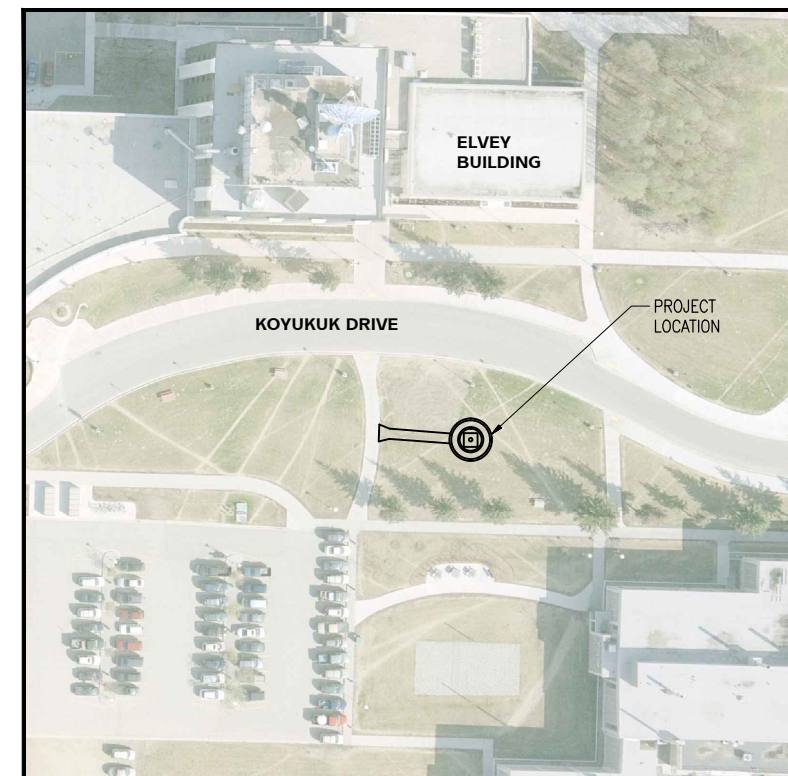


ELVEY ROCKET STATIC DISPLAY

UAF PROJECT NO: 2013168 ELRSD

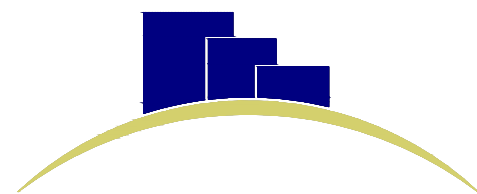
FOR:

UNIVERSITY OF ALASKA
FAIRBANKS, AK
99775



SCALE: NTS

PREPARED BY:



PDC INC. ENGINEERS

OWNER

UNIVERSITY OF ALASKA FAIRBANKS
DIVISION OF DESIGN AND CONSTRUCTION
590 UNIVERSITY AVENUE
SECOND FLOOR
FAIRBANKS, AK 99775
(907) 474-1852
Bob Crenshaw - bicrenshaw2@alaska.edu

CODES

2009 INTERNATIONAL BUILDING CODE

STRUCTURAL ENGINEER

PDC CONSULTING ENGINEERS, INC.
1028 AURORA DRIVE
FAIRBANKS, ALASKA 99709
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SHEET INDEX

SHEET NUMBER	SHEET TITLE
T-1	COVER PAGE
C1.0	SITE PLAN
C1.1	DETAILS
S1.0	GENERAL NOTES
S2.0	STRUCTURAL FOUNDATION PLAN

CONSULTANT :



