PROPOSED BLASTING PLAN

Hyak Wa. I 90

Company WESTERN STATE Date SEPT 25, 2010 Shot # 48

Location of Blast STA 1323 – 1324+50 TO DITCH

Date of Blast Planned SEPT 30 Time of Blast 6:00 Rock Type BASALT

Name of Blaster VIC BRONSON License Number U 21291

Direction NORTH Distance ≈ 75' Feet From I-90 WESTBOUND

# of Pre-Split Holes 60 Spacing 30" Depth 27' Slope .5/1 Charge WT 7# LF Drilled 1620

Holes 16 Burden 8 ft Spacing 10 ft Depth 12 Diameter 3½ Stemming 7

Holes 96 Burden 8 ft Spacing 10 ft Depth 26 Diameter 4 Stemming 7

Holes _____ Burden _____ ft Spacing _____ ft Depth _____ Diameter _____ Stemming _____

Rows 7 Bench Height 24 ft Yield 7963 cu/yds Subdrilling 2'

Type Stemming CRUSHED STONE Max Weight of Explosives per Delay 160#

Explosives Type and Estimated Quantity's

Anfo 9027 lbs Primer's 3/4 lbs/ea Pre-Split Powder 504 lbs

Stick Powder Type FORTEL 3x16 (5.1) Amount ? lbs

Stick Powder Type _____ Amount _____ lbs

Stick Powder Type _____ Amount _____ lbs

Hole to Hole Delay _____ MS Row to Row Delay _____ MS

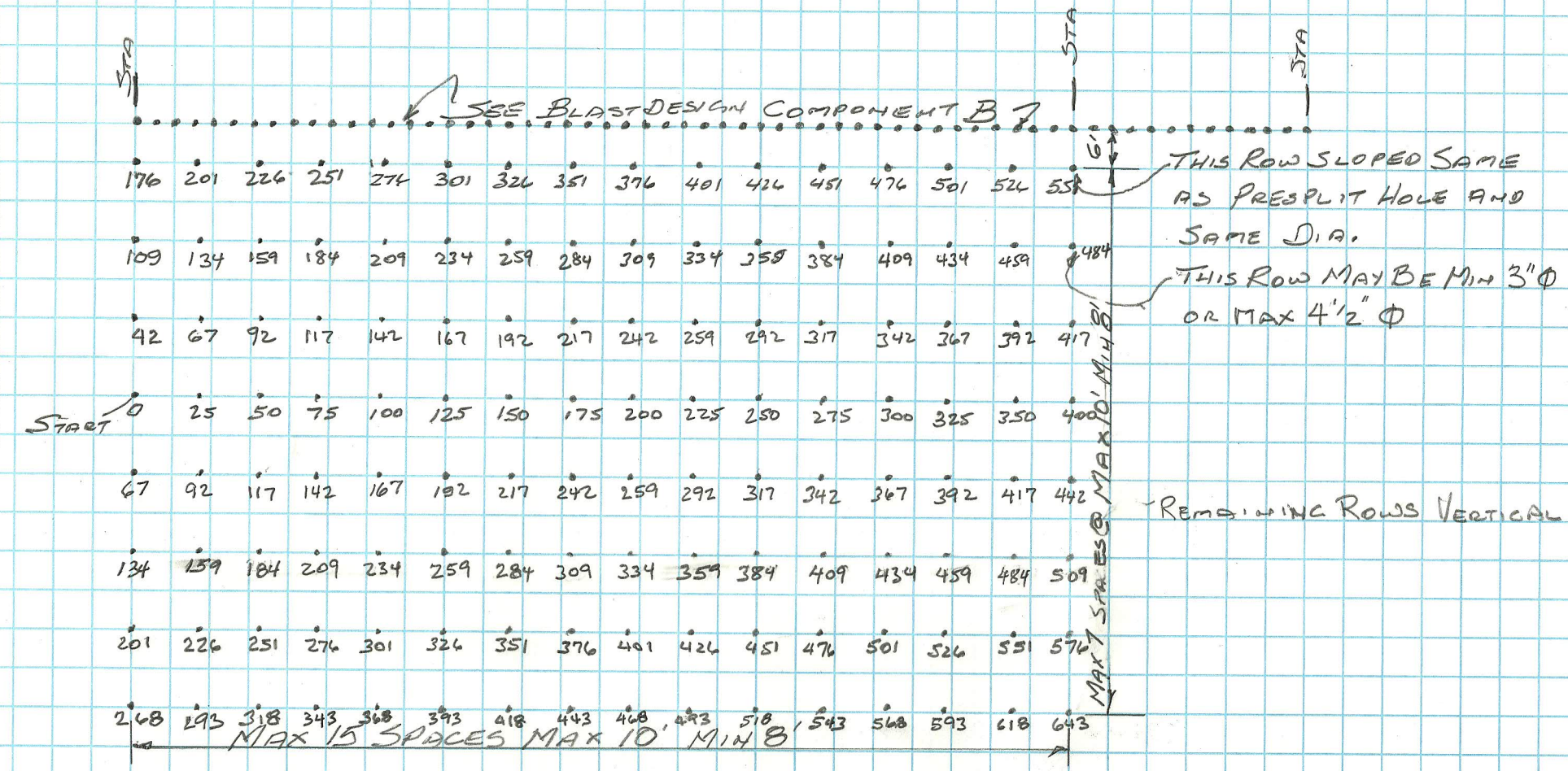
Total Weight of Explosives _____ lbs Estimated Powder Factor _____ lbs cu/yd

