



**MWRA**  
**STONEHAM-READING**  
**CONNECTION**

**36" WATER PIPELINE**  
**CONSTRUCTION**

# RELATED PROJECTS

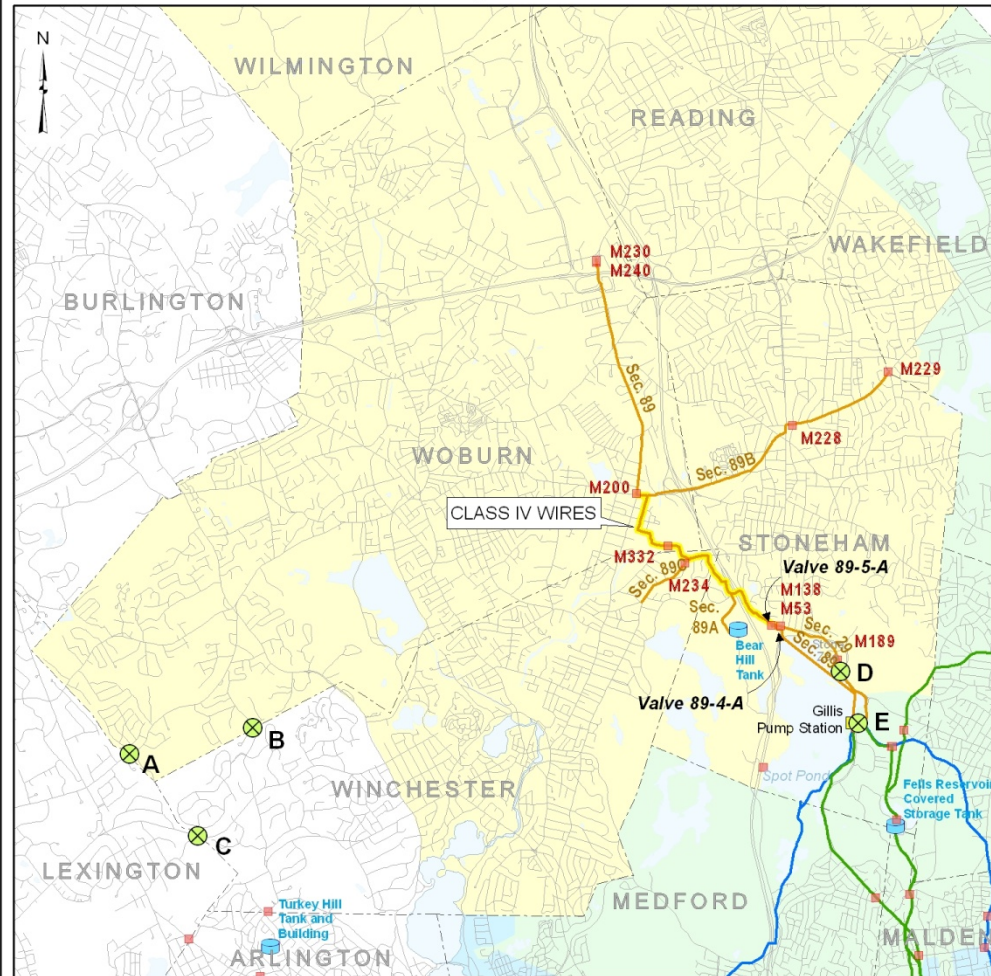
- Meter 70, 12-inch Main – Woodland Rd.
- (near Spot Pond)
- Spot Pond Storage Facility
- NIH Redundant Pipeline
- Other Short Term Improvements



1 inch = 565 feet

FIGURE 1 SITE LOCATION

## Exhibit B NIH Short Term Improvements Completed



- |                                 |                      |
|---------------------------------|----------------------|
| <b>Pressure Zones</b>           | ⊗ Construction Sites |
| Low                             | ■ MWRA Water Meters  |
| High                            | ● Storage Tanks      |
| Northern Intermediate High      | ⊞ Pump Stations      |
| <b>Water Distribution Pipes</b> |                      |
| Low Service                     |                      |
| High Service                    |                      |
| Northern Intermediate High      |                      |
| Class IV Wires                  |                      |

