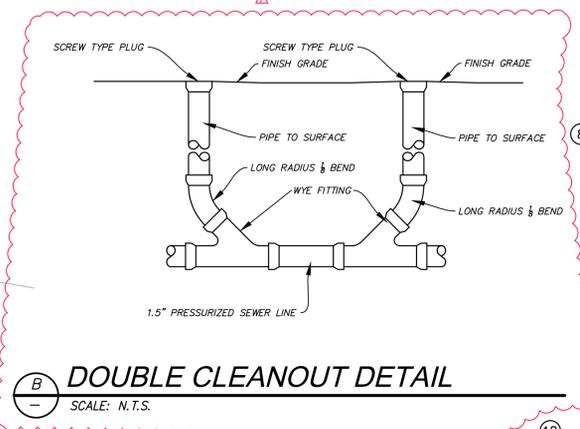
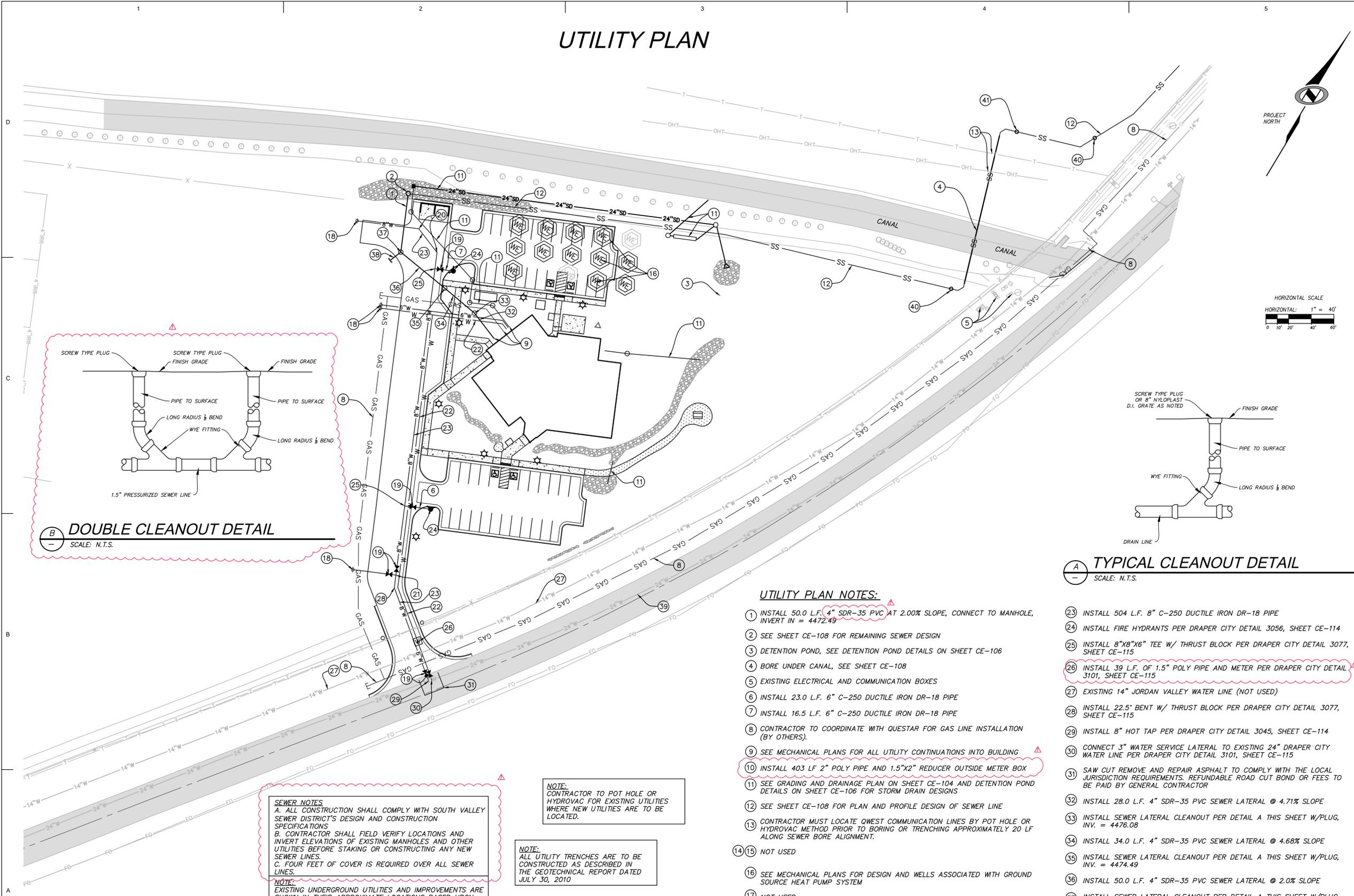
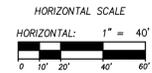
PROFESSIONAL STAMP:

PROJECT NAME:

**NORTHERN UTAH INTERAGENCY
FIRE DISPATCH CENTER**

14224 PONY EXPRESS ROAD
DRAPER CITY, UTAH 84020

PROJECT NORTH



UTILITY PLAN NOTES:

- 1 INSTALL 50.0 L.F. 4" SDR-35 PVC AT 2.00% SLOPE, CONNECT TO MANHOLE, INVERT IN = 4472.49
- 2 SEE SHEET CE-108 FOR REMAINING SEWER DESIGN
- 3 DETENTION POND, SEE DETENTION POND DETAILS ON SHEET CE-106
- 4 BORE UNDER CANAL, SEE SHEET CE-108
- 5 EXISTING ELECTRICAL AND COMMUNICATION BOXES
- 6 INSTALL 23.0 L.F. 6" C-250 DUCTILE IRON DR-18 PIPE
- 7 INSTALL 16.5 L.F. 6" C-250 DUCTILE IRON DR-18 PIPE
- 8 CONTRACTOR TO COORDINATE WITH QUESTAR FOR GAS LINE INSTALLATION (BY OTHERS).
- 9 SEE MECHANICAL PLANS FOR ALL UTILITY CONTINUATIONS INTO BUILDING
- 10 INSTALL 403 LF 2" POLY PIPE AND 1.5"x2" REDUCER OUTSIDE METER BOX
- 11 SEE GRADING AND DRAINAGE PLAN ON SHEET CE-104 AND DETENTION POND DETAILS ON SHEET CE-106 FOR STORM DRAIN DESIGNS
- 12 SEE SHEET CE-108 FOR PLAN AND PROFILE DESIGN OF SEWER LINE
- 13 CONTRACTOR MUST LOCATE QWEST COMMUNICATION LINES BY POT HOLE OR HYDROVAC METHOD PRIOR TO BORING OR TRENCHING APPROXIMATELY 20 LF ALONG SEWER BORE ALIGNMENT.
- 14 15 NOT USED
- 16 SEE MECHANICAL PLANS FOR DESIGN AND WELLS ASSOCIATED WITH GROUND SOURCE HEAT PUMP SYSTEM
- 17 NOT USED
- 18 INSTALL WATER BLOWOFFS PER DRAPER CITY DETAIL 3060 SHEET CE-114
- 19 INSTALL GATE VALVE PER DRAPER CITY DETAIL 3040 SHEET CE-114 (TYP.)
- 20 INSTALL 45" BEND AT WATER LINE WITH THRUST BLOCK PER DRAPER CITY DETAIL 3077 SHEET CE-115
- 21 INSTALL 8" TEE AT WATER LINE WITH THRUST BLOCK PER DRAPER CITY DETAIL 3077 SHEET CE-115
- 22 INSTALL 442 L.F. 2.5" PVC C-900 PIPE WATER SERVICE LINE
- 23 INSTALL 504 L.F. 8" C-250 DUCTILE IRON DR-18 PIPE
- 24 INSTALL FIRE HYDRANTS PER DRAPER CITY DETAIL 3056, SHEET CE-114
- 25 INSTALL 8"x8"x6" TEE W/ THRUST BLOCK PER DRAPER CITY DETAIL 3077, SHEET CE-115
- 26 INSTALL 39 L.F. OF 1.5" POLY PIPE AND METER PER DRAPER CITY DETAIL 3101, SHEET CE-115
- 27 EXISTING 14" JORDAN VALLEY WATER LINE (NOT USED)
- 28 INSTALL 22.5' BENT W/ THRUST BLOCK PER DRAPER CITY DETAIL 3077, SHEET CE-115
- 29 INSTALL 8" HOT TAP PER DRAPER CITY DETAIL 3045, SHEET CE-114
- 30 CONNECT 3" WATER SERVICE LATERAL TO EXISTING 24" DRAPER CITY WATER LINE PER DRAPER CITY DETAIL 3101, SHEET CE-115
- 31 SAW CUT REMOVE AND REPAIR ASPHALT TO COMPLY WITH THE LOCAL JURISDICTION REQUIREMENTS. REFUNDABLE ROAD CUT BOND OR FEES TO BE PAID BY GENERAL CONTRACTOR
- 32 INSTALL 28.0 L.F. 4" SDR-35 PVC SEWER LATERAL @ 4.71% SLOPE
- 33 INSTALL SEWER LATERAL CLEANOUT PER DETAIL A THIS SHEET W/PLUG, INV. = 4476.08
- 34 INSTALL 34.0 L.F. 4" SDR-35 PVC SEWER LATERAL @ 4.68% SLOPE
- 35 INSTALL SEWER LATERAL CLEANOUT PER DETAIL A THIS SHEET W/PLUG, INV. = 4474.49
- 36 INSTALL 50.0 L.F. 4" SDR-35 PVC SEWER LATERAL @ 2.0% SLOPE
- 37 INSTALL SEWER LATERAL CLEANOUT PER DETAIL A THIS SHEET W/PLUG, INV. = 4473.49
- 38 INSTALL 12.0 L.F. 4" SDR-35 PVC SEWER LATERAL @ 2.00% SLOPE, PLUG AND STUB FOR FUTURE CONNECTION
- 39 EXISTING 24" DRAPER CITY WATER LINE (USED FOR THIS PROJECT)
- 40 INSTALL A CLEANOUT GOING BOTH DIRECTIONS AT THIS LOCATION PER DETAIL B, THIS SHEET WITH SCREW TYPE PLUG.
- 41 INSTALL AIR RELEASE VALVE PER DETAIL A SHEET CE-116

SEWER NOTES
A. ALL CONSTRUCTION SHALL COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN AND CONSTRUCTION SPECIFICATIONS
B. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW SEWER LINES.
C. FOUR FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.

NOTE:
EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT.

NOTE:
CONTRACTOR TO POT HOLE OR HYDROVAC FOR EXISTING UTILITIES WHERE NEW UTILITIES ARE TO BE LOCATED.

NOTE:
ALL UTILITY TRENCHES ARE TO BE CONSTRUCTED AS DESCRIBED IN THE GEOTECHNICAL REPORT DATED JULY 30, 2010

NOTE:
WATERLINE PIPES TO BE INSTALLED PER DRAPER CITY DETAILS AS SHOWN ON SHEETS CE-114 AND CE-115 AND DRAPER CITY SPECIFICATIONS.

Least Plotted:

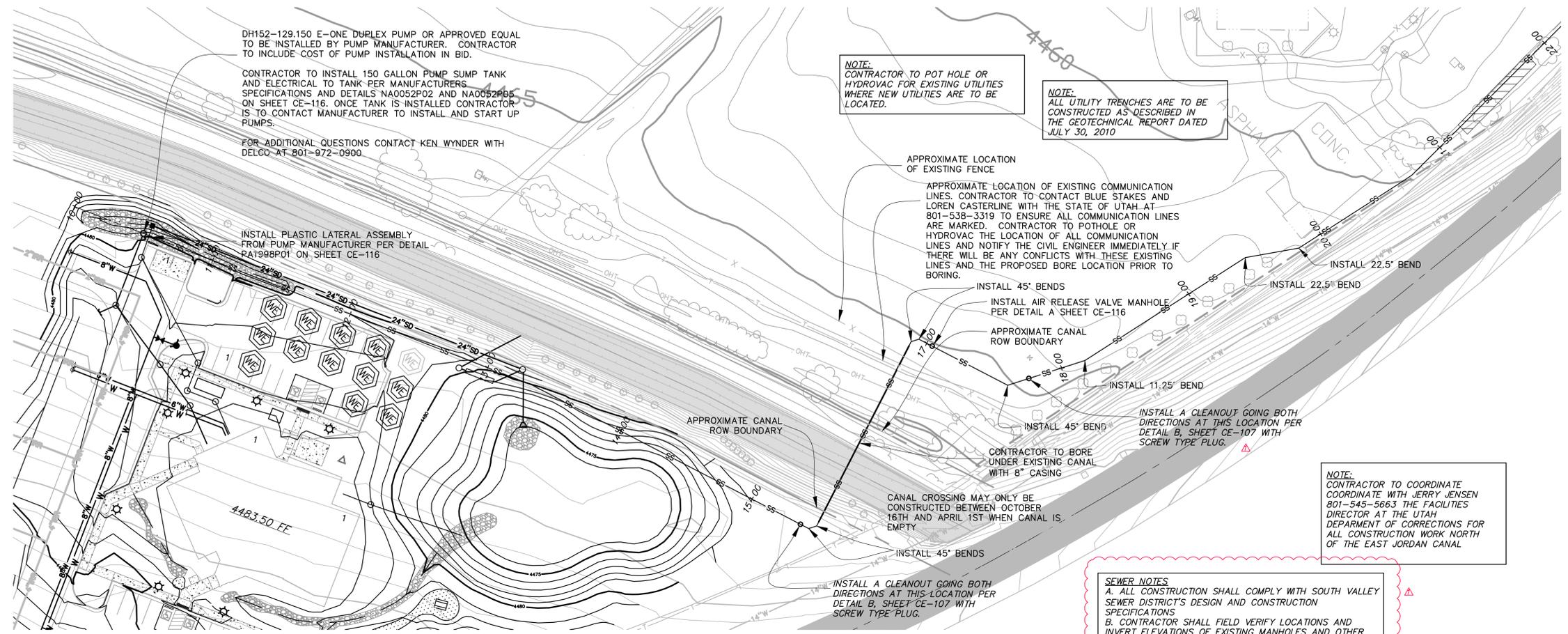
NO.	DATE	DESCRIPTION
1	8/17	CLIENT REVIEW
1	10/05	DD CLIENT REVIEW
1	1/03/11	85% SUBMITTAL
3	1/27/11	CONSTRUCTION BID DOCUMENTS
4	2/21/11	FINAL CONSTRUCTION DOCUMENTS