PROJECT :
2013168 ELRSD
ELVEY ROCKET STATIC DISPLAY

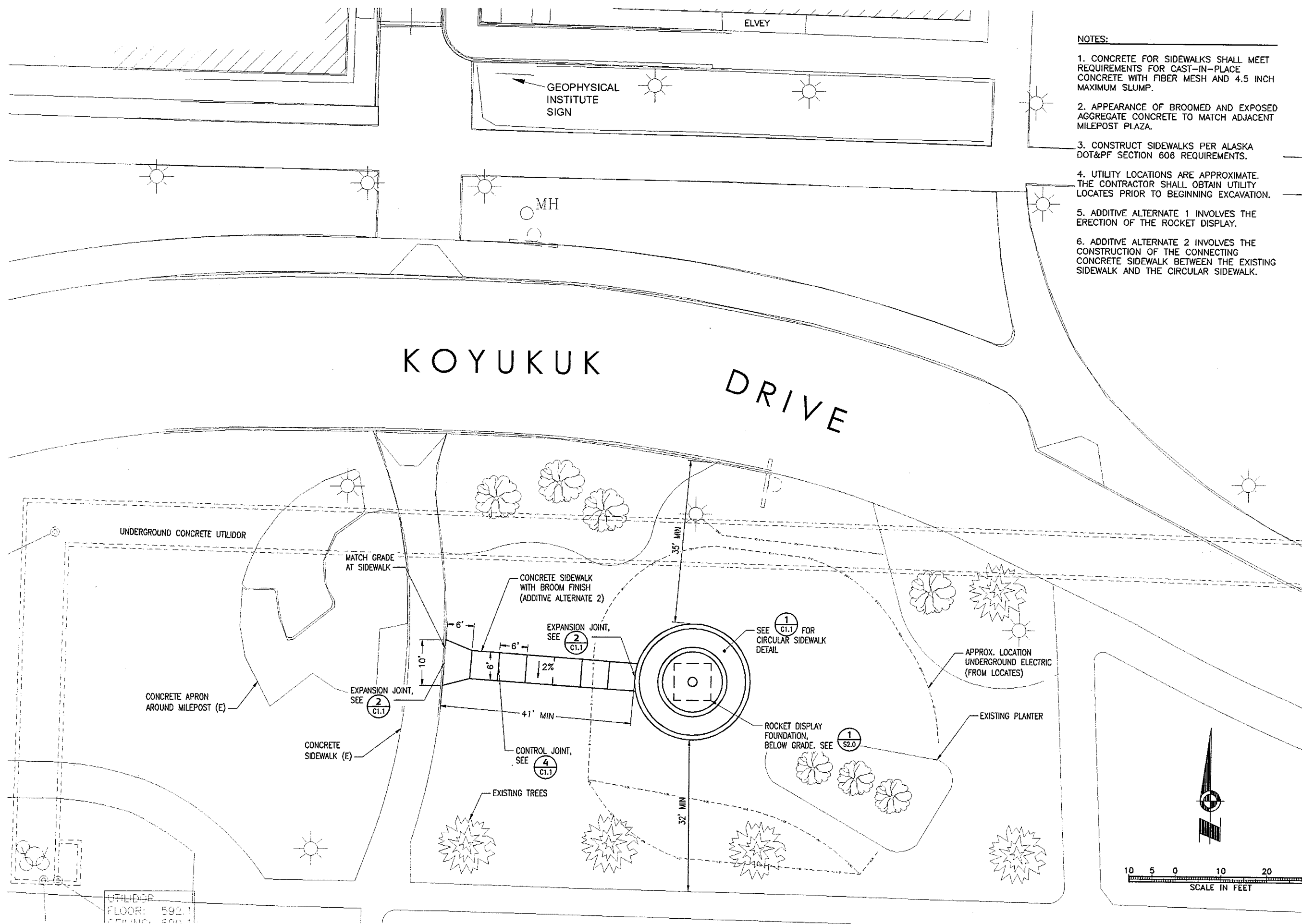
FAIRBANKS, ALASKA

SHEET TITLE :
COVER PAGE

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CHECKED AHE
DATE 05/06/2014

PROJECT No.
13069FB

SHEET NUMBER
T-1



- NOTES:**
1. CONCRETE FOR SIDEWALKS SHALL MEET REQUIREMENTS FOR CAST-IN-PLACE CONCRETE WITH FIBER MESH AND 4.5 INCH MAXIMUM SLUMP.
 2. APPEARANCE OF BROOMED AND EXPOSED AGGREGATE CONCRETE TO MATCH ADJACENT MILEPOST PLAZA.
 3. CONSTRUCT SIDEWALKS PER ALASKA DOT&PF SECTION 606 REQUIREMENTS.
 4. UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL OBTAIN UTILITY LOCATES PRIOR TO BEGINNING EXCAVATION.
 5. ADDITIVE ALTERNATE 1 INVOLVES THE ERECTION OF THE ROCKET DISPLAY.
 6. ADDITIVE ALTERNATE 2 INVOLVES THE CONSTRUCTION OF THE CONNECTING CONCRETE SIDEWALK BETWEEN THE EXISTING SIDEWALK AND THE CIRCULAR SIDEWALK.

CONSULTANT:

5/6/14

PDC INC. ENGINEERS
1028 Aurora Drive, Fairbanks, Alaska 99709-5529

PROJECT:

2013168 ELRSD
ELVEY ROCKET STATIC DISPLAY

FAIRBANKS, ALASKA

SHEET TITLE:

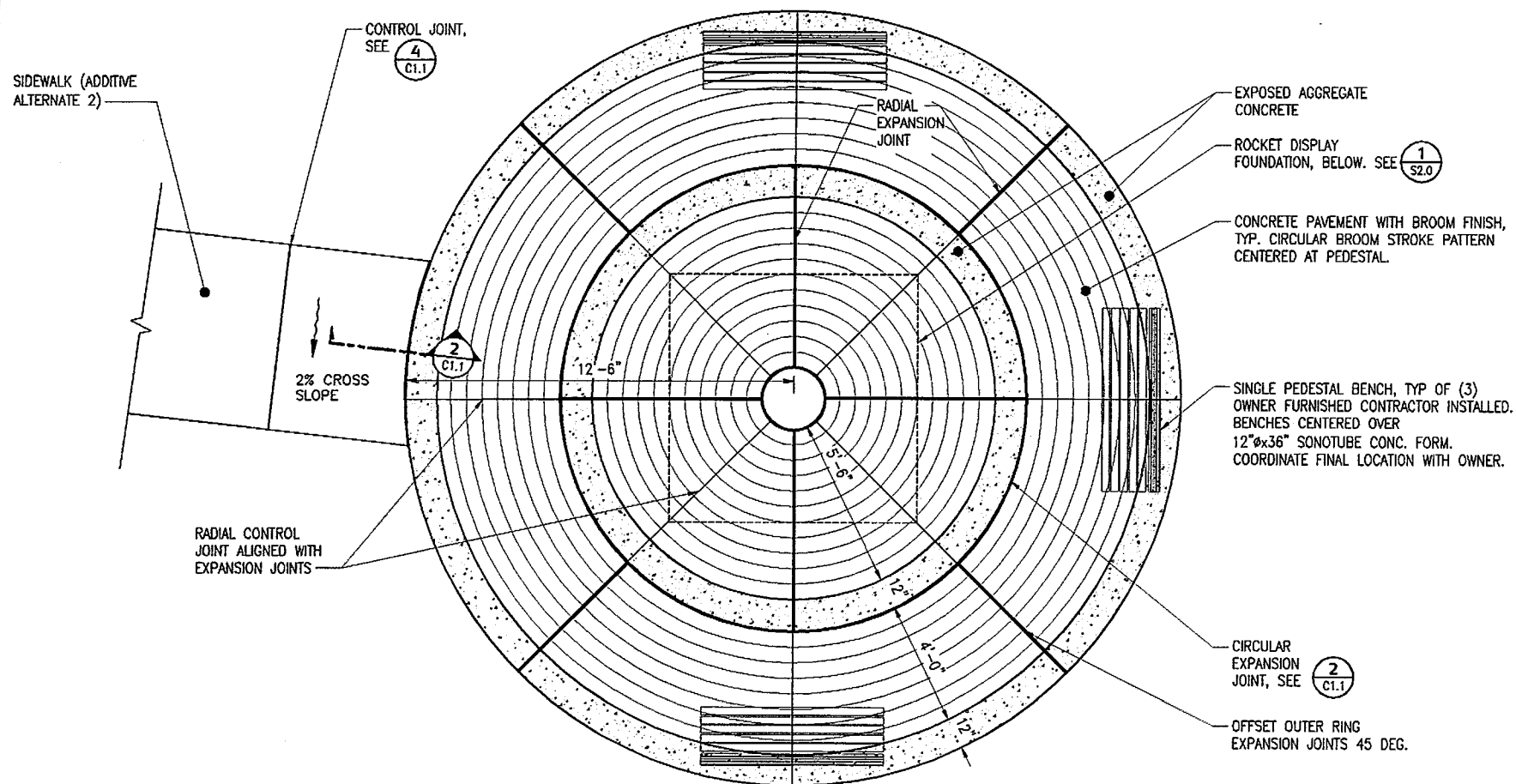
SITE PLAN

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CHECKED	KLH
DATE	05/06/2014

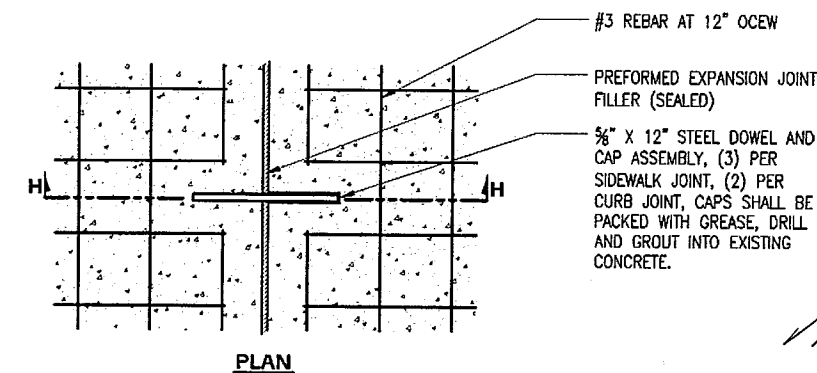
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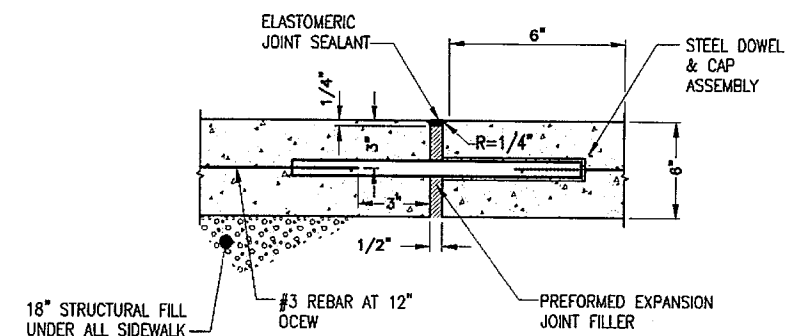
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1 CIRCULAR SIDEWALK PLAN
C1.1 SCALE: 3/8" = 1'-0"