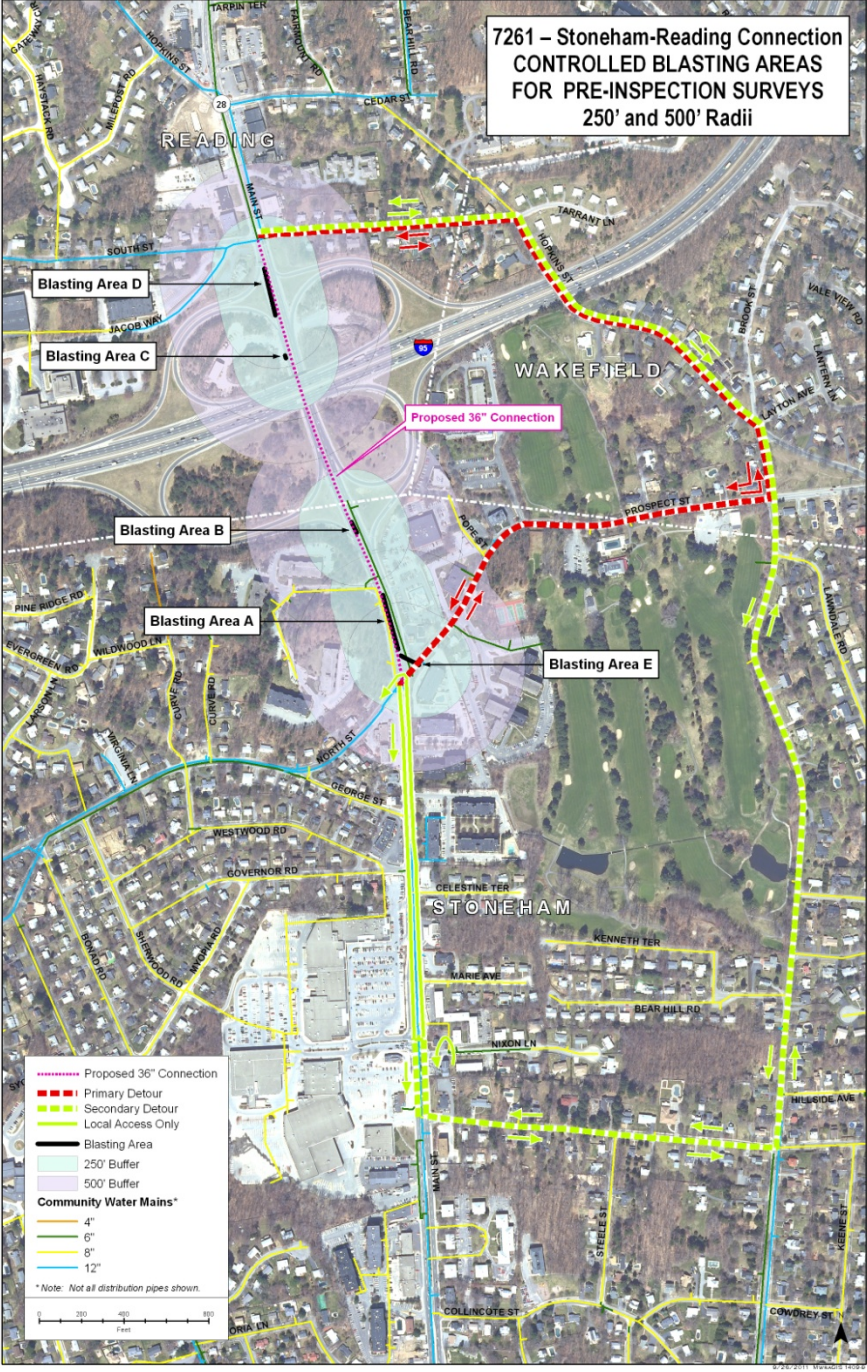
Scale 0 1,250 2,500 5,000 Feet

- A - Lexington-Woburn Connection
- B - Winchester-Woburn Connection
- C - Lexington-Winchester Connection
- D - Pumping Pipes at Stone Zoo
- E - Connection - Section 13 to Section 29

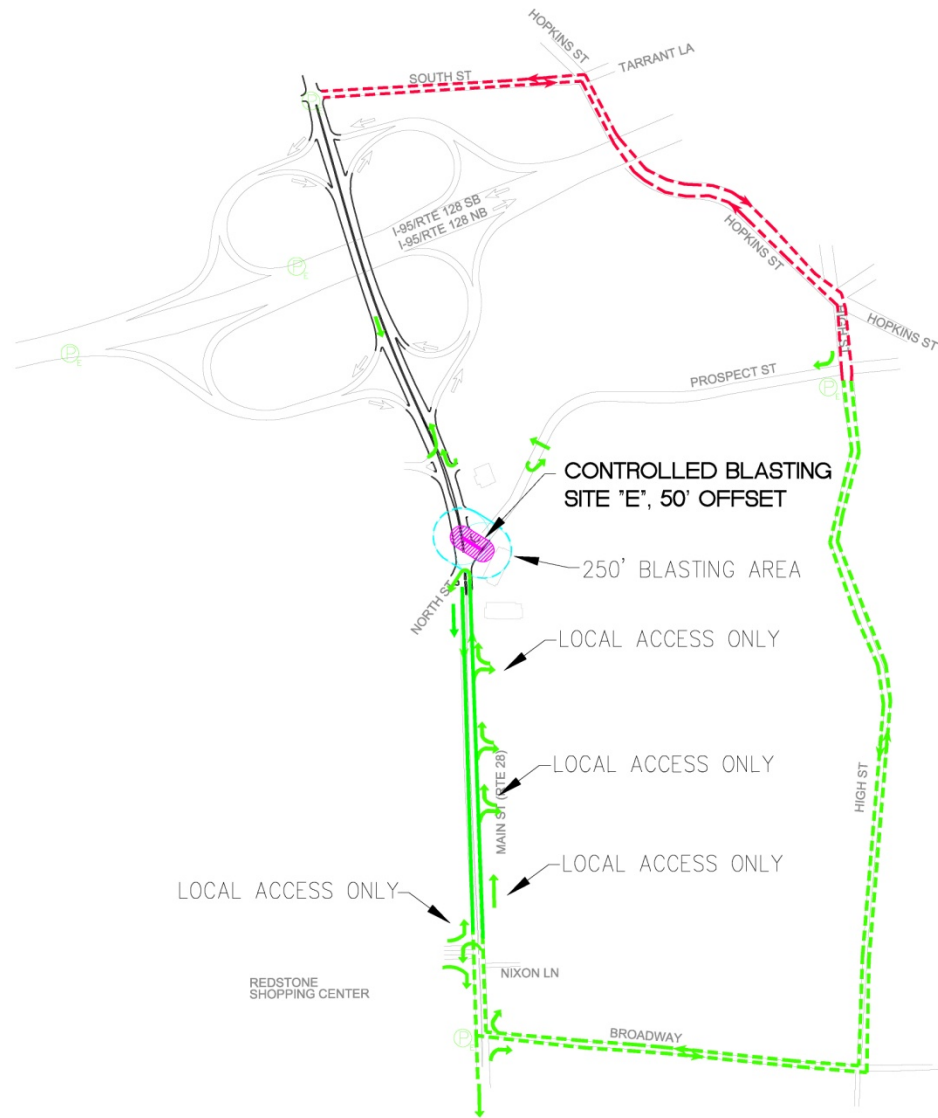
# Contract 7261, Stoneham-Reading Connection