OWNER PROJECT #: 09-12
SPE PROJECT #: 09-12
DRAWN BY: NOLTE - CMW
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DESIGNED BY: NOLTE - CMW

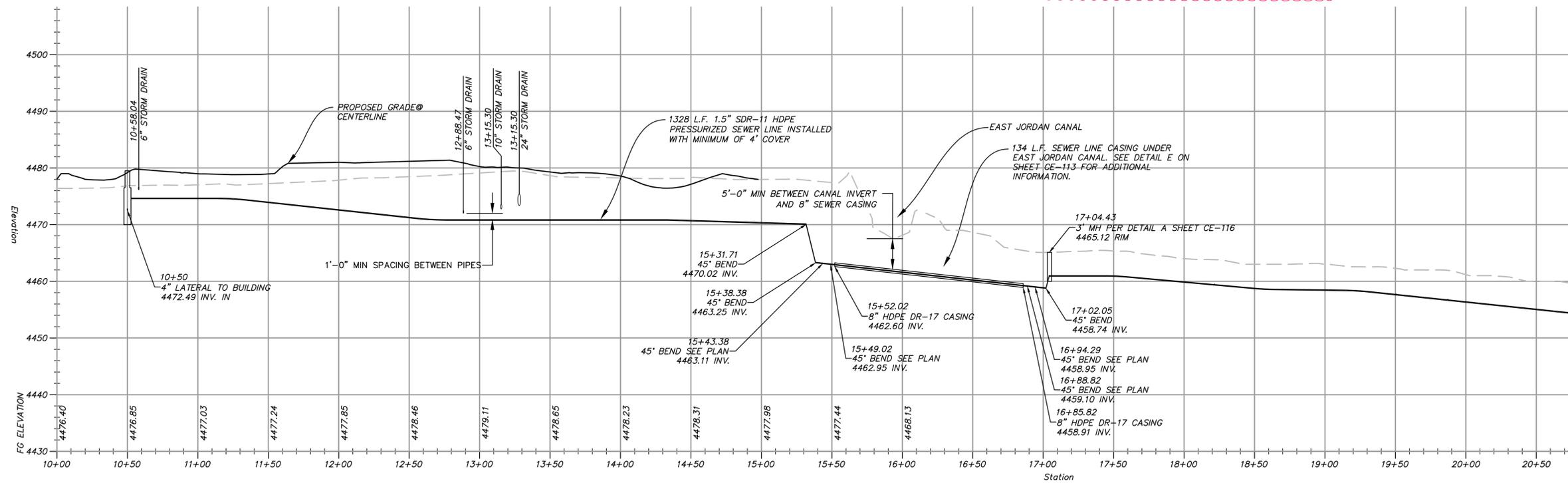
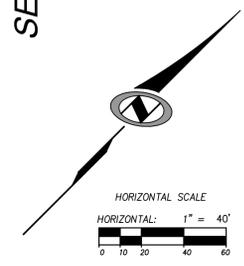
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UTILITY PLAN
CE-107

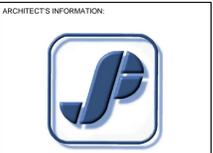
SEWER PLAN AND PROFILE



SEE SHEET CE-109 FOR CONTINUATION



SEE SHEET CE-109 FOR CONTINUATION



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PROFESSIONAL STAMP:
 PROJECT NAME:

NORTHERN UTAH INTERAGENCY FIRE DISPATCH CENTER
 14224 PONY EXPRESS ROAD
 DRAPER CITY, UTAH 84020

REVISIONS:

NO.	DATE	DESCRIPTION
1	03/21/11	RFP3 CHANGES

ISSUED:

NO.	DATE	DESCRIPTION
1	8/17	CLIENT REVIEW
1	10/05	DD CLIENT REVIEW
1	1/03/11	85% SUBMITTAL
3	1/17/11	CONSTRUCTION BID DOCUMENTS
4	2/21/11	FINAL CONSTRUCTION DOCUMENTS

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 SPE PROJECT #: 09-12
 DRAWN BY: NOLTE - CMW
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 SHEET TITLE:

UTILITY PLAN AND PROFILE
 SHEET NUMBER:
CE-108

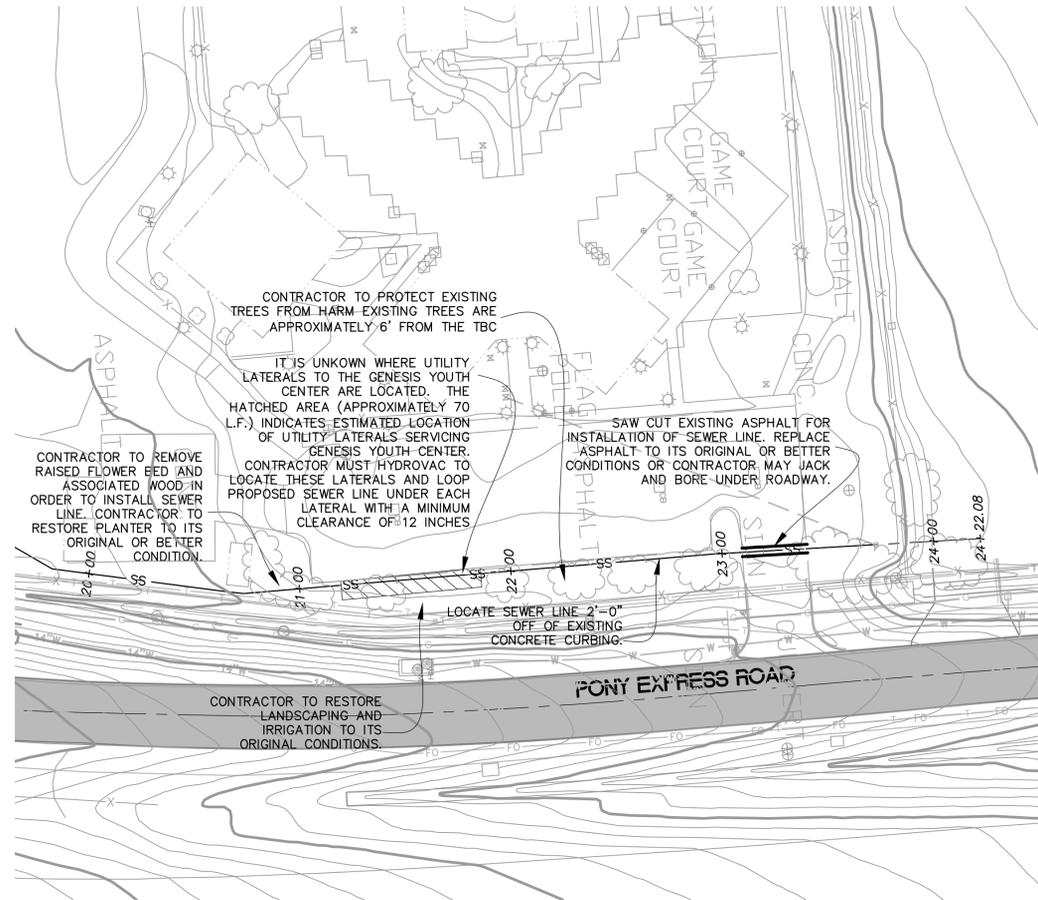
UTILITY PLAN AND PROFILE

NOTE:
CONTRACTOR TO POT HOLE OR HYDROVAC FOR EXISTING UTILITIES WHERE NEW UTILITIES ARE TO BE LOCATED.

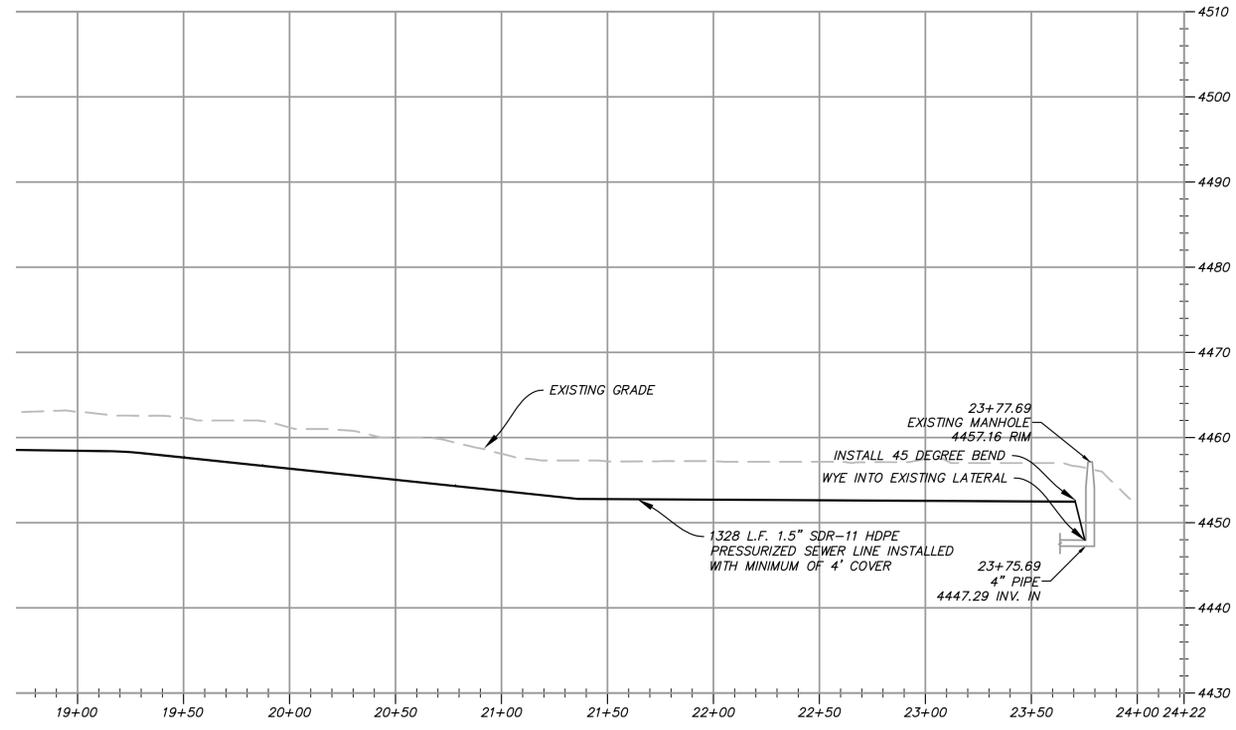
NOTE:
ALL UTILITY TRENCHES ARE TO BE CONSTRUCTED AS DESCRIBED IN THE GEOTECHNICAL REPORT DATED JULY 30, 2010

NOTE:
CONTRACTOR TO COORDINATE COORDINATE WITH JERRY JENSEN 801-545-5663 THE FACILITIES DIRECTOR AT THE UTAH DEPARTMENT OF CORRECTIONS FOR ALL CONSTRUCTION WORK WITHIN THE GENESIS YOUTH CENTER FENCE.

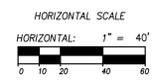
SEE SHEET CE-108 FOR CONTINUATION



SEE SHEET CE-108 FOR CONTINUATION



SEWER NOTES
A. ALL CONSTRUCTION SHALL COMPLY WITH SOUTH VALLEY SEWER DISTRICT'S DESIGN AND CONSTRUCTION SPECIFICATIONS
B. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW SEWER LINES.
C. FOUR FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.