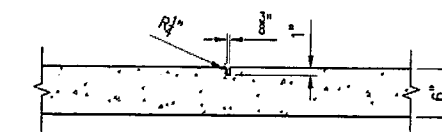
PLAN



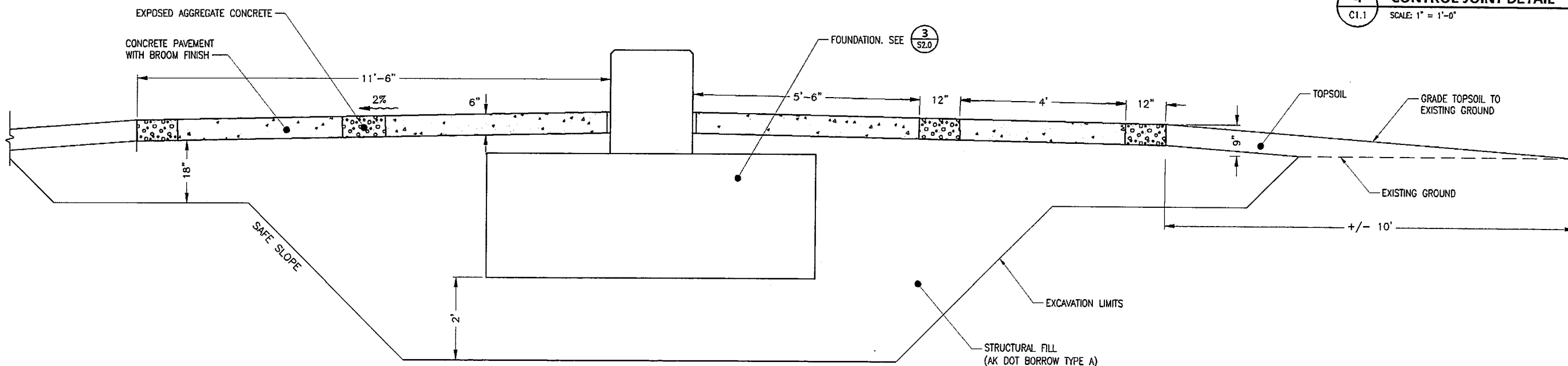
SECTION H-H

NOTE: CONSTRUCTION JOINTS ARE THE SAME AS EXPANSION JOINTS.

2 EXPANSION JOINT DETAIL
C1.1 SCALE: 1" = 1'-0"

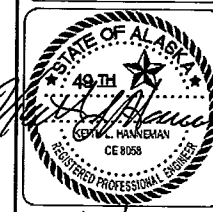


4 CONTROL JOINT DETAIL
C1.1 SCALE: 1" = 1'-0"



3 CIRCULAR SIDEWALK AND FOUNDATION TYPICAL. SECTION
C1.1 SCALE: 1" = 1'-0"

CONSULTANT:



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PDC INC. ENGINEERS
1028 Aurora Drive, Fairbanks, Alaska 99709-5529

PROJECT:
**2013168 ELRSD
ELVEY ROCKET STATIC DISPLAY**
FAIRBANKS, ALASKA

SHEET TITLE:
DETAILS

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DATE	05/06/2014
PROJECT No.	13069FB
SHEET NUMBER	C1.1

STRUCTURAL DESIGN DATA

- 1. WIND LOADS: IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2009 IBC. BASIC WIND SPEED: 90 MPH (3-SECOND GUST) EXPOSURE: C I = 1.0
- 2. SEISMIC LOADS: IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2009 IBC. IMPORTANCE FACTOR $I_p = 1.0$ (OCCUPANCY CATEGORY II) MAPPED SPECTRAL RESPONSE ACCEL $S_s = 0.993$ $S_1 = 0.379$ SPECTRAL RESPONSE COEFFICIENTS $S_{ps} = 0.730$ $S_{p1} = 0.415$ SITE CLASS D SEISMIC DESIGN CATEGORY D