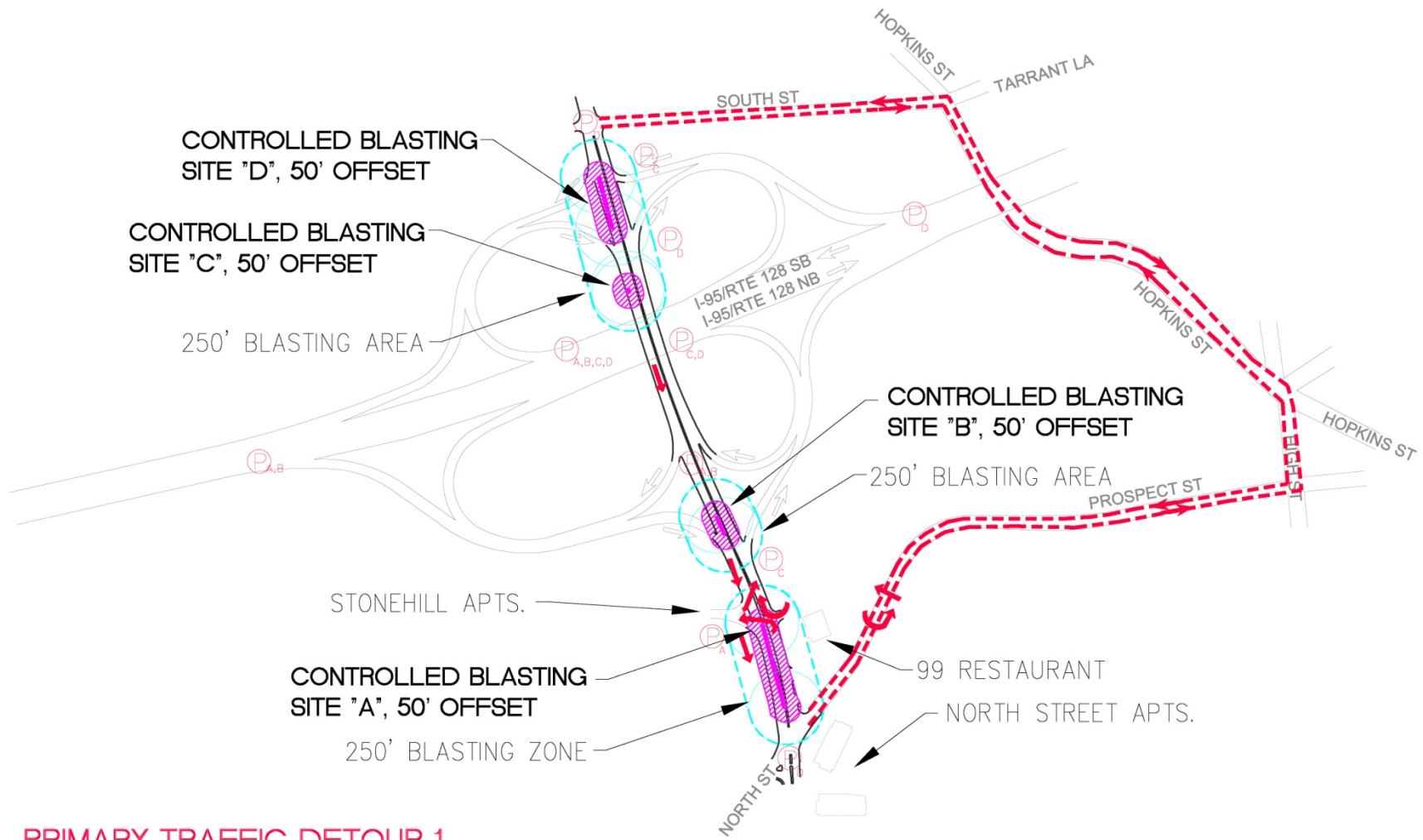
**7261 – Stoneham-Reading Connection  
CONTROLLED BLASTING AREAS  
FOR PRE-INSPECTION SURVEYS  
250' and 500' Radii**



\* Note: Not all distribution pipes shown.