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www.spe-architect.com

PROFESSIONAL STAMP:

PROJECT NAME:

**NORTHERN UTAH INTERAGENCY
FIRE DISPATCH CENTER**

14224 PONY EXPRESS ROAD
DRAPER CITY, UTAH 84020

REVISIONS:

NO.	DATE	DESCRIPTION
1	03/21/11	REVISED CHANGES

ISSUED:

NO.	DATE	DESCRIPTION
1	8/17	CLIENT REVIEW
1	10/05	DD CLIENT REVIEW
1	1/03/11	85% SUBMITTAL
3	1/17/11	CONSTRUCTION BID DOCUMENTS
4	2/21/11	FINAL CONSTRUCTION DOCUMENTS

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SPE PROJECT #: 09-12
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SHEET TITLE:
UTILITY PLAN AND PROFILE

SHEET NUMBER:
CE-109



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PROFESSIONAL STAMP:

PROJECT NAME:

**NORTHERN UTAH INTERAGENCY
FIRE DISPATCH CENTER**

14224 PONY EXPRESS ROAD
DRAPER CITY, UTAH 84020

REVISIONS: Δ

NO.	DATE	DESCRIPTION
1	03/21/11	PAVEMENT SUBGRADE CHANGES

ISSUED:

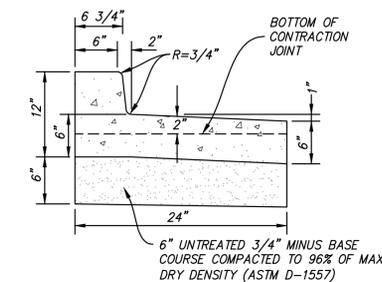
NO.	DATE	DESCRIPTION
1	8/17	CLIENT REVIEW
1	10/05	DD CLIENT REVIEW
1	1/03/11	85% SUBMITTAL
3	1/17/11	CONSTRUCTION BID DOCUMENTS
4	2/21/11	FINAL CONSTRUCTION DOCUMENTS

OWNER PROJECT #:
SPE PROJECT #: 08-01
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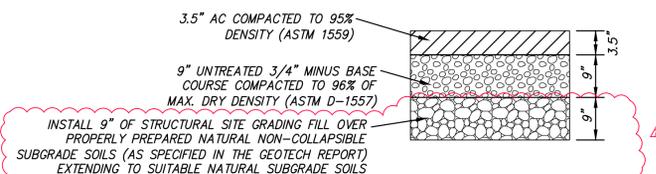
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SHEET TITLE:
**MISCELLANEOUS
DETAILS**

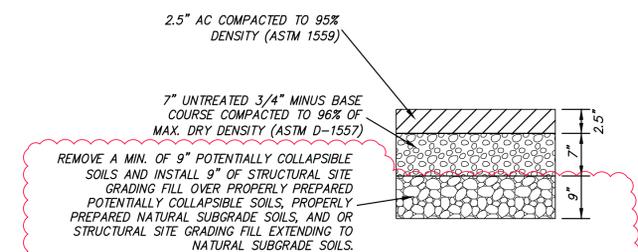
SHEET NUMBER:
CE-113



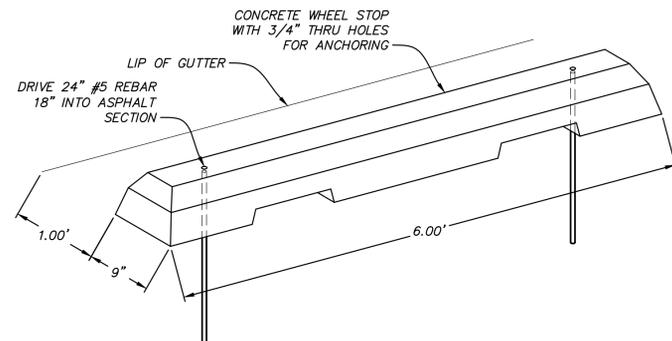
(B) TYPE "A" MODIFIED CURB AND GUTTER
NOT TO SCALE



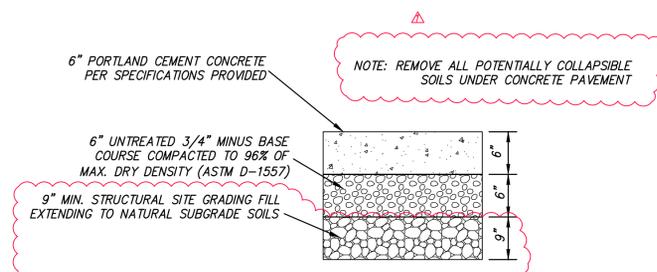
(A) ASPHALT DRIVEWAY PAVEMENT SECTION
NOT TO SCALE



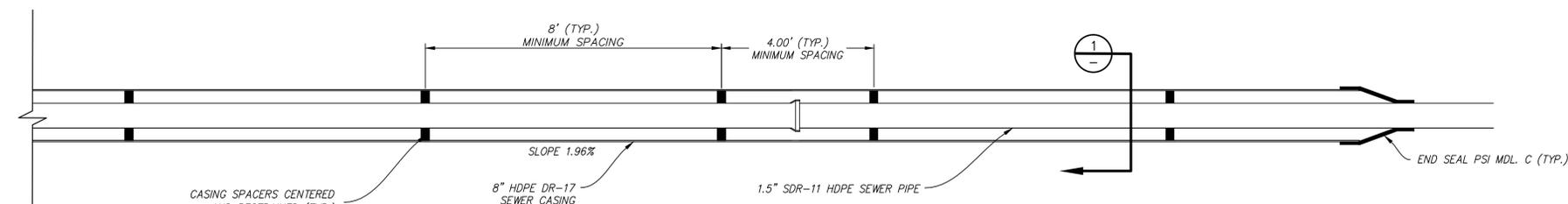
(D) ASPHALT PARKING LOT PAVEMENT SECTION
NOT TO SCALE



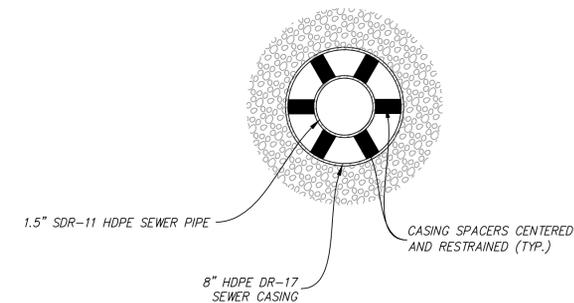
(C) WHEEL STOP
NOT TO SCALE



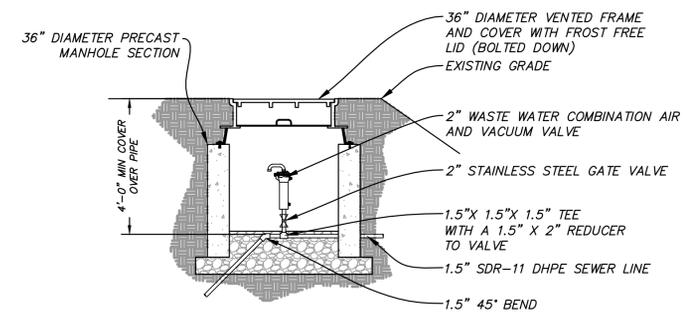
(F) CONCRETE DRIVEWAY PAVEMENT SECTION
NOT TO SCALE



(E) EAST JORDAN CANAL SANITARY SEWER MAIN CROSSING
NTS



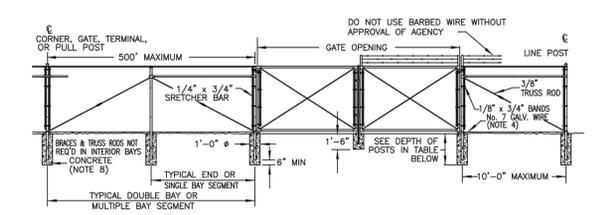
(1) SECTION
NTS



AIR VALVE ASSEMBLY DETAIL
 SCALE: NTS

Chain link fence

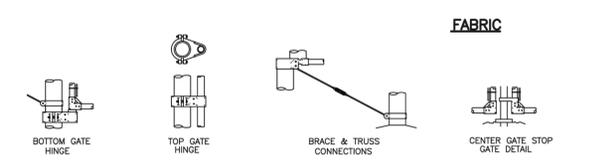
- FENCES 5 FEET HIGH OR HIGHER: Use twisted and barbed selvage, top and bottom.
- FENCES LOWER THAN 5 FEET: Use knuckled selvage on top, and twisted and barbed selvage on bottom.
- TRUSS RODS AND BRACES: Not required for fabric heights less than 5 feet high.
- TENSION WIRE: Use zinc coated, galvanized, No. 7 gage spring coil steel. Set wire at 1 inch over natural ground or 6 inches over concrete structures.
- PIPE: Use ASTM A 120, schedule 40, hot dipped zinc coated steel.
- POST SPACING: Locate posts at equal spacing for each segment with maximum spacing specified in standard specifications.
- BARB WIRE ARM: Face arm towards exterior of fenced area.
- CONCRETE: Class 4000 per Section 03 30 00



FENCE

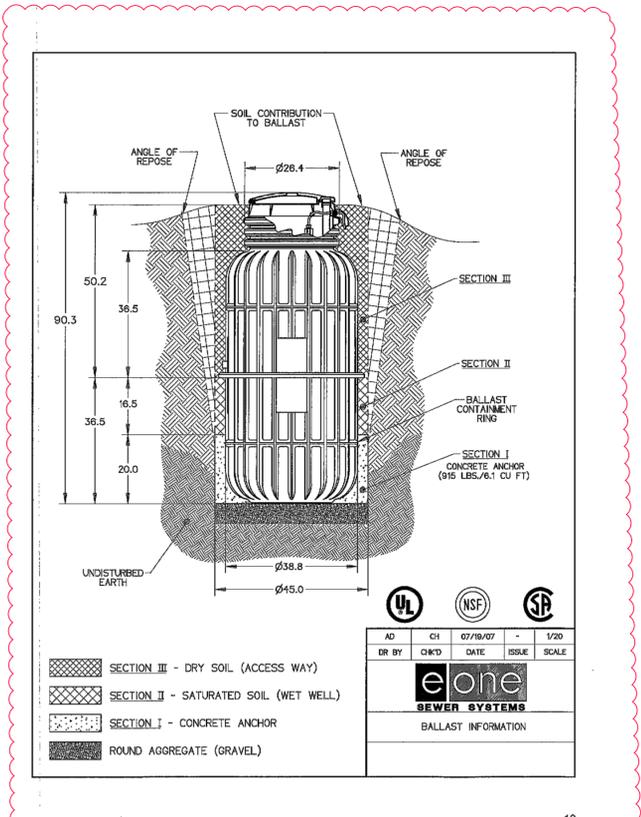
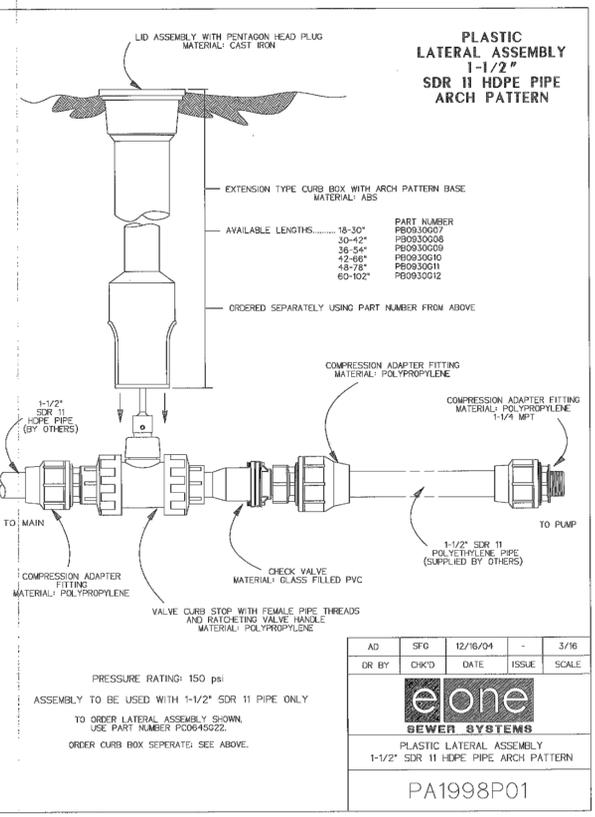
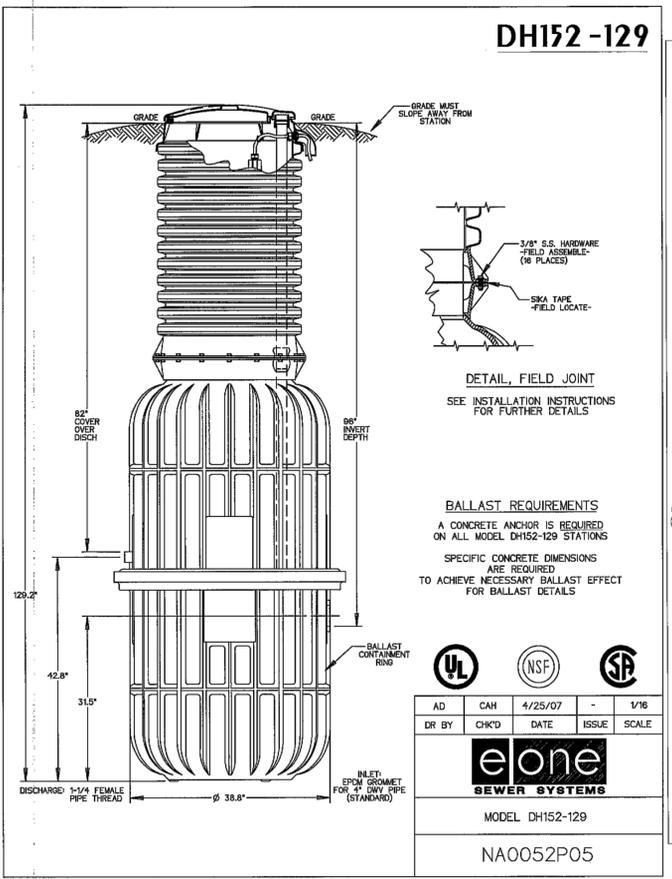
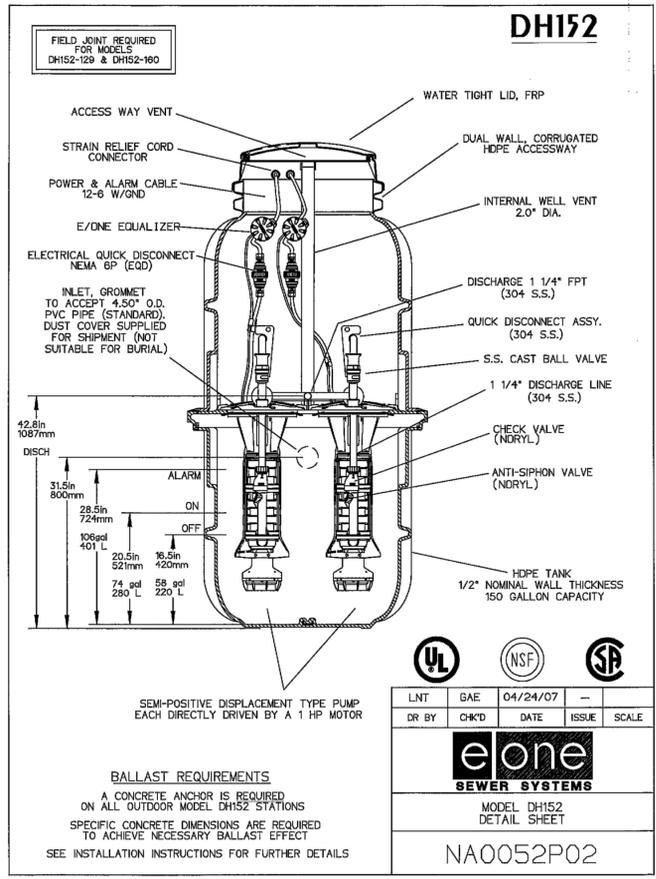
HEIGHT OF FABRIC POSTS	DEPTH OF END CORNER, OR PULL POST	LENGTH OF LINE POST	MINIMUM DIAMETER END, CORNER PULL POST	MINIMUM DIAMETER LINE POST
7'-3"	3'-10"	9'-8"	2 1/2"	2"
6'-3"	3'-9"	8'-8"	2 1/2"	2"
5'-3"	3'-8"	7'-8"	2"	1 1/2"
4'-2"	2'-8"	5'-8"	2"	1 1/2"