CONCRETE NOTES

- 1. ALL CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI.
- 2. ALL CONCRETE SHALL CONTAIN AN APPROVED AIR-ENTRAINING MIXTURE.
- 3. MINIMUM COVER SHALL BE 3" FOR CONCRETE CAST AGAINST THE EARTH AND 2" FOR ALL OTHER CONCRETE.
- 4. ALL REINFORCING BAR SHALL BE DEFORMED NEW STEEL BILLET CONFORMING TO THE STANDARDS OF ASTM A615, GRADE 60
- 5. ALL CONCRETE REINFORCING SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318 AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
- 6. NO CONCRETE SHALL BE PLACED UNTIL EMBEDDED WORK HAS BEEN INSTALLED AND INSPECTED.
- 7. PERFORM ALL CONCRETE WORK IN ACCORDANCE WITH ACI 301 AND 318.
- 8. MIX AND CONTROL OF CONCRETE MATERIALS: THE VERIFICATIONS AND CONTROL OF CONCRETE MIXES SHALL BE THE WORK OF AN INDEPENDENT TESTING LABORATORY. COST OF TESTING SHALL BE PAID BY CONTRACTOR. TESTING AND ANALYSIS OF CONCRETE WILL BE PERFORMED IN ACCORDANCE TO ACI 301. SUBMIT PROPOSED MIX DESIGN OF EACH CLASS OF CONCRETE TO OWNER FOR REVIEW PRIOR TO COMMENCEMENT OF WORK. FOUR CONCRETE TEST CYLINDERS WILL BE TAKEN FOR EVERY 75 OR LESS CU YDS OF EACH CLASS OF CONCRETE PLACED EACH DAY. ONE SLUMP AND ENTRAINMENT AIR TEST WILL BE TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN. CONCRETE MATERIALS: CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR III FOR COLD WEATHER CONCRETING. FINE AND COARSE AGGREGATES SHALL CONFORM TO ASTM C33. WATER SHALL CONFORM TO ASTM C94, POTABLE. AIR ENTRAINMENT SHALL CONFORM TO ASTM C260. OTHER CHEMICAL ADMIXTURES SHALL CONFORM TO ASTM C494, OF ANY TYPE MUST BE APPROVED PRIOR TO USE. REINFORCING BARS SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED.
- 9. PLACEMENT OF CONCRETE: NOTIFY THE OWNER A MINIMUM OF 24 HOURS PRIOR TO COMMENCEMENT OF CONCRETING OPERATIONS. PLACE CONCRETE IN ACCORDANCE WITH ACI 301. HOT WEATHER PLACEMENT: WHEN HOT WEATHER PLACEMENT IS REQUIRED, CONTRACTOR SHALL SUBMIT PLANS FOR APPROVAL BY OWNER AND ENGINEER. COLD WEATHER PLACEMENT: ACI 306.1. ENSURE REINFORCEMENT, INSERTS, EMBEDDED PARTS, FORMED JOINTS AND OPENING ARE NOT DISTURBED DURING CONCRETE PLACEMENT. MAINTAIN CONCRETE COVER AROUND REINFORCING AS PER ACI 318. EXCESSIVE HONEYCOMB OR EMBEDDED DEBRIS IN CONCRETE IS NOT ACCEPTABLE. CONCRETE SHALL BE PLACED DURING DAYLIGHT HOURS UNLESS OTHERWISE APPROVED BY THE ENGINEER. PLACING OF CONCRETE IN A PORTION OF WORK SHALL NOT BE STARTED UNLESS THAT PORTION OF THE WORK CAN BE COMPLETED DURING DAYLIGHT. DAYLIGHT IS DEFINED AS THE PERIOD ONE HOUR BEFORE SUNRISE TO ONE HOUR AFTER SUNSET. CONCRETE SURFACES SHALL HAVE ROUGH EDGES TOOLED-OFF; IRREGULARITIES SHALL BE FILLED POINTED-UP AND SPOT FINISHED. MODIFY OR REPLACE CONCRETE NOT CONFORMING TO REQUIRED LEVELS AND LINES, DETAILS, AND ELEVATIONS. REPAIR OR REPLACE CONCRETE NOT PROPERLY PLACED OR OF THE SPECIFIED TYPE. IMMEDIATELY AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE. NO COLD JOINTS WILL BE PERMITTED.
- 10. CONCRETE QUALITY CONTROL/TESTING: KEEP A DAILY LOG, RECORDING QUANTITIES OF EACH CLASS OF CONCRETE USED, THE AREA OF LOCATION OF EACH QUANTITY OF CONCRETE RELATING TO ITS CONTROLLING CYLINDER AND THE SLUMP OF THIS CONCRETE, AND GENERAL WEATHER CONDITIONS. THE CONTRACTOR SHALL FURNISH THIS INFORMATION TO THE LABORATORY FOR INCLUSION IN THE TEST REPORTS. THE CONTRACTOR SHALL OBTAIN DELIVERY TICKETS SHOWING THE CLASS AND STRENGTH OF CONCRETE, THE SIZE OF COARSE AGGREGATE AND THE SLUMP ORDER. THE CONTRACTOR SHALL IDENTIFY THESE TICKETS RELATIVE TO THE AREA OF PLACEMENT OF THE CONCRETE AND SHALL RETAIN THEM ON FILE. HE SHALL PRODUCE THE TICKETS, SHOULD OWNER REQUEST. THE VERIFICATION AND CONTROL OF ALL CONCRETE SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. COST OF TESTING SHALL BE PAID BY CONTRACTOR. ALL CONCRETE TESTING SHALL BE

PERFORMED BY ACI CERTIFIED TECHNICIANS IN ACCORDANCE WITH ASTM C94. MAKE, CURE, STORE AND BREAK TEST CYLINDERS CONFORMING TO REQUIREMENTS OF ASTM C31 "STANDARD METHOD OF MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD"; ASTM C39 "STANDARD METHOD OF TEST FOR COMPRESSIVE STRENGTH OF CYLINDRICAL SPECIMENS"; ASTM C143 "STANDARD METHOD OF TEST FOR SLUMP OF PORTLAND CEMENT CONCRETE"; ASTM C172 TEST CYLINDERS AND SLUMP TESTS SHALL BE MADE AT JOB SITE AND UNDER NO CIRCUMSTANCES SHALL THEY BE TAKEN AT A CENTRAL MIXING PLANT. REPORTS OF CONTROL CYLINDERS FOR JOB PLACED CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C94. OF THE TEST CYLINDERS TAKEN, ONE SHALL BE BROKEN AT 7 DAYS; TWO SHALL BE BROKEN AT 28 DAYS AND ONE HELD IN RESERVE. ACCEPTANCE OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301.