**SECONDARY TRAFFIC DETOUR 2**  
 SCALE: NONE  
 (FOR CONTROLLED BLAST AREA E ONLY)



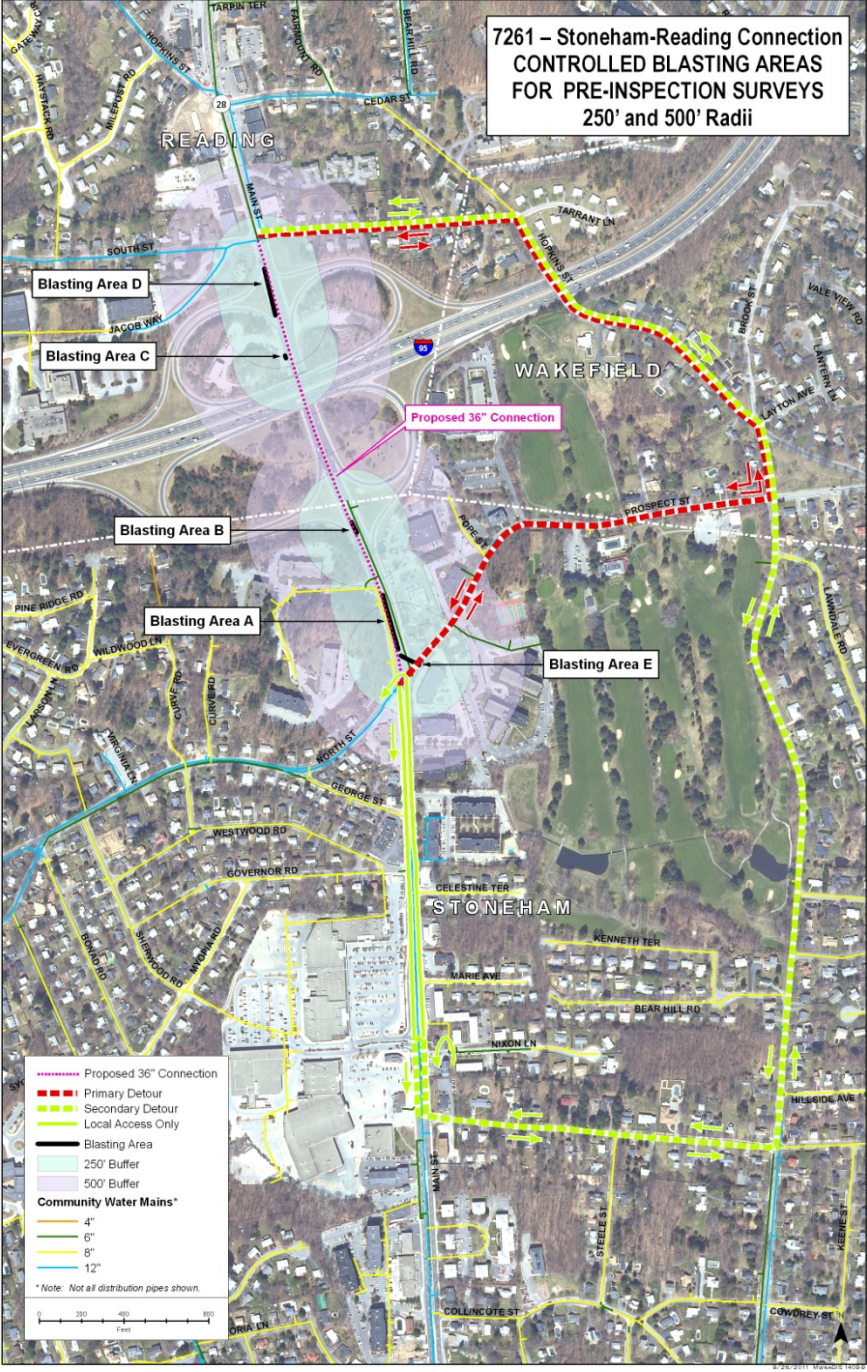
**PRIMARY TRAFFIC DETOUR 1**

SCALE : NONE

(FOR CONTROLLED BLAST AREAS A,B,C+D)



**7261 – Stoneham-Reading Connection  
CONTROLLED BLASTING AREAS  
FOR PRE-INSPECTION SURVEYS  
250' and 500' Radii**





## Albanese D&S, Inc.

66 Silva Lane  
Dracut, MA 01826

Phone: 978-937-0909  
Fax: 978-937-9292

RE: **MWRA 7261 Stoneham/Reading - Concise List of Activity Timeline**

1. **Phase 1 - STA 22+38 to 21+00** (Rt 28 at South Street): 10/2 to 10/12 (7 work nights +/- 1 night) = potential for up to 8 work nights. Please note this accounts for the Holiday weekend. Flow Through Traffic Sequence #1 will be implemented (see attached).
2. **Phase 2 - STA 0+00 to 2+00** (Rt 28 at North Street): 10/11 to 10/27 (13 work day and night shifts +/- 2 shifts) = potential for up to 15 work shifts. Flow Through Traffic Sequence # 1a,8,9,10,11,12 will be implemented (see attached and contract drawing T-3). The following task will occur within the work of Phase 2:
  - a. Controlled Blasting Area E: 10/25/11 (1 work night +/- 2 nights) = potential for up to 3 detour nights from Broadway to High St (Stoneham) to Prospect St. & Hopkins St. (Wakefield) to South St. (Reading) to be known as Secondary Detour Route #2.
3. **Phase 3 - STA 9+24 to 21+00** (Rt 28 SB): 10/13 to 11/6 (17 work nights +/- 4 nights) = potential for up to 21 work nights. Flow Through Traffic Sequence #4,5,6,7 will be implemented (see attached). The following tasks will occur within the work of Phase 3:
  - a. Work Area under Rte. 128 Bridge (3 work nights +/- 1 night) = potential for up to 4 detour nights from North Street (Stoneham) to Prospect Street and Hopkins Street (Wakefield) to South Street (Reading) to be known as Primary Detour Route #1
  - b. Controlled Blasting Area C: 10/26/11 (1 work night +/- 1 night) = potential for up to 2 detour nights with Primary Detour Route #1
  - c. Controlled blasting Area D: 10/30/11 - 11/2/11 ( 4 work nights +/- 2 nights) = potential for up to 6 detour nights with Primary Detour Route #1
4. **Phase 4 - STA 9+24 to 2+00** (Rt 28 SB): 10/30 to 11/21 (16 work nights +/- 4 nights) = potential for up to 20 work nights. Please note this accounts for the Holiday weekend. Flow Through Traffic Sequence #4,5,7 will be implemented (see attached). The following tasks will occur within the work of Phase 4:
  - a. Controlled Blasting Area B: 11/1/11 - 11/2/11 (2 work nights +/- 2 nights) = potential for up to 4 detour nights with Primary Detour Route #1.
  - b. Controlled Blasting Area A: 11/9/11 - 11/16/11 (5 work nights +/- 2 nights) = potential for up to 7 detour nights with Primary Detour Route #1.

### ADDITIONAL NOTES:

- (a) Daytime Activities
  - a. Week of 9/26 - Traffic Median Cut at North Street, remove portion of guardrail for Stonehill Drive, and saw cutting
  - b. Week of 10/2 - Pre drill for rock
- (b) Paving activities will follow mainline work during the day and at night

## CONTROLLED BLASTING PROGRAM

Blasting will occur on \_\_\_\_\_ and is expected to occur 2 to 3 times a work shift, 5 days a week. Blasting is scheduled to be completed \_\_\_\_\_ weeks from the start of work at the blast site.

The following sequence of construction for blasting will be utilized.

1. Remove soil extending from the road surface to the top of rock.
2. Locate and clean out pre-drilled bore holes.
3. Load explosives into the bore holes.
4. After loading of the holes is complete place blasting mats over the holes to prevent fly rock from exiting the trench area.
5. Connect the explosives lead line to the detonator. When the detonator is connected begin horn signals for blasting consisting of the following:

**Five Minute Warning - 3 long horn blasts.**

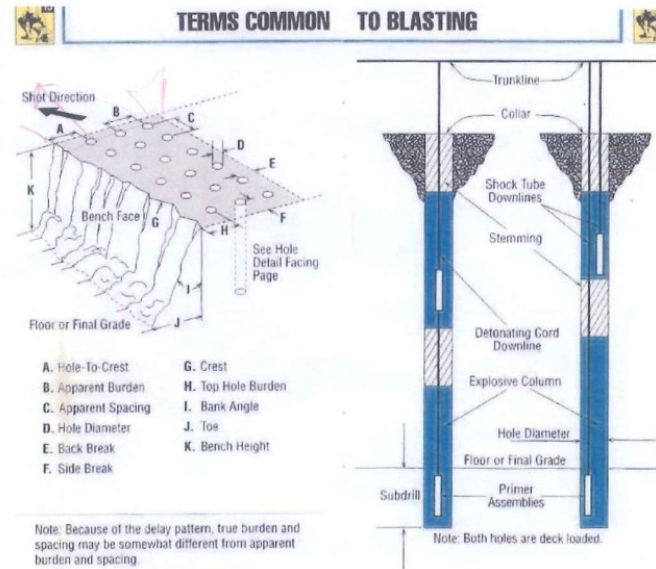
**One Minute Warning - 2 horn blasts.**

**Detonate Explosive**

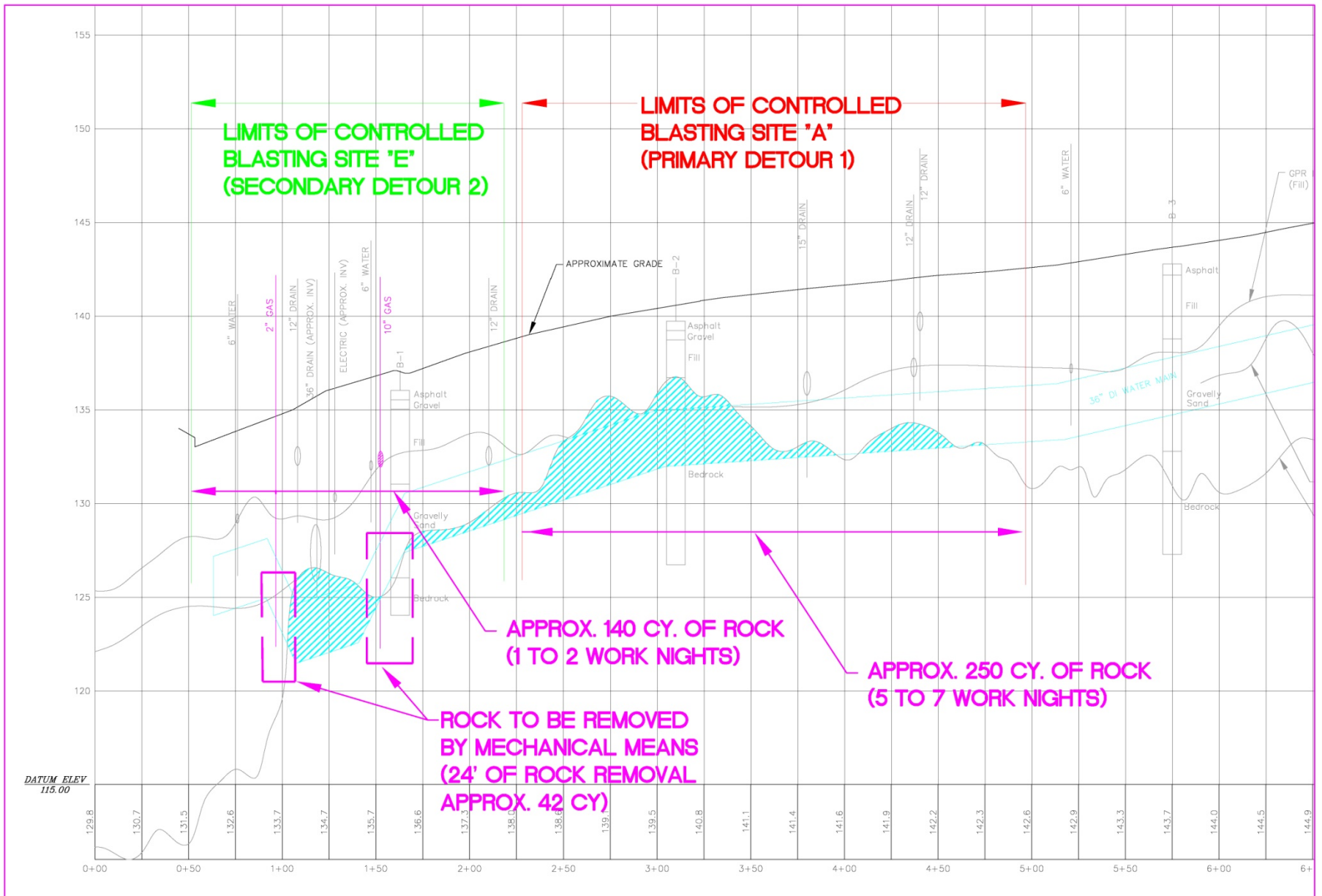
**All Clear Signal - one prolonged horn blast following inspection of the blast area.**