HEIGHT OF FRAME	GATE OPENING		POST
	FRAME	POST	
UNDER 6 FEET	1 1/2" SINGLE OVER 6" TO 8" OR DOUBLE OVER 12" TO 16"	2"	2"
6 FEET AND OVER	1 1/2" SINGLE OVER 8" TO 12" OR DOUBLE OVER 16" TO 24"	3 1/2"	3 1/2"
6 FEET AND OVER	1 1/2" SINGLE OVER 8" TO 12" OR DOUBLE OVER 12" TO 24"	2 1/2"	2 1/2"
6 FEET AND OVER	1 1/2" SINGLE OVER 13" TO 18" OR DOUBLE OVER 26" TO 36"	3 1/2"	6"
6 FEET AND OVER	1 1/2" SINGLE OVER 18" OR DOUBLE OVER 36"	8"	8"



April 1997

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REVISIONS:

NO.	DATE	DESCRIPTION
1	03/21/11	CONCRETE ANCHOR

ISSUED:

NO.	DATE	DESCRIPTION
1	8/17	CLIENT REVIEW
1	10/05	DD CLIENT REVIEW
1	1/03/11	85% SUBMITTAL
3	1/17/11	CONSTRUCTION BID DOCUMENTS
4	2/11/11	FINAL CONSTRUCTION DOCUMENTS

OWNER PROJECT #:

SPE PROJECT #:

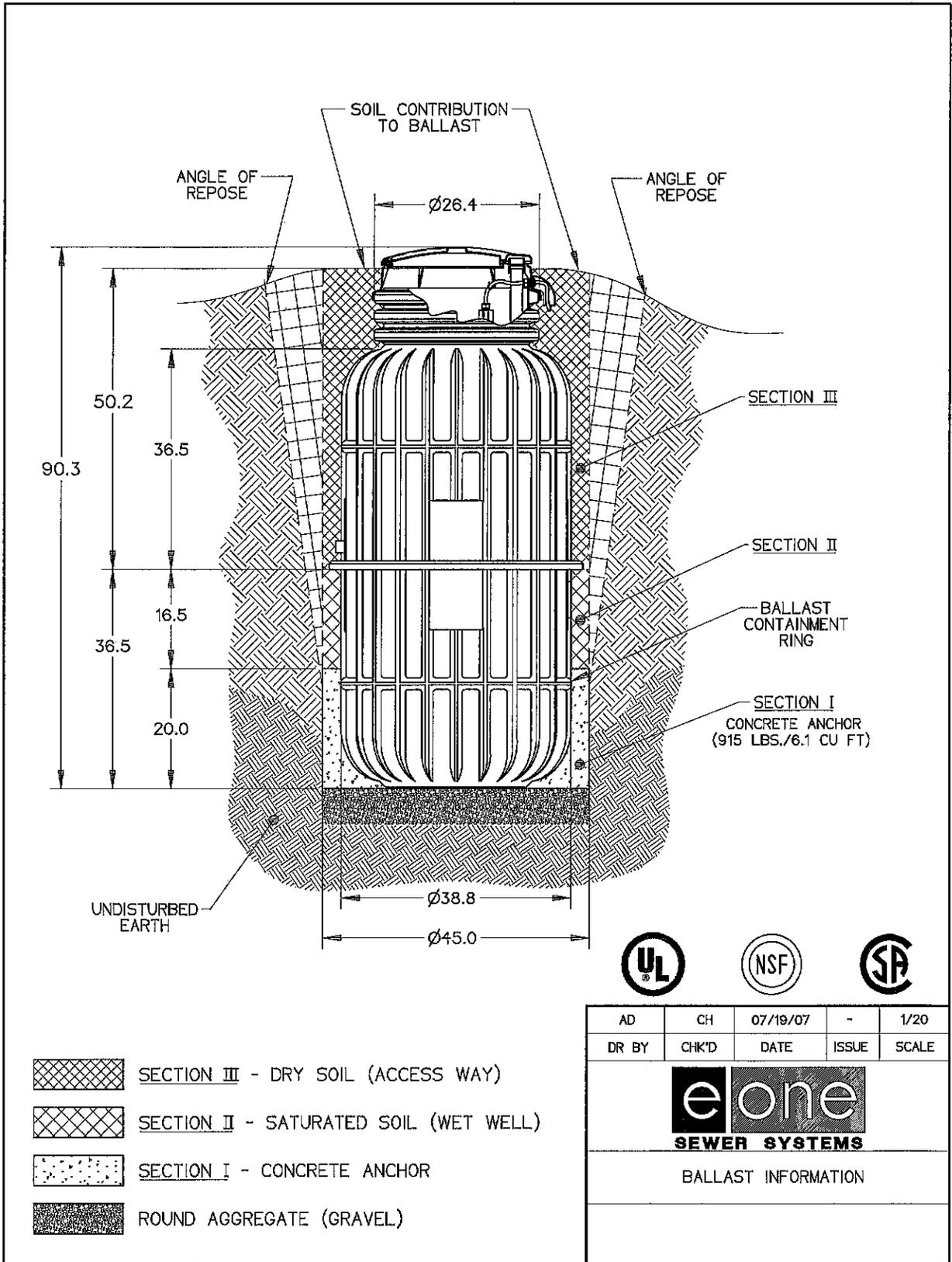
DRAWN BY: NOLAN THAW

CHECKED BY: NOLAN THAW

DESIGNED BY: NOLAN THAW

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SHEET TITLE:



E/One Grinder Pump Station Ballast Calculations

Any buried vessel that is submerged, or partially submerged, in water will be acted on by an upward buoyant force that attempts to return the vessel to a non-submerged state. The magnitude of this buoyant force is equal to the volume of the vessel that is submerged multiplied by the density of water. On most in-ground installations a ballast, or concrete anchor, of proper volume and weight is required to resist the buoyant force. The amount of ballast required for a given set of installation site conditions may be calculated as follows.

Chart 1

Station Height (in)	Wetwell Volume (cu ft)	FNet-Buoyant (lb)	Station Weight (lb)	Fballast (lb)	Volume Concrete (cu ft)	Weight Concrete in Air (lb)
93 inches	22	902.8	470	2787.4	6.1	915
***** 129 inches	22	863.8	509	5174.4	6.1	915
160 inches	22	833.8	539	7253.4	6.1	915

IV. LANDSCAPING

A. LANDSCAPING SPECIFICATION ITEMS

None

B. LANDSCAPING DRAWING ITEMS

Item #1 - Riprap areas

Q: Reference LP-101, CE-103 and CE-104. There appears to be some conflicts as regards to the scope of work at the riprap areas between the drawings. Please clarify which to follow.

A: CE-103 and LP-101 are correct.

Item #2 - Grass and Seed Mix

Q: Reference LI-101 and LP-101. There is large areas of grass and seed mix with no irrigation. Please provide irrigation.

A: Native grass seed mix areas are not intended to be irrigated. The Contractor should hand water for establishment.

V. STRUCTURAL

A. STRUCTURAL DRAWING ITEMS

Item #1 - Steel Canopies

- Q: Do I need any additional TS 12 x 2 x 3/16 perpendicular to the TS 8 x 2 x 3/16 (Between them)? I have only figured it around the perimeter of the canopies.
- A: The framing members are HSS 12 x 4 x 3/16 (not HSS 12 x 2 x 3/16) and they occur at the edges of all canopies including the main entry canopy opening penetration edges. All the other intermediate members will be less than 12" deep and vary as shown on the structural plans.

Item #2 - Galvanizing

- Q: There is a note on the structural drawings sheet SF-111 that states that all of the exterior steel is galvanized. I know that means all of the canopies. Should I also galvanize the tube outriggers? They go inside and outside.
- A: The high roof tube outriggers will also need to be galvanized since they are exterior. Also, the high roof exterior cantilever portions of the steel joist shoes shall be galvanized as well since they are exterior.

VI. MECHANICAL - (See forthcoming Final Addendum)

A. MECHANICAL SPECIFICATION ITEMS

None

B. MECHANICAL DRAWING ITEMS

None

VII. ELECTRICAL - (See forthcoming Final Addendum)

A. ELECTRICAL SPECIFICATION ITEMS

None

B. ELECTRICAL DRAWING ITEMS

None

VIII. ARCHITECTURAL SUPPLEMENTARY SPECIFICATIONS

SECTION 03 1150 - INSULATING CONCRETE FORMS (ICFs)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes Insulating Concrete Forms for structural cast-in-place concrete walls, installation of reinforcing steel bars and placement of concrete within the insulating concrete forms.

1.3 ACTION SUBMITTALS

- A. Product Data: Submit manufacturer's literature describing products and installation procedures
- B. LEED Submittals:
 - 1. Product Data for Credit EA 1: Documentation for the percentage improvement in the proposed building performance rating compared with the baseline building performance rating. For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
 - 2. Laboratory Test Reports for Credit IEQ 4: For primers, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: Submit drawings with dimensions, layout and form types and details.
- D. Steel Reinforcement: Submit schedule of reinforcing. Steel fiber reinforcement may be included when verified by the project engineer and used within the limitations set out by the manufacturer or evaluation report.
- E. Concrete: Submit proposed concrete mix design.
- F. Engineering Calculations: Provide structural calculations sealed by a Professional Engineer.

1.4 SYSTEM DESCRIPTION

- A. ICFs consist of two flame-resistant EPS boards separated by polypropylene webs and are solid non reversible form units.
- B. The EPS foam boards are a minimum 2.75 inch thick, which gives a total EPS foam board thickness of 5.50 inches
- C. The webs separate the EPS boards to form 8 inch cavities, which create the concrete wall thicknesses.
- D. The webs are spaced every 8 inch on centre horizontally and 16 inch on centre vertically, and contain a 1.25 inch wide furring strip that extends the height of each ICF block. The furring strips shall facilitate fasteners for attachment of both exterior and interior finishes.
- E. A furring strip is located in the corners of corner forms. The furring strip consists of both a vertical and horizontal component. The vertical component extends nearly the full height of the form, extends a minimum of 2.5 inches from both sides of the corner, and a minimum of 0.2 inches thick. The horizontal component is a minimum 2 inches in height, extend a minimum of 6 inches from both sides of the corner, and a minimum of 0.2 inches thick.
- F. The webs facilitate rebar placement in accordance with ACI 318
- G. The EPS panels are 16" high by 48" long
- H. The rigid cellular EPS insulation complies with ASTM C 578-10a as follows:
 - 1. Plus Panels are Type II

1.5 DELIVERY, STORAGE & HANDLING

- A. Packing, Shipping, Handling & Unloading
 - 1. ICF shall be delivered on-site in original factory packaging. All delivered ICF products shall show traceability by bearing on the identification label the location of manufacturing plant, product description, batch/lot number and date produced.
 - 2. Care shall be exercised in handling and unloading ICF onto the construction site to minimize damage to the EPS boards and/or webs. ICF shall remain in original factory packaging until ready for installation.
 - 3. Storage location shall be in an area that will minimize damage or soiling to ICF products. Protection shall be provided in cases where stored products of ICF could be exposed, for more than 2 weeks, to UV or freezing rain or snow conditions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Logix Platinum Insulated Concrete Forms or comparable product by one of the following:
1. Quad-Lock Building Systems Ltd.
 2. Fox Block
 3. Amvic Building Systems.