Method of Initation _____ Type of Detonator & Delay _____

Notes: SEE BLAST DESIGN COMPONENTS D, C & B FOR GENERAL PLAN INFO

Plan Submitted By [signature] Date SEPT 25, 2010

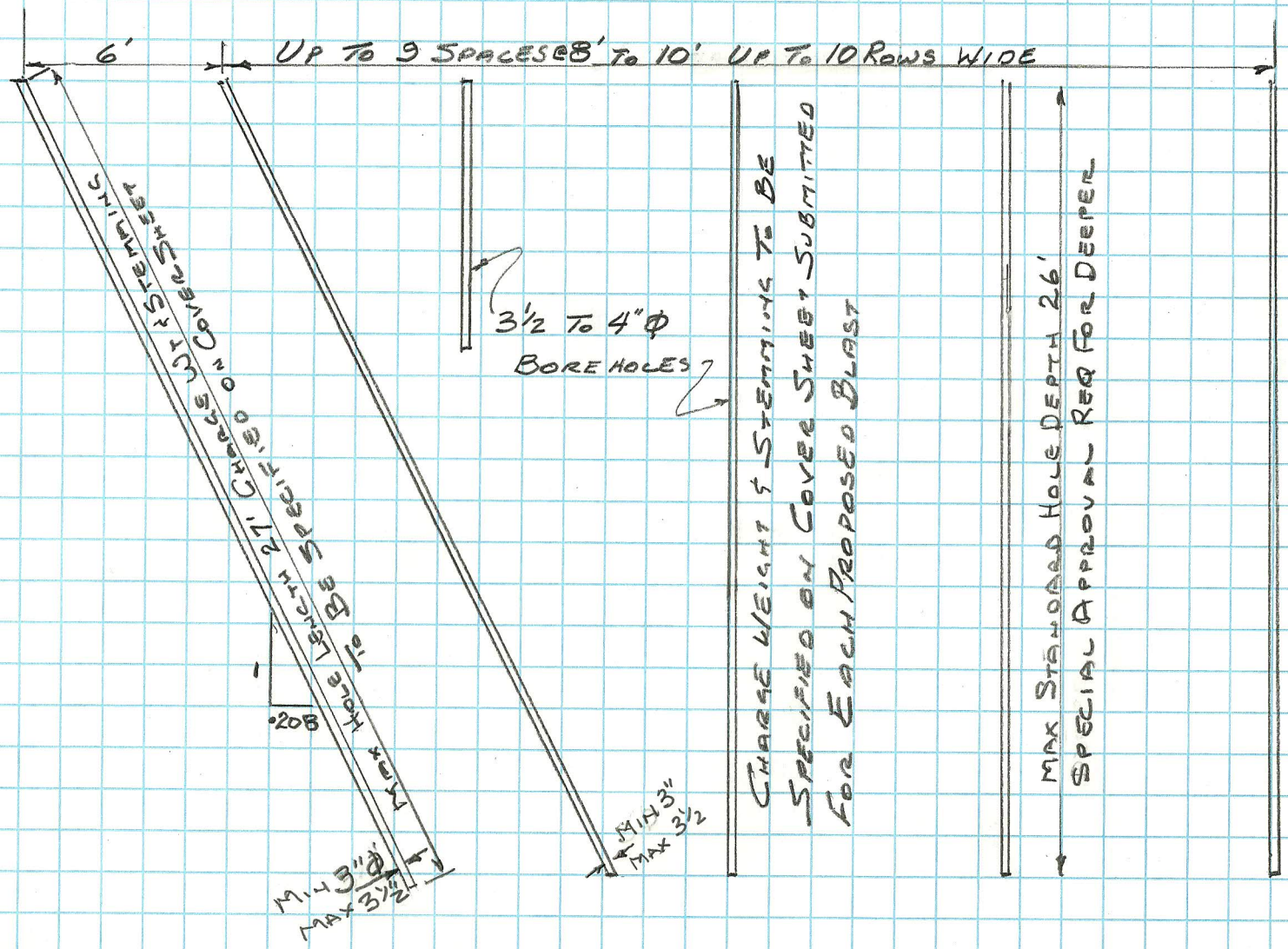
Note: Production blast holes will only be fired if pre-split line is blasted in combination or prior to the blast for a distance of 30 feet at the beginning and end of production blasting.