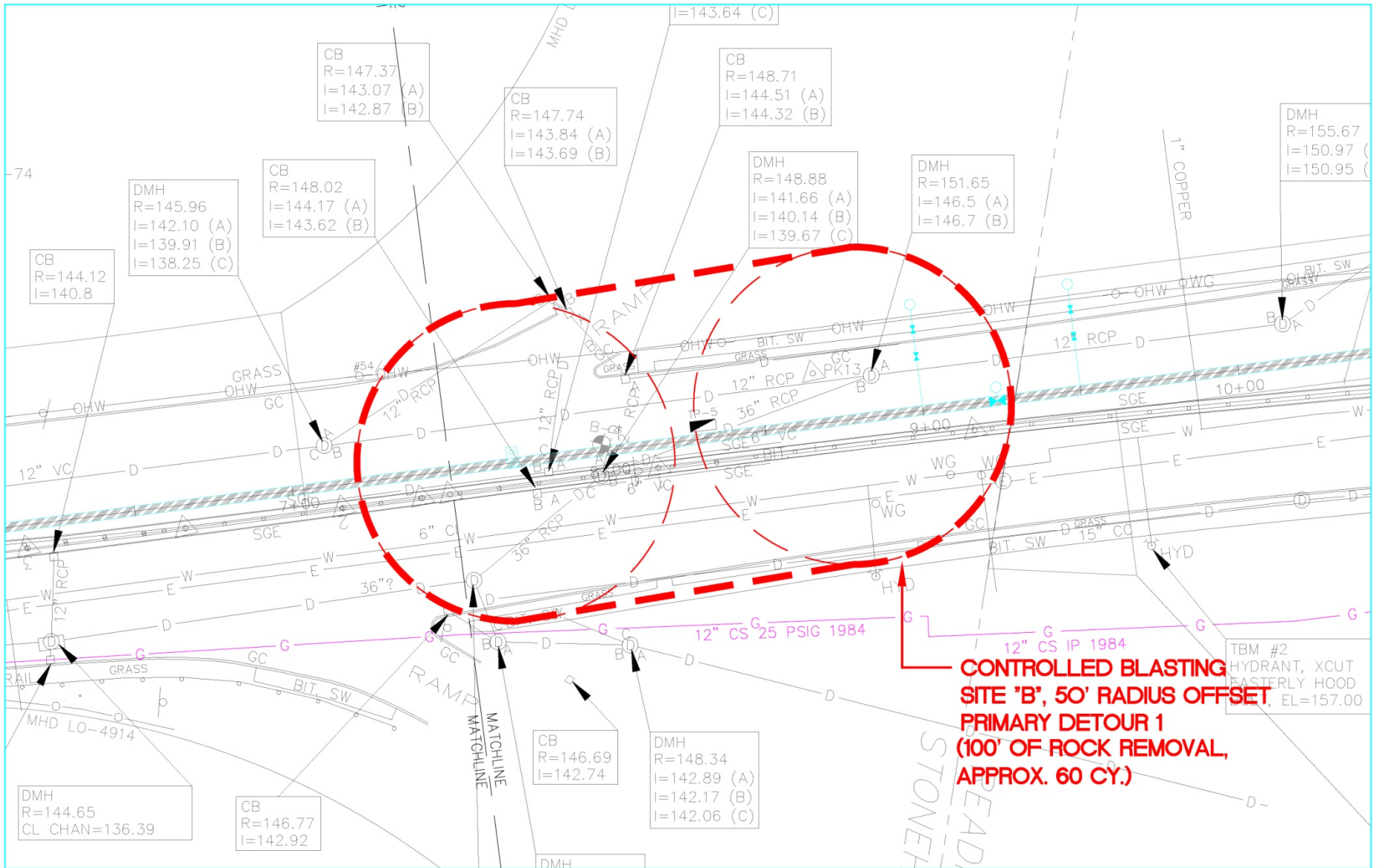
6. Remove blasting mats, excavate blasted rock.
7. Continue the excavation to pipe grade, install pipe, backfill.
8. Repeat Steps 1-7.

All blasting operations are monitored using an instrument called Seismograph which verifies and provides a record that the blast parameters are within the State Board of Fire Prevention limits.









**CONTROLLED BLASTING  
SITE 'B', 50' RADIUS OFFSET  
PRIMARY DETOUR 1  
(100' OF ROCK REMOVAL,  
APPROX. 60 CY.)**

CB  
R=147.37  
I=143.07 (A)  
I=142.87 (B)

CB  
R=147.74  
I=143.84 (A)  
I=143.69 (B)

CB  
R=148.71  
I=144.51 (A)  
I=144.32 (B)

DMH  
R=155.67  
I=150.97 (A)  
I=150.95 (B)

CB  
R=148.02  
I=144.17 (A)  
I=143.62 (B)

DMH  
R=148.88  
I=141.66 (A)  
I=140.14 (B)  
I=139.67 (C)

DMH  
R=151.65  
I=146.5 (A)  
I=146.7 (B)

CB  
R=144.12  
I=140.8

DMH  
R=145.96  
I=142.10 (A)  
I=139.91 (B)  
I=138.25 (C)