2.2 CONCRETE & REINFORCING STEEL

- A. Recommended maximum aggregate sizes are listed in the following table.

Block Cavity Size			
4 inch	6.25 inch	8 inch	10 and 12 inch
0.375	0.75	0.75	0.75

- B. Recommended concrete slump is 5 to 7 inch. Slump may differ depending on design revisions to suit application.
- C. Reinforcing steel shall be as specified under Section 03 3000, and as required by the design engineer.
- D. Structural design of reinforced concrete shall comply with ACI 318 & 301 as applicable.

2.3 WALL ALIGNMENT SYSTEM

- A. The Wall Alignment System shall be used as a wall bracing system, and consist of an adjustable mechanism to ensure, and maintain, plumbness of the wall during construction.
- B. The wall alignment system shall be assembled to handle all design construction loads, and must be approved by a design engineer. Installation of ICF shall comply with ACI 347R.
- C. Assembly of the wall alignment system must comply with local building and regulatory codes.

2.4 WATERPROOFING

- A. Where called for on drawings, waterproofing shall be an EPS compatible waterproofing system approved by the owner's Engineer or Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Special attention shall be paid to assessing all areas of work to determine, as much as possible, the scope of work involved.

3.2 SITE VERIFICATION OF CONDITIONS

- A. The Installing Contractor shall verify the following site conditions prior to installation of ICF:
 - 1. Site access and egress;
 - 2. Site conditions are as set out in Section 1.6 Project Conditions
 - 3. Footings installed under Section 03 30 00 are within +/- ¼ inch (6 mm) of level and that steps in footings are 16 inches (406 mm) in height;
 - 4. Reinforcing steel dowels are in place at specified centers along footing lengths.

3.3 PREPARATION

- A. The Installing Contractor shall ensure top of footings are clear of debris prior to installing ICF. All debris must be removed from the interior of the forms prior to installation.

3.4 INSTALLATION

- A. Installation of ICF products shall be in conformance to the Installation Manual or as per the Technical Advisor's recommendations. Alternate installation methods shall be approved by the owners' engineer.
- B. The Installing Contractor shall ensure the proper installation methods for the following work are employed on site. The installation method shall comply with the manufacturer's installation instructions, unless alternate methods are approved by the owner's engineer
 - 1. Installation of First Course
 - 2. Installation of Horizontal Reinforcement
 - 3. Install form lock device every third course
 - 4. Setting Successive Courses
 - 5. Forming Door & Window Openings
 - 6. Installation of Vertical Reinforcement
 - 7. Inspection and alignment of forms Prior to Concrete Placement
 - 8. Concrete Placement

3.5 SERVICE PENETRATIONS

- A. Service penetrations shall be installed where indicated on approved drawings. Service penetrations shall be installed by the appropriate trade
- B. Where service penetrations run through the ICF wall, sleeves shall be provided to create a void where the service is to be located. Sleeves shall be placed prior to concrete placement.

3.6 FIELD QUALITY CONTROL

- A. The Installing Contractor shall inspect the erected formwork prior to placing concrete. The formwork shall be inspected to verify, but not limited to, the following:
 - 1. Conformance to design drawings
 - 2. Plumbness of wall
 - 3. Rebar placement
 - 4. Stability of wall alignment system (wall bracing system) and any additional anchoring system required to keep the walls aligned position and rigidity.
- B. Owner will engage a third party inspector to ensure all installation is done in accordance with all code and manufacturers requirements. Contractor shall correct all deficiencies and have work re-inspected at the Contractor's expense. Comply with LEED requirements for recycling of waste.

3.7 CLEANUP

- A. Installing Contractor shall ensure his/her work site is kept clean at all times. All material shall be properly disposed, and all remaining debris shall be removed from the work site following the complete installation of ICF.

3.8 PROTECTION

- A. Prior to concrete placement, interlocking knobs along the top of the ICF wall shall be protected with tape or other means to ensure no concrete debris sets on and between the interlocking knobs
- B. Protection of installed forms shall be provided if the forms are expected to be exposed to UV rays for longer than 180 days (i.e. delay in final wall finish application)
- C. See Section 1.5.1 for additional protection requirements

END OF SECTION 03 1150

SECTION 323113 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes chain-link fences and swing gates.

1.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design chain-link fences and gates, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Chain-link fence and gate framework shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7:
 - 1. Minimum Post Size: Determine according to ASTM F 1043 for framework up to 12 feet high, and post spacing not to exceed 8 feet.
 - 2. Minimum Post Size and Maximum Spacing: Determine according to CLFMI WLG 2445, based on mesh size and pattern specified and on the following:
 - a. Wind Loads: 90 mph
 - b. Exposure Category: C.
 - c. Fence Height: 12 feet.
 - d. Material Group: IA, ASTM F 1043, Schedule 40 steel pipe.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated
- B. LEED Submittals:
 - 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
- C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- D. Samples: For each polymer-coated product and for each color and texture specified, in 6-inch lengths for components and on full-sized units for accessories.
- E. Delegated-Design Submittal: For chain-link fences and gate framework indicated to comply with performance requirements and design criteria, including analysis data

signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of chain-link fence and gate, from manufacturer.
- B. Product Test Reports: For framing strength according to ASTM F 1043.
- C. Sample of special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which Installer agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

- A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:
 - 1. Fabric Height: 6 feet, 8 feet and 12 feet.
 - 2. Steel Wire Fabric: Wire with a diameter of 0.148 inch.
 - a. Mesh Size: 2 inches.
 - b. Zinc-Coated Fabric: ASTM A 392, Type II, Class 2, 2.0 oz./sq. ft. with zinc coating applied before weaving.
 - 3. Selvage: Knuckled at both selvages.

2.2 FENCE FRAMING

- A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043 or ASTM F 1083 based on the following:

1. Fence Height: As indicated on Drawings.
2. Light Industrial Strength: Material Group II-L, roll-formed steel C-section shapes.
 - a. Line Post: 2.875 inches in diameter.
 - b. End, Corner and Pull Post: 2.875 inches.

2.3 TENSION WIRE

- A. Metallic-Coated Steel Wire: 0.177-inch- diameter, marcelled tension wire complying with ASTM A 817 and ASTM A 824, with the following metallic coating:
 1. Type II, zinc coated with minimum coating weight matching chain-link fabric coating weight.

2.4 SWING GATES

- A. General: Comply with ASTM F 900 for gate posts and single and double swing gate types.
 1. Gate Leaf Width: As indicated on drawings.
 2. Gate Fabric Height: As indicated.
- B. Pipe and Tubing:
 1. Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; protective coating and finish to match fence framing.
 2. Gate Posts: Round tubular steel.
 3. Gate Frames and Bracing: Round tubular steel.
- C. Frame Corner Construction: Welded.
- D. Hardware:
 1. Hinges: 180-degree inward and 180-degree outward swing as indicated on drawing sheet AE-101 and AS-101.
 2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate. Padlock and chains for double gates will be provided by the Owner.
 3. Lock: Manufacturer's standard internal device furnished in lieu of gate latch.
 4. Closer: Manufacturer's standard.
 5. Double Gates: Cane bolts.
 6. Coordinate with Section 087100 and electrical.

2.5 FITTINGS

- A. General: Comply with ASTM F 626.

2.6 GROUT AND ANCHORING CEMENT

- A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.
- B. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
 - 1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
- D. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated.
- E. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
- F. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
 - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 - 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - a. Exposed Concrete: Extend 2 inches above grade; shape and smooth to shed water.

- b. Concealed Concrete: Top 30 inches minimum below grade to allow covering with surface material.
 - c. Posts Set into Concrete in Sleeves: Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.
 - d. Posts Set into Voids in Concrete: Form or core drill holes not less than 5 inches deep and 3/4 inch larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.
- G. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of as indicated on Drawings.
- H. Line Posts: Space line posts uniformly at 96 inches o.c.
- I. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Provide horizontal tension wire at the following locations:
- 1. Extended along top and bottom of fence fabric.
- J. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave no space between finish grade or surface and bottom selvage unless otherwise indicated.
- K. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.
- L. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

END OF SECTION 323113

SECTION 072413 - POLYMER-BASED EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

PART 4 - GENERAL

4.1 SUMMARY

- A. Section Includes:
 - 1. Exterior insulation and finish system (EIFS) applied over exterior cement board.

4.2 PERFORMANCE REQUIREMENTS

- A. Class PB EIFS: Physical properties and structural performance that comply with ICC-ES AC219.

4.3 ACTION SUBMITTALS

- A. Product Data: For each type and component of EIFS indicated.
- B. LEED Submittals:
 - 1. Product Data for Credit IEQ 4.1: For adhesives used inside the weatherproofing system, documentation including printed statement of VOC content.
 - 2. Laboratory Test Reports for Credit IEQ 4: For adhesives used inside the weatherproofing system, documentation indicating that they comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: For EIFS. Include plans, elevations, sections, details, penetrations, terminations, joints, fasteners, and attachments to other work.
- D. Samples: For each exposed product and for each color and texture specified.

4.4 INFORMATIONAL SUBMITTALS

- A. Material or product certificates.
- B. Product test reports.
- C. Field quality-control reports.
- D. Evaluation reports.

4.5 CLOSEOUT SUBMITTALS

- A. Maintenance data.

4.6 QUALITY ASSURANCE

- A. Installer Qualifications: An installer who is certified in writing by EIFS manufacturer as qualified to install manufacturer's system using trained workers.
- B. Source Limitations: Obtain EIFS from single source from single EIFS manufacturer and from sources approved by EIFS manufacturer as compatible with system components.
- C. Fire-Test-Response Characteristics: Provide EIFS and system components with the following fire-test-response characteristics as determined by testing identical EIFS and system components per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.
 - 1. Fire-Resistance Characteristics: Per ASTM E 119.
 - 2. Full-Scale Multistory Fire Test: Per UBC Standard 26-4.
 - 3. Full-Scale Diversified Fire Test: Per ASTM E 108 modified for testing vertical walls.
 - 4. Intermediate-Scale Multistory Fire Test: Per UBC Standard 26-9.
 - 5. Radiant Heat Exposure: No ignition of EIFS per NFPA 268.
 - 6. Potential Heat: Acceptable level per NFPA 259.
 - 7. Surface-Burning Characteristics: Insulation board, adhesives, base coats, and finish coats with flame-spread index of 25 or less and smoke-developed index of 450 or less, per ASTM E 84.
- D. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution and set quality standards for fabrication and installation.
 - 1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- E. Preinstallation Conference: Conduct conference at Project site.

PART 5 - PRODUCTS

5.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Dryvit Systems, Inc.
 - 2. Finestone; BASF Wall Systems, Inc.
 - 3. Master Wall, Inc.
 - 4. Omega Products International, Inc.
 - 5. Parex, Inc.; a brand of ParexLahabra, Inc.
 - 6. Senergy; BASF Wall Systems, Inc.
 - 7. SonoWall; Degussa Wall Systems, Inc.
 - 8. Sto Corp.
 - 9. TEC; an H. B. Fuller company.

5.2 MATERIALS

- A. Compatibility: Provide adhesive, fasteners, board insulation, reinforcing meshes, base- and finish-coat systems, sealants, and accessories that are compatible with one another and with substrates and approved for use by EIFS manufacturer for Project.
- B. Primer/Sealer: EIFS manufacturer's standard substrate conditioner with VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24, designed to seal substrates from moisture penetration and to improve the bond between substrate of type indicated and adhesive used for application of insulation.
- C. Insulation Adhesive: Standard formulation with VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- D. Molded, Rigid Cellular Polystyrene Board Insulation: Comply with ASTM C 578, Type I; EIFS manufacturer's requirements; and EIMA's "EIMA Guideline Specification for Expanded Polystyrene (EPS) Insulation Board."
 - 1. Foam Shapes: Provide with profiles and dimensions indicated on Drawings.
- E. Reinforcing Mesh: Balanced, alkali-resistant, open-weave, glass-fiber mesh treated for compatibility with other EIFS materials; complying with ASTM D 578 and the following:
 - 1. Heavy-Duty Reinforcing Mesh: Not less than 20 oz./sq. yd.
 - 2. Strip Reinforcing Mesh: Not less than 3.75 oz./sq. yd.
 - 3. Detail Reinforcing Mesh: Not less than 4.0 oz./sq. yd.
 - 4. Corner Reinforcing Mesh: Not less than 7.2 oz./sq. yd.
- F. Base-Coat Materials: Standard formulation.
- G. Primer: Factory-mixed, elastomeric-polymer primer.
- H. Finish-Coat Materials: Factory-mixed, standard acrylic-based coating with enhanced mildew resistance.
 - 1. Colors: As selected by Architect from manufacturer's full range.
- I. Mechanical Fasteners: Corrosion-resistant fasteners consisting of thermal cap, standard washer and shaft attachments, and fastener suitable for substrate.
- J. Trim Accessories: Manufactured from UV-stabilized PVC and complying with ASTM D 1784 and ASTM C 1063.