GENERAL FOUNDATION NOTES

- 1. ALLOWABLE SOIL PRESSURE IS 2,500 PSF FOR FOOTINGS, WITH A ONE THIRD INCREASE FOR SHORT TERM LOADING PERMITTED.
- 2. PERFORM LABORATORY MATERIAL TESTS IN ACCORDANCE WITH ASTM D1557 TO DETERMINE THE MAXIMUM DRY DENSITY OF ALL FOOTING AND SLAB SUBGRADES.
- 3. ALL FOOTING AND SLAB SUBGRADES SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY. ALL BACKFILL AROUND AND ABOVE ALL FOUNDATION ELEMENTS, FOOTINGS AND WALLS SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY.
- 4. PLACE STRUCTURAL FILL, BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
- 5. CONTRACTOR SHALL PROVIDE A COMPACTION TEST PLAN INDICATING PROPOSED TEST LOCATIONS PRIOR TO BACKFIL FOR APPROVAL. COMPACTION TESTS FOR ALL FOOTING AND SLAB SUBGRADES WILL BE DONE IN ACCORDANCE WITH ASTM D2922. AT A MINIMUM TESTS SHALL BE PERFORMED ON THE FIRST LAYER OF FOUNDATION SUBGRADE, MID HEIGHT OF FULLY COMPACTED DEPTH, AND AT THE FINAL LAYER OF SUBGRADE BELOW THE FOUNDATION. WHEN TESTS INDICATE WORK DOES NOT MEET SPECIFIED REQUIREMENTS AND ADDITIONAL COMPACTION DOES NOT BRING INTO COMPLIANCE REMOVE WORK, REPLACE AND RETEST.
- 6. THE CONCRETE FOOTING SHALL BE PLACED IN ONE CONTINUOUS PLACEMENT.
- 7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL SEASONAL FROST HAS THAWED OR BEEN REMOVED.
- 8. CONTRACTOR TO PROVIDE REBAR SHOP DRAWINGS.
- 9. STRUCTURAL FILL SHALL MEET STATE OF ALASKA DOT&PF REQUIREMENTS FOR SELECTED MATERIAL, TYPE A.

STRUCTURAL STEEL NOTES

- 1. ALL PLATE STEEL SHALL BE ASTM A36. STEEL TUBES SHALL BE ASTM A500, GRADE B. STEEL PIPE SHALL BE ASTM A53, GRADE B.
- 2. STEEL STUD ANCHORS SHALL BE TRU-WELD STUDS OR NELSON STUDS.
- 3. ALL WELDING ELECTRODES SHALL BE E70XX.
- 4. ALL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO AISC SPECIFICATIONS AND CODES LATEST EDITION.
- 5. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE -- STEEL," LATEST EDITION.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES. SPECIAL CONSIDERATION SHOULD BE GIVEN TO TEMPERATURE DIFFERENTIALS AND STRUCTURAL STEEL FRAMING INTO CONCRETE WALLS, BEAMS OR COLUMNS.

SPECIAL INSPECTION

- 1. THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION PER IBC 2009. THESE INSPECTIONS SHALL BE PERFORMED BY A SPECIAL INSPECTOR APPROVED BY THE UNIVERSITY OF ALASKA FAIRBANKS TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED.

SPECIAL INSPECTION TABLE		
#	ITEM	DESCRIPTION
1	CONCRETE	PERIODIC INSPECTION OF THE FOUNDATION AND SLAB-ON-GRADE.
3	REINFORCING STEEL	PLACEMENT OF REINFORCING STEEL.
4	SPECIAL GRADING, EXCAVATION AND FILLING	A. FOUNDATION EXCAVATIONS AND BEARING STRATA B. BACKFILL BELOW FOUNDATION

STRUCTURAL ABBREVIATIONS

ABBREVIATION	DEFINITION
@	AT
&	AND
AB	ANCHOR BOLT
B	BOTTOM
CC	CLEAR COVER
CLR	CLEAR
CONC	CONCRETE
CJ	CONSTRUCTION JOINT
CONT	CONTINUOUS
DIA, ϕ	DIAMETER
DWLS	DOWELS
DWGS	DRAWINGS
EA	EACH
ELEV	ELEVATIONS
FIN	FINISH
FT	FEET
GRAV	GRAVITY
HORIZ	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HSS	HOLLOW STRUCTURAL SECTION
IN	INCH
LBS	POUNDS
MAX	MAXIMUM
MIN	MINIMUM
MPH	MILES PER HOUR
NTS	NOT TO SCALE
#	NUMBER
OC	ON CENTER
R	PLATE
PSF	POUNDS PER SQUARE FOOT
PJF	PREMOLDED JOINT FILLER
R	RADIUS
REINF	REINFORCE
SECT	SECTION
T	TOP
TYP	TYPICAL
VERT	VERTICAL

CONSULTANT :