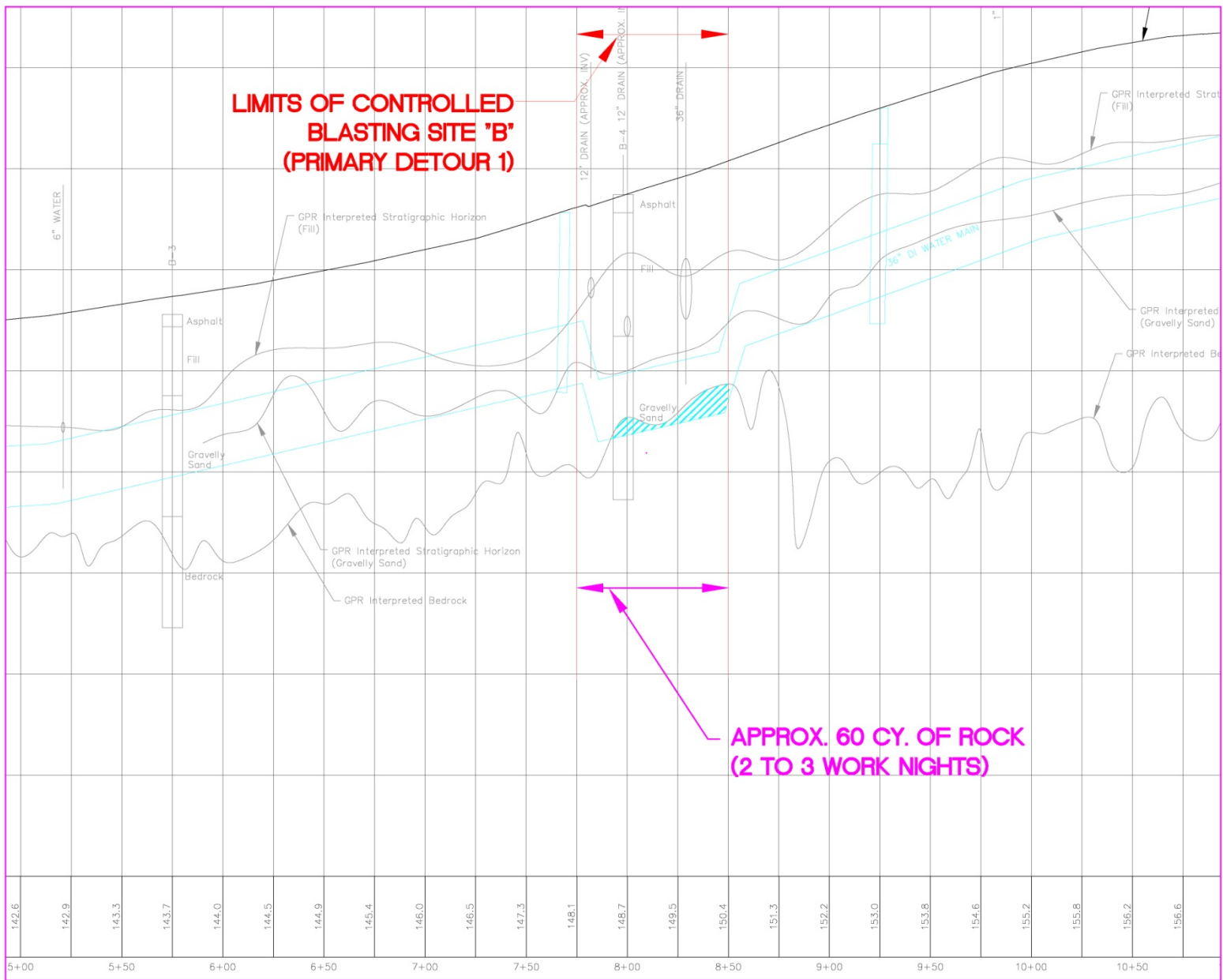
CB  
R=146.69  
I=142.74

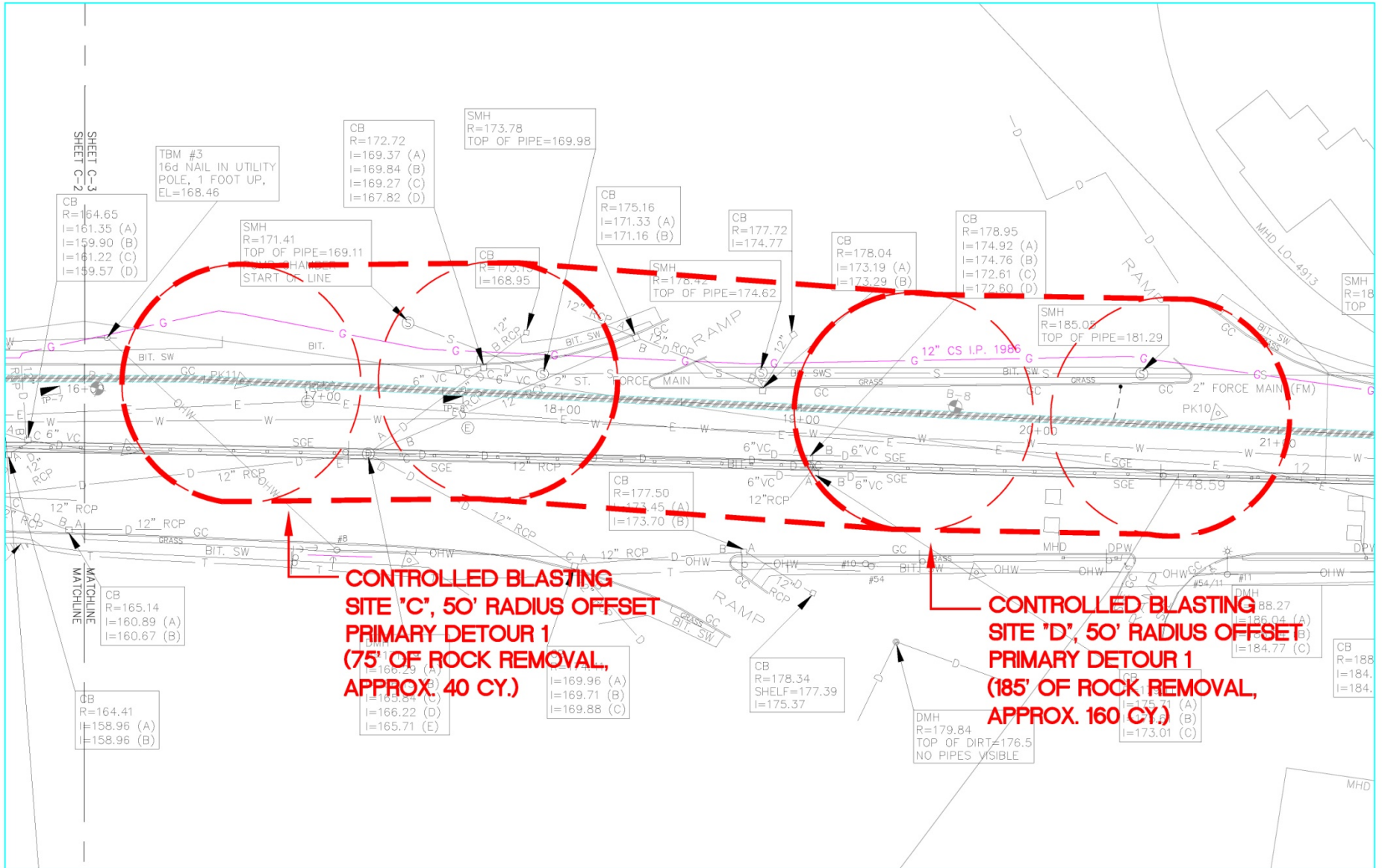
DMH  
R=148.34  
I=142.89 (A)  
I=142.17 (B)  
I=142.06 (C)

DMH  
R=144.65  
CL CHAN=136.39

CB  
R=146.77  
I=142.92

TBM #2  
HYDRANT, XCUT  
EASTERLY HOOD  
EL=157.00





SHEET C-3  
SHEET C-2

TBM #3  
16d NAIL IN UTILITY  
POLE, 1 FOOT UP,  
EL=168.46

CB  
R=172.72  
I=169.37 (A)  
I=169.84 (B)  
I=169.27 (C)  
I=167.82 (D)

SMH  
R=173.78  
TOP OF PIPE=169.98

CB  
R=175.16  
I=171.33 (A)  
I=171.16 (B)

CB  
R=177.72  
I=174.77

CB  
R=178.95  
I=174.92 (A)  
I=174.76 (B)  
I=172.61 (C)  
I=172.60 (D)

SMH  
R=18  
TOP

SMH  
R=171.41  
TOP OF PIPE=169.11  
CROSS HATCHES  
START OF LINE

CB  
R=173.5  
I=168.95

SMH  
R=178.42  
TOP OF PIPE=174.62

CB  
R=178.04  
I=173.19 (A)  
I=173.29 (B)

SMH  
R=185.05  
TOP OF PIPE=181.29

CB  
R=177.50  
I=173.45 (A)  
I=173.70 (B)

CB  
R=165.14  
I=160.89 (A)  
I=160.67 (B)