PART 6 - EXECUTION

6.1 INSTALLATION

- A. Comply with ASTM C 1397 and EIFS manufacturer's written instructions for installation of EIFS as applicable to each type of substrate indicated.
- B. Primer/Sealer: Apply over cement board sheathing.

- C. Expansion Joints: Install at locations indicated, where required by EIFS manufacturer, where expansion joints are indicated in substrates behind EIFS; where EIFS adjoin dissimilar substrates, materials, and construction.
- D. Base Coat: Apply to exposed surfaces of insulation in minimum thickness recommended in writing by EIFS manufacturer, but not less than 1/16-inch dry-coat thickness.
- E. Reinforcing Mesh: Completely embed mesh in wet base coat, applying additional base-coat material if necessary, so reinforcing-mesh color and pattern are not visible.
 - 1. Heavy-duty reinforcing mesh.
- F. Finish Coat: Apply over dry primed base coat, maintaining a wet edge at all times for uniform appearance, in thickness required by EIFS manufacturer to produce a uniform finish of color and texture matching approved sample and free of cold joints, shadow lines, and texture variations.
 - 1. Texture: As selected by Architect from manufacturer's full range.

END OF SECTION 072413

SECTION 08 71 00 – DOOR HARDWARE

PART 1 – GENERAL

1.01 SUMMARY

A. SECTION INCLUDES

1. The work in this section includes furnishing all items of finish hardware as hereinafter specified or obviously necessary for all swinging, sliding, folding and other doors. Except items, which are specifically excluded from this section of the specification or of unique hardware, specified in the same sections as the doors and frames on which they are installed.

B. RELATED DOCUMENTS

1. Related documents, drawings and general provisions of contract, including General and Supplementary Conditions and Division 1 specification sections apply to this section.

C. RELATED SECTIONS

1. 06 20 00 – Finish Carpentry
2. 06 48 16 – Interior Wood Door Frames
3. 08 01 00 – Operations and Maintenance
4. 08 06 71 – Door Hardware Schedule
5. 08 11 13 – Metal Doors and Frames
6. 08 14 13 – Flush Wood Doors
7. 08 14 23 – Clad Wood Doors
8. 08 41 00 – Entrances and Storefronts
9. 28 13 00 – Access Control

1.02 REFERENCES

A. STANDARDS

1. AIA A201 1997 – General Conditions of the Contract
2. ANSI-A250.4 – Steel Doors and Frames Physical Endurance
3. ANSI A156.1 – Butts and Hinges
4. ANSI A156.2 – Bored Locks and Latches
5. ANSI A156.3 – Exit Devices
6. ANSI A156.4 – Door Controls – Door Closers
7. ANSI A156.5 – Auxiliary Locks and Associated Products
8. ANSI A156.6 – Architectural Door Trim
9. ANSI A156.7 – Template Hinge Dimensions
10. ANSI A156.8 – Door Controls – Overhead Holders
11. ANSI A156.13 – Mortise Locks and Latches
12. ANSI A156.15 – Closer Holder Release Devices
13. ANSI A156.16 – Auxiliary Hardware
14. ANSI A156.18 – Material and Finishes
15. ANSI A156.26 – Continuous Hinges

16. UL10C – Positive Pressure Fire Tests of Door Assemblies

B. CODES

1. NFPA 101 – Life Safety Code
2. IBC 2003 – International Building Code
3. ANSI A117.1 – Accessible and Usable Buildings and Facilities
4. ADA – Americans with Disabilities Act

1.03 SUBMITTALS

A. GENERAL REQUIREMENTS

1. Submit copies of finish hardware schedule in accordance with Division 1, General Requirements.

B. SCHEDULES AND PRODUCT DATA

1. Schedules to be in vertical format, listing each door opening, and organized into “hardware sets” indicating complete designations of every item required for each door opening to function as intended. Hardware schedule shall be submitted within two (2) weeks from date the purchase order is received by the finish hardware supplier. Furnish four (4) copies of revised schedules after approval for field and file use. Note any special mounting instructions or requirements with the hardware schedule. Schedules to include the following information:
 - a. Location of each hardware set cross-referenced to indications on drawings, both on floor plans and in door and frame schedule.
 - b. Handing and degree of swing of each door.
 - c. Door and frame sizes and materials.
 - d. Keying information.
 - e. Type, style, function, size, and finish of each hardware item.
 - f. Elevation drawings and operational descriptions for all electronic openings.
 - g. Name and manufacturer of each hardware item.
 - h. Fastenings and other pertinent information.
 - i. Explanation of all abbreviations, symbols and codes contained in schedule
 - j. Mounting locations for hardware when varies from standard.
2. Submit catalog cuts and/or product data sheets for all scheduled finish hardware.
3. Submit separate detailed keying schedule for approval indicating clearly how the owner’s final instructions on keying of locks has been fulfilled.

C. SAMPLES

1. Upon request, samples of each type of hardware in finish indicated shall be submitted. Samples are to remain undamaged and in working condition through submittal and review process. Items will be returned to the supplier or incorporated into the work within limitations of keying coordination requirements.

D. TEMPLATES

1. Furnish a complete list and suitable templates, together with finish hardware schedule to contractor, for distribution to necessary trades supplying materials to be prepped for finish hardware.

E. ELECTRONIC HARDWARE SYSTEMS

1. Provide complete wiring diagrams prepared by an authorized factory employee for each opening requiring electronic hardware, except openings where only magnetic hold-open devices are specified. Provide a copy with each hardware schedule submitted after approval.
2. Provide complete operational descriptions of electronic components listed by opening in the hardware submittals. Operational descriptions to detail how each electrical component functions within the opening incorporating all conditions of ingress and egress. Provide a copy with each hardware schedule submitted for approval.
3. Provide elevation drawings of electronic hardware and systems identifying locations of the system components with respect to their placement in the door opening. Provide a copy with each hardware schedule submitted for approval.
4. Prior to installation of electronic hardware, arrange conference between supplier, installers and related trades to review materials, procedures and coordinating related work.
5. The electrical products contained within this specification represent a complete engineered system. If alternate electrical products are submitted, it is the responsibility of the distributor to bear the cost of providing a complete and working system including re-engineering of electrical diagrams and system layout, as well as power supplies, power transfers and all required electrical components. Coordinate with electrical engineer and electrician to ensure that line voltage and low voltage wiring is coordinated to provide a complete and working system.
6. For each item of electrified hardware specified, provide standardized molex plug connectors to accommodate up to twelve (12) wires. Molex plug connectors shall plug directly into through-door wiring harnesses, frame wiring harnesses, electric locking devices and power supplies.
7. Integrated wiegand products shall be supplied only through designated ASSA ABLOY "Authorized Channel Partner" (ACP) distributors. Installation of integrated wiegand products shall be performed by an ASSA ABLOY "Certified Integrator" (CI).

F. OPERATIONS AND MAINTENANCE MANUALS

1. Upon completion of construction and building turnover, furnish two (2) complete maintenance manuals to the owner. Manuals to include the following items:
 - a. Approved hardware schedule, catalog cuts and keying schedule.
 - b. Hardware installation and adjustment instructions.
 - c. Manufacturer's written warranty information.
 - d. Wiring diagrams, elevation drawings and operational descriptions for all electronic openings.

1.04 QUALITY ASSURANCE

A. SUBSTITUTIONS

1. All substitution requests must be submitted before bidding and within the procedures and time frame as outlined in Division 1, General Requirements. Approval of products is at the discretion of the architect and his hardware consultant.

B. SUPPLIER QUALIFICATIONS

1. A recognized architectural door hardware supplier who has maintained an office and has been furnishing hardware in the project's vicinity for a period of at least two (2) years.
2. Hardware supplier shall have office and warehouse facilities to accommodate this project.
3. Hardware supplier shall have in his employment at least one (1) Architectural Hardware Consultant (AHC) who is available at reasonable times during business hours for consultation about the project's hardware and requirements to the owner, architect and contractor.
4. Hardware supplier must be an authorized factory distributor of all products specified herein.

1.05 FIRE-RATED OPENINGS

1. Provide door hardware for fire-rated openings that comply with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed by Underwriter's Laboratories (UL) or Warnock Hersey (WH) for use on types and sizes of doors indicated.
2. Project requires door assemblies and components that are compliant with positive pressure and S-label requirements. Specifications must be cross-referenced and coordinated with door manufacturers to ensure that total opening engineering is compatible with UL10C Standard for Positive Pressure Fire Tests of Door Assemblies.
 - a. Hardware required for fire doors shall be listed with Underwriters Laboratories for ratings specified.
 - b. Certification(s) of compliance shall be made available upon request by the Authority Having Jurisdiction.

1.06 DELIVERY, STORAGE AND HANDLING

A. MARKING AND PACKAGING

1. Properly package and mark items according to the approved hardware schedule, complete with necessary screws and accessories, instructions and installation templates for spotting mortising tools. Contractor shall check deliveries against accepted list and provide receipt for them, after which he is responsible for storage and care. Any shortage or damaged good shall be made without cost to the owner.

2. Packaging of door hardware is the responsibility of the supplier. As hardware supplier receives material from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set and door numbers to match the approved hardware schedule. Two or more identical sets may be packed in same container.

B. DELIVERY

1. The supplier shall deliver all hardware to the project site; direct factory shipments are not allowed unless agreed upon beforehand. Hardware supplier shall coordinate delivery times and schedules with the contractor. Inventory door hardware jointly with representatives of hardware supplier and hardware installer/contractor until each is satisfied that count is correct.
2. No keys, other than construction master keys and/or temporary keys are to be packed in boxes with the locks.
3. At time of hardware delivery, door openings supplier in conjunction with the contractor shall check in all hardware and set up a hardware storage room.

C. STORAGE

1. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of work will not be delayed by hardware losses both before and after installation.

1.07 WARRANTY

- A. All items, except as noted below, shall be warranted in writing by the manufacturer against failure due to defective materials and workmanship for a minimum period of one (1) year commencing on the date of final completion and acceptance. In the event of product failure, promptly repair or replace item with no additional cost to the owner.
 1. Cylindrical locksets – Heavy Duty: Seven (7) years
 2. Exit Devices: Five (5) years
 3. Door closers: Ten (10) years
 4. Securitron (and approved equals) electrified hardware: Unlimited Lifetime

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Only manufacturers as listed below shall be accepted. Obtain each type of finish hardware (hinges, latch and locksets, exit devices, door closers, etc.) from a single manufacturer.

2.02 MATERIALS

A. SCREWS AND FASTENERS

1. All required screws shall be supplied as necessary for securing finish hardware in the appropriate manner. Thru-bolts shall be supplied for exit devices and door closers where required by code and the appropriate blocking or reinforcing is not present in the door to preclude their use.

B. HANGING DEVICES

1. HINGES

- a. Hinges shall conform to ANSI A156.1 and have the number of knuckles as specified, oil-impregnated bearings as specified with NRP (non-removable pin) feature, at all exterior reverse bevel doors. Unless otherwise scheduled, supply one (1) hinge for every 30" of door height. Hinges shall be a minimum of 4 1/2" high and 4" wide; heavy weight hinges (.180) shall be supplied at all doors where specified.

- 1) Specified Manufacturer: McKinney
- 2) Approved Substitutes: Hager, Stanley

2. ELECTRIC HINGES

- a. Electric hinges shall be provided with molex standardized plug connectors to accommodate up to twelve (12) wires. Plug connectors shall plug directly into molex through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Provide a mortar guard for each electric hinge specified.

- 1) Specified Manufacturer: McKinney QC Series
- 2) Approved Substitutes: Hager, Stanley

3. MONITORING SWITCH HINGES

- a. Monitoring switch hinges to be magnetic reed, concealed, adjustable switch type with extra heavy magnet.

- 1) Specified Manufacturer: McKinney MM Series
- 2) Approved Substitutes: Hager EMN Series, Stanley CS Series

4. CONTINUOUS GEARED HINGES

- a. All hinges to be non-handed and completely reversible. Hinge line to be available in concealed flush mount with or without inset, full surface and half surface types as specified in the hardware sets. All hinges to be made of extruded 6060 T6 aluminum alloy with polyacetal thrust bearings, anodized after cutouts are made for bearings. All concealed hinges to be fire-rated for 20, 45 and 90 minutes when incorporated into proper door and frame labeled installations, without necessitating the use of fusible-link pins. All concealed hinges to be available in standard, heavy, and extra heavy duty weights; all full surface and half surface hinges in standard and heavy duty weights as specified in the hardware sets. All hinges to be factory cut for door size.