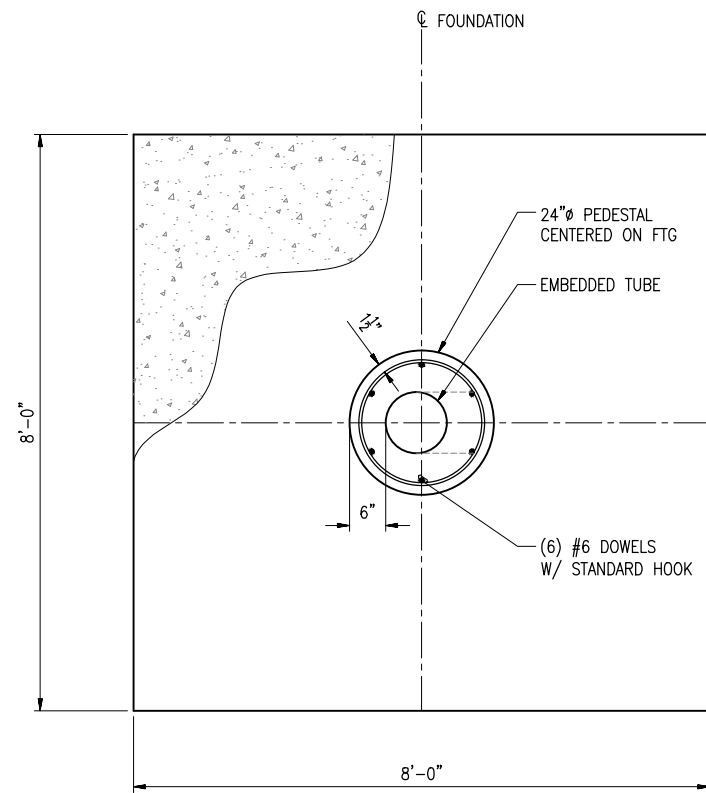
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2013168 ELRSD
ELVEY ROCKET STATIC DISPLAY
FAIRBANKS, ALASKA

SHEET TITLE :
GENERAL NOTES

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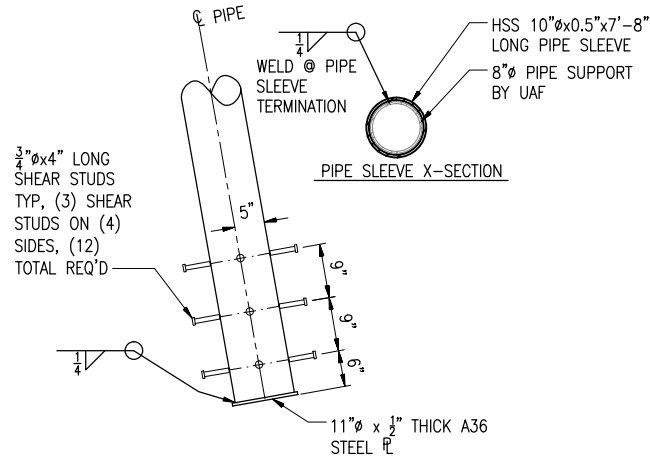
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SHEET NUMBER

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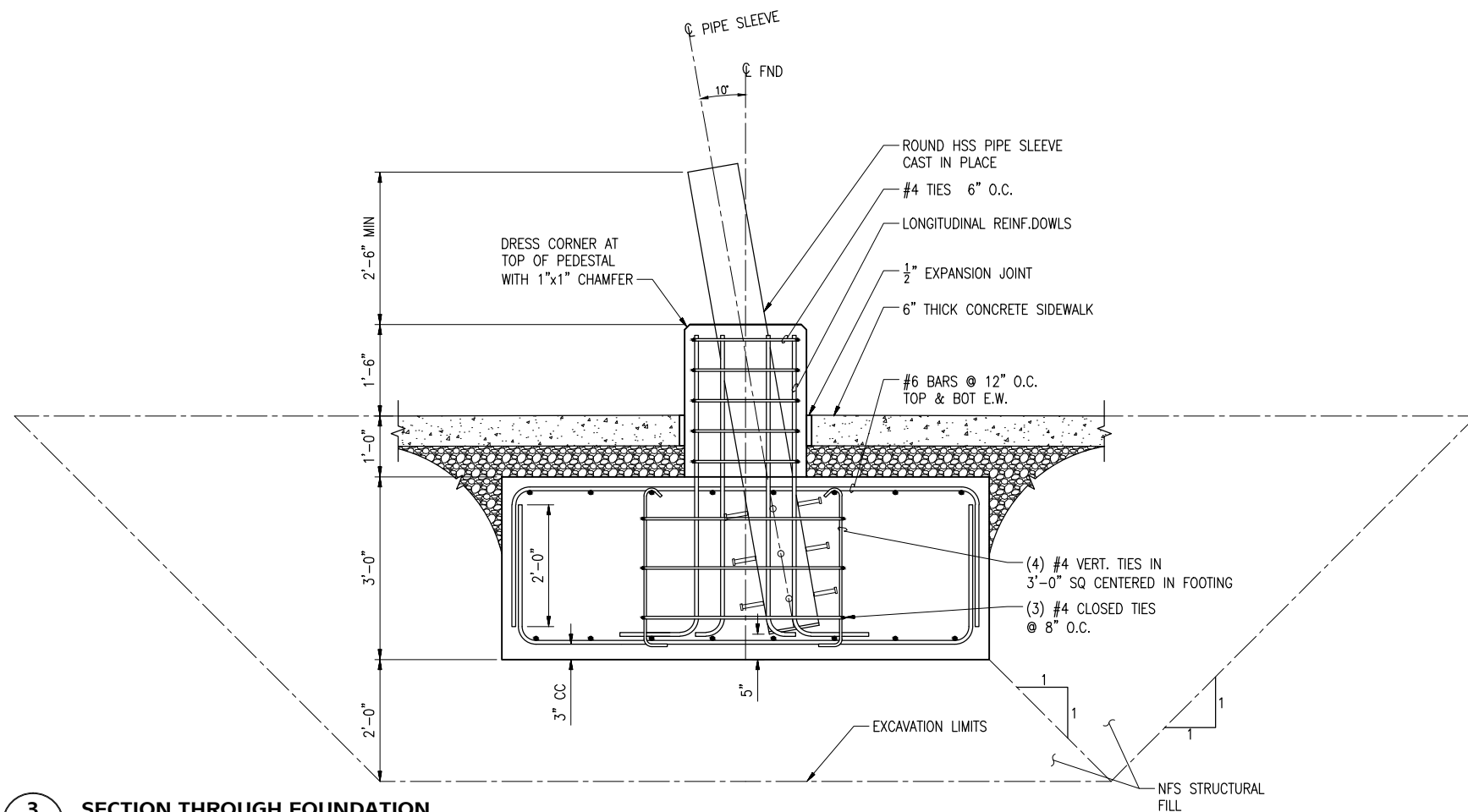
1 FOUNDATION PLAN