CB  
R=164.41  
I=158.96 (A)  
I=158.96 (B)

**CONTROLLED BLASTING  
SITE 'C', 50' RADIUS OFFSET  
PRIMARY DETOUR 1  
(75' OF ROCK REMOVAL,  
APPROX. 40 CY.)**

I=166.29 (A)  
I=166.22 (B)  
I=165.94 (C)  
I=166.22 (D)  
I=165.71 (E)

I=169.96 (A)  
I=169.71 (B)  
I=169.88 (C)

CB  
R=178.34  
SHELF=177.39  
I=175.37

**CONTROLLED BLASTING  
SITE 'D', 50' RADIUS OFFSET  
PRIMARY DETOUR 1  
(185' OF ROCK REMOVAL,  
APPROX. 160 CY.)**

I=175.71 (A)  
I=173.01 (B)  
I=173.01 (C)

CB  
R=188  
I=184.  
I=184.

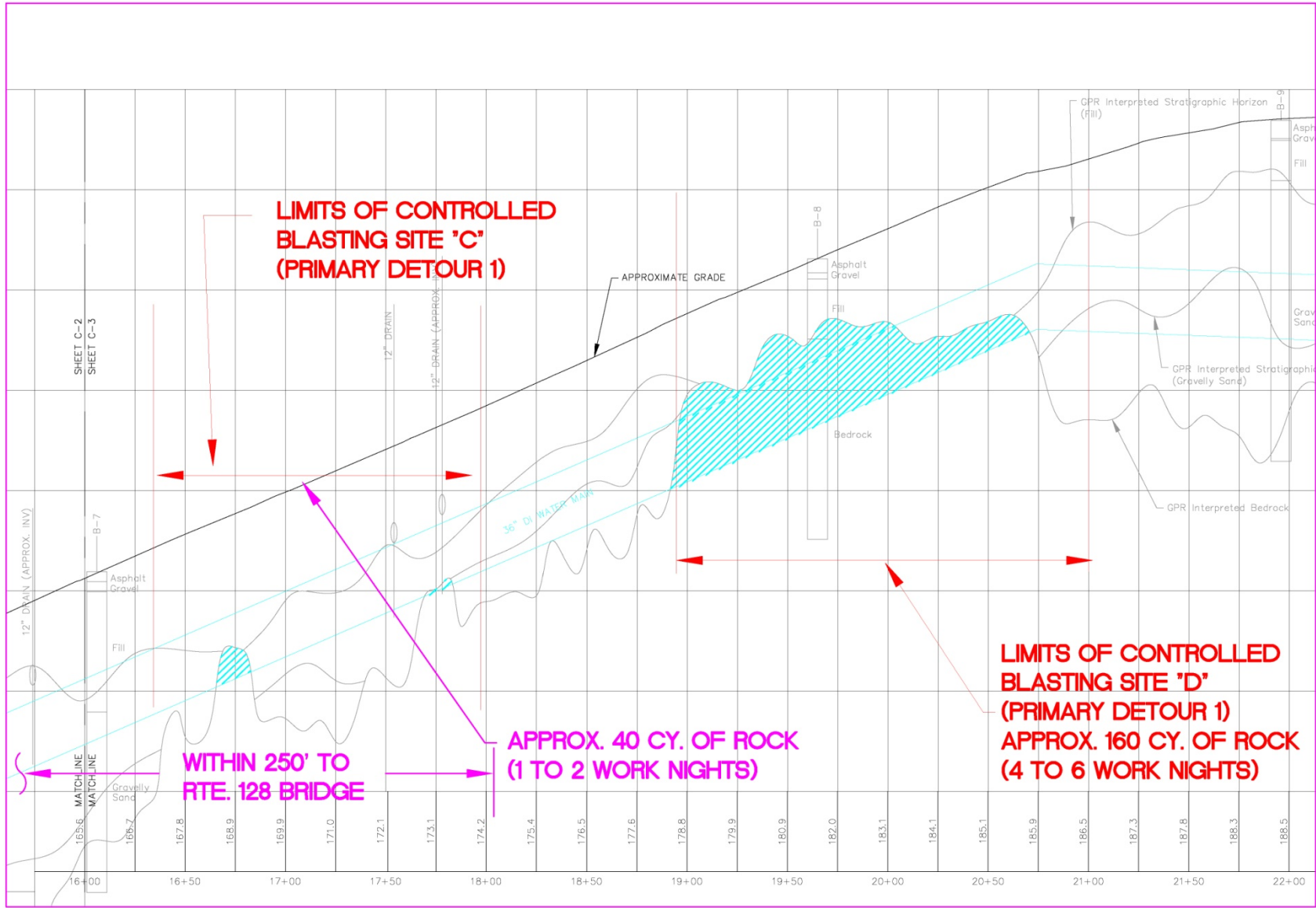
DMH  
R=179.84  
TOP OF DIRT=176.5  
NO PIPES VISIBLE

DMH  
R=88.27  
I=186.04 (A)  
I=184.77 (C)

CB  
R=188  
I=184.  
I=184.

MHD





**LIMITS OF CONTROLLED  
BLASTING SITE 'C'  
(PRIMARY DETOUR 1)**

**LIMITS OF CONTROLLED  
BLASTING SITE 'D'  
(PRIMARY DETOUR 1)  
APPROX. 160 CY. OF ROCK  
(4 TO 6 WORK NIGHTS)**

**WITHIN 250'  
TO  
RTE. 128 BRIDGE**

**APPROX. 40 CY. OF ROCK  
(1 TO 2 WORK NIGHTS)**

SHEET C-2  
SHEET C-3

12" DRAIN (APPROX. INV)

Asphalt Gravel

Fill

Gravelly Sand

APPROXIMATE GRADE

36" DI WATER MAIN

Bedrock

GPR Interpreted Stratigraphic Horizon (Fill)

Asph Gravel  
Fill

Gravelly Sand

GPR Interpreted Stratigraphic (Gravelly Sand)

GPR Interpreted Bedrock

16+00

16+50

17+00

17+50

18+00

18+50

19+00

19+50

20+00

20+50

21+00

21+50

22+00

# Contract 7261, Stoneham-Reading Connection