- 1) Specified Manufacturers: Pemko

- 2) Approved Manufacturers: McKinney, Select

C. CYLINDERS AND KEYING

1. CYLINDERS

- a. Provide cylinders and keys protected from unauthorized manufacture and distribution by manufacturer's United States patents. The key design and tolerances shall permit the cutting of keys with standard code or duplicating machines. The requirement for a single-purpose or keyway-specific cutting or duplicating machine shall not be allowed. The key design and tolerances shall permit the use of keys and cylinders in existing key systems having similar keyways and sections.

- 1) Specified Manufacturer: Sargent XC
- 2) Approved Substitutes: None

2. KEYING

- a. All locks and cylinders shall be construction master-keyed. All locks and cylinders to be master-keyed or grandmaster-keyed as directed by the owner. The factory shall key all locks and cylinders. Furnish the following key amounts:

- 1) Two (2) change keys per lock
- 2) Three (3) grand master keys
- 3) Six (6) master keys per master level
- 4) Fifteen (15) construction/temporary keys

- b. Master keys and all high-security or restricted keyway blanks shall be sealed in tamper-proof packaged boxes when shipped from the factory. The boxes shall be shrink wrapped and imprinted to ensure the integrity of the packaging.

3. KEY CABINET

- a. Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall expansion capacity of 150% of the number of locks required for the project.

- 1) Specified Manufacturer: Telkee
- 2) Approved Substitutes: Lund

4. KEY CONTROL SOFTWARE

- a. A comprehensive key management software package shall be supplied. Software package shall include free one year technical support and free upgrades to software as it becomes available. Software shall have customized query, reporting and search capability and shall allow for tracking of all issued keys. Display of key-holder photographs and signatures shall be allowed.

- 1) Specified Manufacturers: Sargent Key Wizard

- 2) Approved Manufacturers: Corbin Russwin

D. LOCKING DEVICES

1. CYLINDRICAL LOCKSETS – HEAVY DUTY

- a. All locksets shall be ANSI 156.2 Series 4000, Grade 1 Certified. Furnish with standard 2 3/4” backset. Lock housing shall be fabricated of steel zinc dichromate and stainless steel. Latchbolt shall be brass or stainless steel with a minimum 1/2” throw. Locks shall be non-handed and fully field reversible.

- 1) Specified Manufacturer: Sargent 10 Line
- 2) Approved Substitutes: Corbin Russwin CL3300 Series, Schlage ND Series

2. ELECTRIFIED LOCKSETS

- a. Mechanical features of locksets shall conform to standards as specified above. Locksets shall be fail-secure unless otherwise specified. Where specified electrified locksets shall be provided with a switch to monitor inside or outside lever handle or signal remote location. Provide an in-line power controller with all electrified locksets.

- 1) Specified Manufacturers: Sargent
- 2) Approved Manufacturers: Corbin Russwin, Schlage

3. LOCKSET STRIKES

- a. Strikes shall be non-handed and available with curved lip, full lip or ASA type strikes as required. Provide strikes with lip-length required to accommodate jamb and/or trim detail and projection.

E. ELECTROMAGNETIC LOCKS

1. MAGNALOCKS

- a. Magnalocks shall operate on 24VDC input and shall not consume more than three (3) watts of power (125mA @ 24VDC). The magnalock shall be capable of providing a pull-apart or tensile holding force of at least 1200 pounds. The strike plate shall be mounted using a steel sex bolt and roll pin to provide a “floating” movement to assure automatic self-alignment with the lock. Anti-tamper caps shall be provided for the exposed holes. The lock and strike shall be plated to provide corrosion proofing. The lock shall be full sealed in resin to make it tamper and weather proof. The lock shall contain a suppression circuit to prevent residual magnetism and inductive kickback. The circuit also shall provide accelerated field collapse and radiation suppression. Ten feet of jacketed stranded conductor shall be provided for electrical connection.

- 1) Specified Manufacturers: Securitron Model 62
- 2) Approved Manufacturers: Locknetics 390+

F. EXIT DEVICES

1. CONVENTIONAL DEVICES – PUSH RAIL

- a. All exit devices shall be ANSI A156.3, Grade 1 Certified and shall be listed by Underwriters Laboratories and bear the UL label for life safety in full compliance with NFPA 80 and NFPA 101. Mounting rails shall be formed from a solid single piece of stainless steel, brass or bronze no less than 0.072” thick. Push rails shall be constructed of 0.062” thick material. Lever trim shall be available in finishes and designs to match that of the specified locksets.

- 1) Specified Manufacturer: Sargent 80 Series
- 2) Approved Substitutes: Corbin Russwin ED4000/ED5000 Series, Von Duprin 98 Series

2. ELECTRIFIED DEVICES

- a. Electrified exit devices shall conform to all traditional exit device standards as specified above. All power requirements for exit devices used must utilize a continuous circuit electric hinge for clean design and no visible means of interrupting power to device.
- b. Options for delayed egress exit devices to be specified in the hardware sets. Devices to conform to NFPA 101 - Special Locking Arrangements for delayed egress. Nuisance delay to be available as standard for either zero (0) or two (2) seconds. Internal latchbolt monitoring, and a standard 10-second delay for "Authorized Entry" to be standard features on every device. Delayed egress feature to be available throughout all styles and sizes of exit devices including: Panic and Fire rated Rim, Wide and Narrow Stile, Mortise, Surface Vertical Rod, and Concealed Vertical Rod.
- c. All exit devices, both fire labeled and non-labeled devices, requiring electric dogging shall be held in the "dogged" or retracted position. All exit devices with electric latch retraction shall provide for a remote means of unlocking for momentary or maintained periods of time.
- d. Exit devices with electrified trim shall be fail-secure unless otherwise specified.
- e. Where specified exit devices shall be provided with a switch to monitor push rail or signal remote location and latchbolt monitoring.

- 1) Specified Manufacturers: Sargent
- 2) Approved Manufacturers: Corbin Russwin, Von Duprin

G. DOOR CLOSERS

1. SURFACE MOUNTED CLOSERS – HEAVY DUTY

- a. All door closers shall be ANSI 156.4, Grade 1 Certified. All closers shall have aluminum alloy bodies, forged steel arms, and separate valves for adjusting backcheck, closing and latching cycles and adjustable spring to provide up to 50% increase in spring power. Closers shall be furnished with parallel arms mounting on all doors opening into

corridors or other public spaces and shall be mounted to permit 180 degrees door swing wherever wall conditions permit. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

- 1) Specified Manufacturer: Sargent 351
- 2) Approved Substitutes: Corbin Russwin DC6000, LCN 4041 Series, Norton 7500 Series

2. AUTOMATIC DOOR OPERATORS – HEAVY DUTY

- a. All door closers shall be ANSI 156.19, Grade 1 Certified. Units shall have adjustments for door closing force and backcheck, motor assist from 0 to 30 seconds, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay up to 30 seconds. Operator units shall provide conventional door closer opening and closing forces unless the power operator motor is activated by an initiating device with door closer assembly having adjustable spring size, backcheck valve, sweep valve, latch valve, speed control valve, and pressure adjustment valve to control door closing. Operators shall have push and go function to activate power operator or power assist functions. Units shall have a presence detector input to prevent a closed door from opening or a door that is fully opened from closing and shall have a hold open toggle input to allow remote activation for indefinite hold open; door shall close the second time the input is activated. Operators shall have a SPDT relay for interfacing with latching or locking devices. All controlling operator switches shall be of radio-frequency design and not hard-wired.

- 1) Specified Manufacturer: Norton 5900 X-in Series
- 2) Approved Substitutes: Besam Power Swing, Sargent MPower 4000 Series

H. DOOR TRIM AND PROTECTIVE PLATES

1. Kick plates shall be .050 gauges and two (2) inches less full width of door, or as specified. Push plates, pull plates, door pulls and miscellaneous door trim shall be as shown in the hardware schedule.
 - a. Specified Manufacturer: Rockwood
 - b. Approved Substitutes: McKinney, Trimco

I. DOOR STOPS AND HOLDERS

1. WALL MOUNTED DOOR STOPS

- a. Where a door is indicated on the plans to strike flush against a wall, wall bumpers shall be provided. Provide convex or concave design as indicated.
 - 1) Specified Manufacturers: Rockwood
 - 2) Approved Substitutes: McKinney, Trimco

2. OVERHEAD STOPS/HOLDERS

- a. Where specified, overhead stops/holders as shown in the hardware sets are to be provided. Track, slide, arm and jamb bracket shall be constructed of extruded bronze and

shock absorber spring shall be of heavy tempered steel. Overhead stops shall be of non-handed design.

- 1) Specified Manufacturers: Rixson 1 Series
- 2) Approved Substitutes: Sargent 690 Series

J. GASKETING AND THRESHOLDS

1. Provide continuous weatherseal on exterior doors and smoke, light, or sound seals on interior doors where indicated or scheduled. Provide intumescent seals as required to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies. Provide only those units where resilient or flexible seal strip is easily replaceable and readily available from stocks maintained by manufacturer.
2. Provide threshold units not less than 4" wide, formed to accommodate change in floor elevation where indicated, fabricated to accommodate door hardware and to fit door frames. All threshold units shall comply with the Americans with Disabilities Act (ADA).
 - a. Specified Manufacturers: Pemko
 - b. Approved Substitutes: McKinney, Reese, Zero

K. SILENCERS

1. Furnish rubber door silencers all hollow metal frames; two (2) per pair and three (3) per single door frame.

L. ELECTRONIC PRODUCTS AND ACCESSORIES

1. IN-LINE POWER CONTROLLER

- a. Where specified, electrified products shall be supplied with an in-line power controller that enables the hardware to operate from 12 to 32 volts. On board safety features shall include an in-line fuse to protect the hardware and host system from any possible reverse current surges. The controller shall regulate current to provide continuous duty operation without the typical head build up.

- 1) Specified Manufacturers: HES 2005 Smart-Pac II
- 2) Approved Manufacturers: NONE

2. POWER SUPPLIES

- a. Power supplies shall furnish regulated 24VDC and shall be UL class 2 listed. LED's shall monitor zone status (voltage/no voltage) and slide switches shall be provided to connect or disconnect the load from power; 1, 4 or 8 separate output circuit breakers shall be provided to divide the load. Power supplies shall have the internal capability of charging optional 24VDC sealed lead acid batteries in addition to operating the DC load. Power supplies shall be supplied complete requiring only 120VAC to the fused input and shall be supplied in an enclosure. Power supplies shall be provided with emergency release terminals that allow the release of all devices upon activation of the fire alarm system.

- 1) Specified Manufacturer: Securitron BPS
- 2) Approved Substitutes: Corbin Russwin 781N, Schlage PS

2.03 FINISHES

- A. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 or traditional U.S. finishes shown by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Where specified hardware shall have an antimicrobial coating which permanently suppresses the growth of bacteria, algae, fungus, mold and mildew applied. The finish shall control the spread and growth of bacteria, mold and mildew and shall be FDA listed for use in medical and food preparation equipment.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Contractor shall ensure that the building is secured and free from weather elements prior to installing interior door hardware. Examine hardware before installation to ensure it is free of defects.

3.02 INSTALLATION

- A. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with the governing regulations.
 1. “Recommended Locations for Builders Hardware for Standard Steel Doors and Frames” by the Door and Hardware Institute (DHI.)
 2. NWWDA Industry Standard I.S.1.7, “Hardware Locations for Wood Flush Doors.”
- B. All hardware shall be applied and installed in accordance with best trade practice by an experienced hardware installer. Care shall be exercised not to mar or damage adjacent work.
- C. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.
- D. Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.03 FIELD QUALITY CONTROL

- A. The Contractor shall comply with AIA A201 1997 section 3.3.1 which reads as follows: “The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the contract Documents give other specific instructions concerning these matters.”
- B. Prior to the installation of hardware, manufacturer's representatives for locksets, closers, and exit devices shall arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Architect and Owner.
- C. The hardware supplier shall do a final inspection prior to building completion to ensure that all hardware was correctly installed and is in proper working order.
- D. The manufacturer's representative shall do a final inspection prior to building completion to ensure that all hardware was correctly installed and is in proper working order.

3.04 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
- B. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore to proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- C. Instruct owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes and usage of any electronic devices.

3.05 PROTECTION

- A. Contractor shall protect all hardware, as it is stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

3.06 HARDWARE SCHEDULE

- A. The following schedule is furnished for whatever assistance it may afford the Contractor; do not consider it as entirely inclusive. Should any particular door or item be omitted in any scheduled hardware heading, provide door or item with hardware same as required for similar purposes. Hardware supplier is responsible for handing and sizing all products as listed in the hardware heading. Quantities listed are for each pair of doors, or for each single door.

