ELLIOIT FIELD STATION

BLAST LAB FOUNDATION AND STRONG SLAB FOR CONSTRUCTION

SPECIFICATIONS:

28-day concrete strength 5000 psi
Mild steel: Gr. 60
PT steel: Gr. 270
PT operation shall follow all applicable manufacturer specifications & recommendations
Clear cover: 3’ at surfaces exposed to earth, 2’ elsewhere

BL-T1: TITLE SHEET
BL-S1: FOUNDATION AND STRONG SLAB PLAN VIEW
BL-S2: TYPICAL TRANSVERSE SECTION (Section 1-1)
BL-S3: TRANSVERSE SECTION THROUGH SUMP (Section 2-2)
BL-S4: TYPICAL LONGITUDINAL SECTION (Section 3-3)
BL-S5: LONGITUDINAL SECTION THROUGH SUMP (Section 4-4)
BL-S6: SUMP DETAILS (TRANSVERSE SECTION)
BL-S7: SUMP DETAILS (LONGITUDINAL SECTION)
BL-S8: STRONG SLAB DETAILS

BL-S8-1: TYPICAL STRONG SLAB ASSEMBLY
BL-S8-2: Strong Slab Reinforcement (PLAN VIEW)
BL-S8-3 & 4: Strong Slab Cross Sections
BL-S9: TYPICAL RETAINING WALL CORNER (PLAN VIEW)
BL-S10: RETAINING WALL CORNER (Sections A-A & B-B)
BL-S11: TYPICAL ISOLATION ANCHOR BOLT INSTALLATION

Blast Lab Project

DWG No: BL-T1
Date: 2003/07/16

⚠️ revised 2003/09/09
D&C: TRN, CSL
FOUNDATION AND STRONG SLAB PLAN VIEW

All concrete: $f'c = 5,000$ psi
All Mild Steel: Gr 60
All Prestressing Steel: Gr 270

Blast Lab Project

Date: 2003/07/16

revised 2003/09/09
Two (2) post-tensioning tendons each jacked to 270 kips and grouted. Each tendon is composed of seven (7) 0.6" strands and uses [DYWIDAG Multistrand Anchorage System (or equivalent if approved by engineer)]

# 3 ties spaced at 12" O.C. in vertical direction and 12" O.C. in north-south direction

2" clear cover (note)

# 5 headed oars @ 12" (typ)

various clear-cover on 1% slope, from 6' at east end to 2' at west end

Longitudinal steel #9 @ 12"

Transverse steel #9 @ 6'

3' clear cover

Ground Level

Office

East edge of baselab removed

Standard bends (TYP)

#9 @ 12" in vertical direction (typ)

#6 @ 12" in horizontal direction (typ)

TYPICAL TRANSVERSE SECTION (Section 1-1)

Blast Lab Project

DWG No.: BL-S2

Date: 2003/07/17

© revised 2003/07/11

© revised 2003/07/26 (RF1 086)
Three (3) post-tensioning tendons each jacked to 150 kips and grouted. Each tendon is composed of five (5) 0.6" strands and uses DYWIDAG Multistrand Anchorage System (or equivalent if approved by engineer).

See 3'-thick strong floor details (BL-S8)

# 3 ties spaced at 12" o.c. in vertical direction and 12" o.c. in east-west direction.

#9 @ 12" (typ)

#6 @ 12" in horizontal direction (typ)

#3 ties @ 12" (typ)

* various clear-cover on 1% slope, from 6' at east end to 2' at west end

# 5 vertical ties spaced at 12" in east-west direction

# 5 headed bars @ 12" (typ)

Ties down anchor

Layer #10 @ 4' at top and bottom

3' clear cover

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TYPICAL LONGITUDINAL SECTION, (Section 3-3)

Blast Lab Project

DWG No: BL-S4

Date: 2003/07/16

revised 2003/07/11

revised 2003/09/09

revised 2003/07/26 (RF1 086)
DETAIL OF TRANSVERSE SECTION THROUGH SUMP

Blast Lab Project
DWG No.: BL-S6
Date: 2003/07/16
⚠️ revised 2003/07/08
Construction joint:
Cast 3-ft slab after post-tensioning of wall

Post tensioned wall

Tie down anchors on 2’x2’ grid.
(See BL-S8-1)

1 layer #10 @ 4’ at top and bottom

#11 @ 24’

2” clear cover on top
3” clear cover on bottom

3’-THICK STRONG SLAB DETAILS

Blast Lab Project
DWG No: BL-S8
Date: 2003/07/16
△ revised 2003/07/08
△ revised 2003/09/09
TOP OF SLAB

CAP AND COUPLER TO MATCH (E)
POMEL STRUCTURES LABORATORY CAPS

2-1/2" STD. PIPE

3/4" CLR

2" CLR

4"Ø STEEL CAP

SLAB THICKNESS (3'-0")

PL 1-1/2" X 8"X 8" W/1-5/8" HOLE AT CENTER

HEAT TREATED NUT FOR 1-1/4"Ø ASTM A722 THREADED ROD

TYPICAL TIE-DOWN ASSEMBLY

Blast Lab Project
DWG No: BL-S8-1
Date: 2003/07/16

⚠️ revised 2003/09/09
Strong Slab Reinforcement (Plan View)
Strong Slab Reinforcement

Section A-A - Typical Transverse Section

Strong Slab Reinforcement

Section B-B - Transverse Section at Edge

Blast Lab Project

DWG No: BL-S8-3
Date: 2003/07/16

revised 2003/09/09
Strong Slab Reinforcement

Section C-C – Typical Longitudinal Section

Transverse reinforcement between 1st and 2nd longitudinal layer

5'-0' extension on U-bar (typ)

Typical Longitudinal Reinforcement
3 layers of #11 @ 12" o.c. (top and bottom)

Edge Longitudinal Reinforcement
#11 bar (top and bottom) each edge

U-bar at each end

3' clear cover (typ)

Strong Slab Reinforcement

Section D-D – Longitudinal Section at Edge

Transverse reinforcement between 2nd and 3rd longitudinal layers

5'-0' extension on U-bar (typ)

U-bar at each end

U-bar

Blast Lab Project

DWG No.: BL-S8-4
Date: 2003/07/16

revised 2003/09/09
TYPICAL RETAINING WALL CORNER DETAIL – PLAN VIEW

Horizontal #6 @ 12" bend detail at corner joint

#4 headed bar (typ)

5 #4 diagonal steel @ 12" (typ) (bend as required for construction)

Vertical 12 #9 evenly spaced in 2'x2' boundary zone

Vertical 12 #9 each face in 2' beyond boundary zone (typ)

Vertical #9 @ 12" (typ)

2 PT Ducts @ 1 ft

2' - 1"

#3 tie hook @ 12" (typ)

48"x25"x1" A36 steel plate with Heaped Concrete Anchor by Nelson stud H4L 1/2" x 4-1/8" MS (or equivalent) 8 studs on 1' grid

Blast Lab Project

DWG No: BL-S9

Date: 2003/07/16

⚠️ revised 2003/07/11
TYPICAL ISOLATOR ANCHOR BOLT INSTALLATION

Eight (8) 12" x 3/4" Ø
ASTM A307 Headed Bolt, Embedded 9'
(see detail A)

Work Point: Center of Rubber Isolation Bearing

Detail A - Typical Anchor Bolt