BLAST DESIGN COMPONENT D

SCALE 1" = 20'

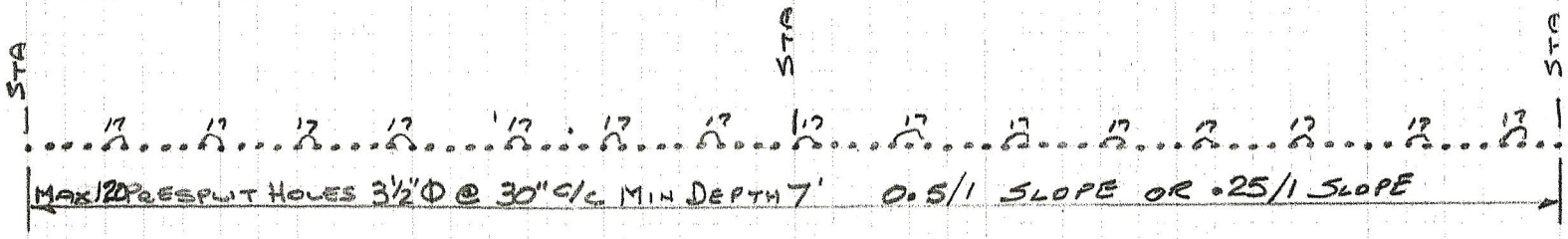
NOTE: WHEN LESS THAN 8 ROWS OF HOLES ARE USED ROWS NEAREST SHOULD BE DROPPED FROM THE TIMING PATTERN FIRST



STANDARD BLAST DESIGN COMPONENT B

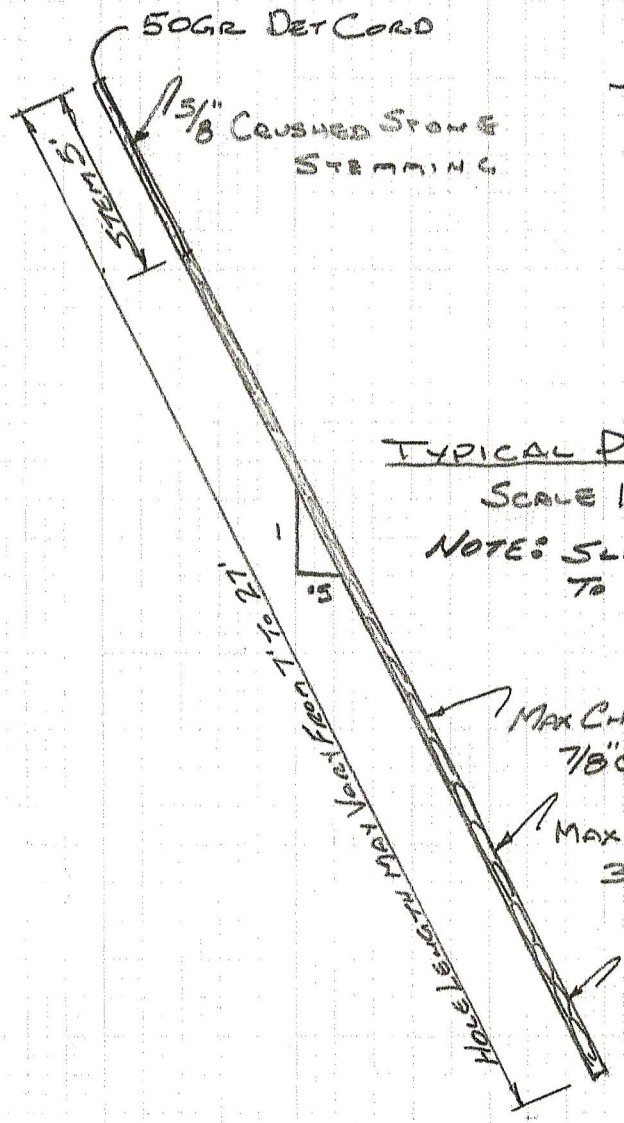
SCALE 1" = 5'

TODAY DATE: SEPT 24, 10



PLAN VIEW STANDARD BLAST COMPONENT C

SCALE: 1" = 25'



TYPICAL PRESPLIT HOLE

SCALE 1" = 5'

NOTE: SLOPE MAY VARY FROM .25/1 TO .5/1 (SHOWN AS .5/1)

MAX CHARGE WT 7.1# SENETEL POWERSPLIT 7/8"Φ x 16" L

MAX 5 HOLES PER 17ms DELAY 35.6# DELAY MAX

HOLE DIA MAY BE 3"Φ IN LAPILLI TUFF OR 3½" IN WEAK BASALT

PROPOSED BLAST #: 44

PROPOSED DATE: SEPT 27, 2010

SUBMITTED BY: CHARLES MURPHY