B. Manufacturer's Abbreviations:

1. AW – AWID
2. HI - HID
3. MC – McKinney
4. NO – Norton
5. PE - Pemko
6. RO – Rockwood
7. RX – Rixson
8. SA – Sargent
9. SN – Securitron

Heading 01

Doors: 101

1 Continuous Hinge	CFM SLF HD CM PT		PE
1 Electrified Exit Device	11 55 56 8504 862	32D	SA
1 PowerMatic Operator	5930 X-in	689	NO
1 Overhead Stop	1ADJ- _36	689	RX
1 Bollard Post	578		NO
1 Wall Actuator	661		NO
1 Vestibule Actuator	672		NO
1 Proximity Reader	AWID & HID COMPATIBLE (BY ACCESS CONTROL)		AW/HI
1 Under Counter Switch	PB3ER		SN
1 Weatherstripping	BY DOOR MANUFACTURER		
1 Power Supply	BPS-24-2		SN
1 Battery	B-24-5		SN
1 Power Transfer	CEPT		SN
1 Frame Harness	QC-C1500		MC
1 Door Harness	QC C__P		MC
1 Threshold	271 A		PE

Doors are closed and locked. Presenting an authorized card at the card reader will retract the latch of the exit device, door can be manually pulled open or by pressing the outside actuator door will open automatically. Door will close and relock. Button in Office 136 will retract the latch of the exit device allowing the door to be opened. Request to exit is built into the exit device. Doors are monitored by the CM feature in the hinge. Free egress at all times.

Heading 02

Doors: 103, 107

1 Continuous Hinge	CFM SLF HD CM PT		PE
1 Electrified Exit Device	11 55 56 8504 862	32D	SA
1 PowerMatic Operator	5930 X-in	689	NO
1 Overhead Stop	1ADJ- _36	689	RX
1 Proximity Reader	AWID & HID COMPATIBLE (BY ACCESS CONTROL)		AW/HI
1 Vestibule Actuator	672		NO
1 Battery	B-24-5		SN
1 Wall Actuator	661		NO
1 Power Transfer	CEPT		SN
1 Power Supply	BPS-24-2		SN
1 Frame Harness	QC-C1500		MC

1 Door Harness	QC C__P	MC
1 Weatherstripping	BY DOOR MANUFACTURER	
1 Bollard Post	578	NO
1 Threshold	271 A	PE

Doors are closed and locked. Presenting an authorized card at the card reader will retract the latch of the exit device, door can be manually pulled open or by pressing the outside actuator door will open automatically. Door will close and relock. Request to exit is built into the exit device. Doors are monitored by the CM feature in the hinge. Free egress at all times.

Heading 03

Doors: 106

1 Monitor Hinge	T4A3386 4 1/2 X 4 1/2 NRP MM	26D	MC
2 Hinges	T4A3386 4 1/2 X 4 1/2 NRP	26D	MC
1 Storeroom Lockset (w/ RX)	11 28 RX 10G04 LL	26D	SA
1 Closer	351 CPS	EN	SA
1 Protection Plate	K1050 10" x 2" LDW	US32D	RO
1 Frame Harness	QC-C1500		MC
1 Door Harness	QC C__P		MC
1 Weatherstrip	2891 AS @ HEAD ONLY		PE
1 Weatherstrip	290 AS @ JAMBS ONLY		PE
1 Door Bottom	315 CN		PE
1 Threshold	271 A		PE

Doors are closed and locked. Request to exit is built into the lock. Doors are monitored by the MM feature in the hinge. Free egress at all times.

Heading 04

Doors: 104

1 Continuous Hinge	CFM SLF HD CM PT		PE
1 Exit Device	11 8513 ETL	32D	SA
1 Magnalock	M62	US32D	SN
1 PowerMatic Operator	5930 X-in	689	NO
1 Overhead Stop	1ADJ-_36	689	RX
1 Bollard Post	578		NO
2 Wall Actuator	661		NO
2 Proximity Reader	AWID & HID COMPATIBLE (BY ACCESS CONTROL)		AW/HI
1 Weatherstripping	BY DOOR MANUFACTURER		
1 Power Supply	BPS-24-2		SN
1 Battery	B-24-5		SN
1 Power Transfer	CEPT		SN
1 Frame Harness	QC-C1500		MC
1 Threshold	271 A		PE

Doors are closed and locked. Presenting an authorized card at the card reader will release the magnetic lock, door can be manually pulled open or by pressing the outside actuator door will open automatically. Door will close and relock. Doors are monitored by the CM feature in the hinge.

Heading 05

Doors: 102, 105, 108

1 Continuous Hinge	CFM SLF HD		PE
1 Inactive Push Bar	8893	32D	SA
1 Exit Device Trim	862	32D	SA
1 PowerMatic Operator	5910 X-in	689	NO
1 Overhead Stop	1ADJ-_36	689	RX
1 Wall Actuator	661		NO
1 Weatherstripping	BY DOOR MANUFACTURER		
1 Threshold	271 A		PE

Heading 06

Doors: 109

2 Hinges	TA2714 4 1/2 X 4 1/2 NRP	26D	MC
1 Hinges	TA2714 4 1/2 X 4 1/2 MM QC	26D	MC
1 Exit Device	11 55 56 8804 ETL	32D	SA
1 Closer	351 CPS	EN	SA
1 Proximity Reader	AWID & HID COMPATIBLE (BY ACCESS CONTROL)		AW/HI
1 Power Supply	BPS-24-2		SN
1 Battery	B-24-5		SN
1 Frame Harness	QC-C1500		MC
1 Door Harness	QC C__P		MC
2 Under Counter Switch	PB3ER		SN
1 Protection Plate	K1050 10" x 2" LDW	US32D	RO
1 Set Smoke Seal	S773		PE

Doors are closed and locked. Presenting an authorized card at the card reader will retract the latch of the exit device, the door can be manually pulled open. Door will close and relock. Buttons in Office 136 and Reception 102 will retract the latch of the exit device allowing the door to be opened. Request to exit is built into the exit device. Doors are monitored by the CM feature in the hinge. Free egress at all times.

Heading 07

Doors: 124

2 Hinges	TA2714 4 1/2 X 4 1/2 NRP	26D	MC
1 Hinges	TA2714 4 1/2 X 4 1/2 MM QC	26D	MC
1 Electrified Exit Device	11 55 56 8804 ETL	32D	SA
1 Closer	351 P10	EN	SA
1 Protection Plate	K1050 10" x 2" LDW	US32D	RO
1 Wall Bumper	409	US32D	RO
1 Power Supply	BPS-24-2		SN
1 Battery	B-24-5		SN
1 Proximity Reader	AWID & HID COMPATIBLE (BY ACCESS CONTROL)		AW/HI
1 Door Harness	QC C__P		MC
1 Frame Harness	QC-C1500		MC
1 Set Smoke Seal	S773		PE

Doors are closed and locked. Presenting an authorized card at the card reader will retract the latch of the exit device, door can be manually pulled open. Door will close and relock. Request to exit is built into the exit device. Doors are monitored by the CM feature in the hinge. Free egress at all times.

Heading 08

Doors: 110, 125, 130, 132, 135, 136, 139

1 Hinges	TA2714 4 1/2 X 4 1/2 MM QC	26D	MC
2 Hinges	TA2714 4 1/2 X 4 1/2 NRP	26D	MC
1 Electrified Lockset (FSE)	11 28 RX 10G71 LL	26D	SA
1 Closer	351 P10	EN	SA
1 Protection Plate	K1050 10" x 2" LDW	US32D	RO
1 Wall Bumper	409	US32D	RO
1 Power Supply	BPS-24-2		SN
1 Battery	B-24-5		SN
1 Door Harness	QC C__P		MC
1 Frame Harness	QC-C1500		MC
1 Set Smoke Seal	S773		PE
1 Door Bottom	315 CN		PE
1 Threshold	271 A		PE
1 Proximity Reader	AWID & HID COMPATIBLE (BY ACCESS CONTROL)		AW
Key pad prox reader @ 110			

Doors are closed and locked. Presenting an authorized card at the card reader will unlock the lock, door can be manually pulled open. Door will close and relock. Request to exit is built into the exit device. Doors are monitored by the CM feature in the hinge. Free egress at all times.

Heading 09

Doors: 113, 114, 115

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Exit Device	11 8813 ETL	32D	SA
1 Closer	351 P10	EN	SA
1 Protection Plate	K1050 10" x 2" LDW	US32D	RO
1 Wall Bumper	409	US32D	RO
1 Set Smoke Seal	S773		PE
1 Door Bottom	315 CN		PE
1 Threshold	271 A		PE

Heading 10

Doors: 141, 142

3 Hinges	TA2714 4 1/2 X 4 1/2 NRP	26D	MC
1 Storeroom Lockset	11 28 10G04 LL	26D	SA
1 Closer	351 P10	EN	SA
1 Protection Plate	K1050 10" x 2" LDW	US32D	RO
1 Wall Bumper	409	US32D	RO
1 Set Smoke Seal	S773		PE
1 Door Bottom	315 CN		PE
1 Threshold	271 A		PE

Heading 11

Doors: 111, 117, 119, 122, 131, 137, 138

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Storeroom Lockset	11 28 10G37 LL	26D	SA
1 Wall Bumper	409	US32D	RO
1 Set Smoke Seal	S773		PE

Heading 12

Doors: 123, 126, 127, 128, 129

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Entrance Lockset	11 28 10G05 LL	26D	SA
1 Wall Bumper	409	US32D	RO
1 Set Smoke Seal	S773		PE

Heading 13

Doors: 134

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Privacy Set	28 10U65 LL	26D	SA
1 Wall Bumper	409	US32D	RO
1 Set Smoke Seal	S773		PE

Heading 14

Doors: 133

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Passage Set	28 10U15 LL	26D	SA
1 Wall Bumper	409	US32D	RO
1 Set Smoke Seal	S773		PE
1 Door Bottom	315 CN		PE
1 Threshold	271 A		PE

Heading 15

Doors: 118, 121

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
2 Door Push/Pull Set	RM2200-10 BTB MOUNTING	US32D	RO
1 PowerMatic Operator	5930 X-in	689	NO
1 Protection Plate	K1050 10" x 2" LDW	US32D	RO
2 Wall Actuator	661		NO
1 Set Smoke Seal	S773		PE
1 Door Bottom	315 CN		PE
1 Threshold	271 A		PE

Heading 16

Doors: 116, 120

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Door Push/Pull Set	RM2200-10 BTB MOUNTING	US32D	RO
1 PowerMatic Operator	5910 X-in	689	NO
1 Wall Bumper	409	US32D	RO
1 Wall Actuator	661		NO
1 Set Smoke Seal	S773		PE
1 Door Bottom	315 CN		PE
1 Threshold	271 A		PE

Heading 17

Doors: 112

1 Cylinder	11 34/41 AS REQUIRED	26D	SA
1 Balance of Hardware	BY DOOR MANUFACTURER		

END OF SECTION 087100

SECTION 12 9300 - SITE FURNISHINGS

PART 1 GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, miscellaneous hardware, foundations, miscellaneous appurtenances, facilities, transportation and services required for installation of all site furnishings and related work as shown on the Drawings and/or specified herein.
- B. Scope of work:
 - 1. The general extent of work contained in this section is shown on the drawings and can include, but may not be limited to, installation of the following:
 - a. Bicycle Racks

1.02 SUBMITTALS

- A. Submit the following in accordance with Section 01 3300:
 - 1. Product Data for each product specified herein which shall include but not limited to manufacturer's drawings, specifications and installation requirements
 - 2. Samples: Submit samples of colors and finishes for all applicable products and furnishings for selection by Owner's Representative.
 - 3. Shop Drawings: Submit complete shop drawings for all materials or furnishings requiring field or shop fabrication.
 - 4. Warranty: Manufacturer's standard warranty.
 - 5. LEED Submittals:
 - a. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings and should use best manufacturing practices in compliance with standards referenced above.

1.04 DELIVERY, STORAGE AND HANDLING

- A. The contractor is responsible for coordination of the delivery, acceptance, handling and storage of all site furnishings.
- B. Store and handle site furnishings as acceptable to the Owner's Representative and so that work or access of others is not impeded.

- C. The contractor shall protect all site furnishings from theft or damage at all times until such items have been accepted by the Owner.

PART 2 PRODUCTS

2.01 BICYCLE RACKS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Madrax; BOL450-2R-SF or a comparable product by one of the following:
 - 1. SiteScapes
 - 2. Belson Outdoors
 - 3. Dero
- B. Materials
 - 1. Bollard shall be constructed of ASTM A53, 4" Schedule 40 steel pipe (4.5" O.D. x 0.237" thick wall).
 - 2. Attachment bars shall be constructed of ASTM A582, TP 304 stainless steel rounds (3/4" O.D.).
- C. Recycled Content
 - 1. Powder Coated Carbon Steel:
 - a. Recycled Material Content: Minimum 90 percent.
 - b. Post-Consumer Material Content: Minimum 59 percent.
 - c. Pre-Consumer Material Content: Minimum 32 percent.
 - d. Recyclable: 100 percent.
- D. Finishes
 - 1. Manufacturers standard polyester powder coat with rust inhibitor primer.
 - 2. Color as selected by Landscape Architect from manufacturer's standard color range.

PART 3 EXECUTION

3.01 SEQUENCING AND SCHEDULING

- A. Coordinate construction timing of installation of site furnishings in conformance with all other pertinent work

3.02 INSTALLATION

- A. Install as shown in Drawings unless noted otherwise.
- B. Set bike bollards secured to construction, level and true to line, in correct relationship to adjacent materials.

3.03 FIELD QUALITY CONTROL

- A. All site furnishings shall be inspected and accepted upon delivery by the Contractor. Final acceptance of site furnishings and locations of site furnishings shall be per the discretion of the Owner's Representative.

END OF SECTION 129300

IX. ARCHITECTURAL SUPPLEMENTARY DRAWINGS

None