S2.0 SCALE: 3/4" = 1'-0"



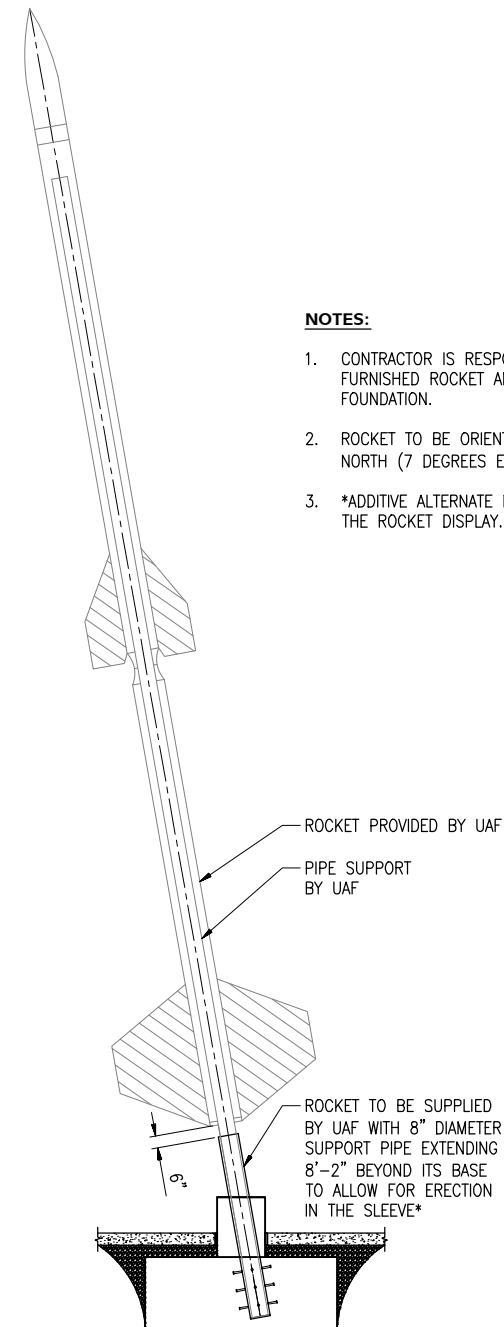
2 PIPE SLEEVE DETAIL

S2.0 SCALE: 3/4" = 1'-0"



3 SECTION THROUGH FOUNDATION

S2.0 SCALE: 3/4" = 1'-0"



4 ROCKET ELEVATION (ADD ALT #1)

S2.0 SCALE: 1/4" = 1'-0"

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR SETTING THE OWNER FURNISHED ROCKET AND SECURING IT TO THE NEW FOUNDATION.
2. ROCKET TO BE ORIENTED SO THAT IT POINTS MAGNETIC NORTH (7 DEGREES EAST FROM TRUE NORTH).
3. *ADDITIVE ALTERNATE No.1 INVOLVES THE ERECTION OF THE ROCKET DISPLAY.

CONSULTANT :



PROJECT :
**2013168 ELRSD
 ELVEY ROCKET STATIC DISPLAY**
 FAIRBANKS, ALASKA

SHEET TITLE :
**STRUCTURAL
 FOUNDATION PLAN**

DESIGN EDM
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 CHECKED AHE
 DATE 05/06/2014

PROJECT No.
13069FB
 SHEET NUMBER

S2.0