

MILLER CONSTRUCTION, INC.

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TRANSMITTAL

TO: Kristin M. Higgins, PE Project Manager Vermont Agency of Transportation	DATE	PROJECT NO.
	5/7/2014	Barnard ER BRF 0241 (39)

XX

WE ENCLOSE THE FOLLOWING:

UNDER SEPARATE COVER WE ARE SENDING THE FOLLOWING

COPIES	NUMBER	DESCRIPTION	CODE
1		Schedule Narrative - Rev 4 - May	H
1		Schedule Dated 05/07/14	H

CODE:

A FOR INITIAL APPROVAL

B FOR FINAL APPROVAL

C APPROVED AS NOTED-RESUBMISSION REQUIRED

D APPROVED AS NOTED-RESUBMISSION NOT REQUIRED

E DISAPPROVED-RESUBMIT

F QUOTATION REQUESTED

G APPROVED

H FOR APPROVAL

I AS REQUESTED OR REQUIRED

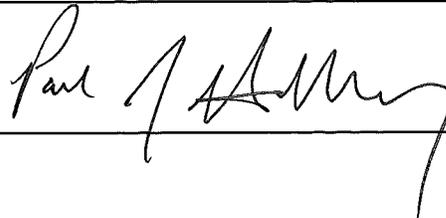
J FOR USE IN ERECTION

K LETTER FOLLOWS

L FOR FIELD CHECK

M FOR YOUR USE

BY: _____





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05/07/14

Barnard ER BRF 0241 (39) – Schedule Narrative – Revision 4

Project Overview:

The Barnard ER BRF 0241 (39) Project involves the replacement of Bridge 25 with related approach and channel work. The project location is in the Town of Barnard, VT on Vermont Route 12, beginning at Mile Post 7.0195 and ending at Mile Post 7.0535. The new structure will be approximately 88 feet in length with 97 feet of roadway work.

The intent of the Project is to have the bridge closure period (BCP) be as short a duration as possible. The allowable BCP is 28 consecutive calendar days. During the BCP, work will be allowed on the bridge 24 hours per day, 7 days per week, including holiday periods.

The Contract Completion Date is August 29, 2014. The BCP shall begin on or after June 20, 2014.

Monthly Updates:

Work performed during the previous Monthly Period is limited to Pre-Construction activities and is as follows:

- Approval of Lighting Plan – 4/9/14
- Approval of CPM Schedule Update: April – 4/11/14
- Submission of Precast Structure Erection Plan – 4/18/14
- Rejection of Precast Structure Erection Plan – 5/1/14
- Submission of CPM Schedule Update: May – 5/7/14

Schedule:

The Miller Construction, Inc. approach in preparing the Preliminary Project Baseline Schedule is to sequence activities as logically and efficiently as possible. All activities comprise of basic bridge building concepts with finish-start relationships.

Pre-Construction:

Pre-Construction activities include the submission and subsequent approval of all required submittals. There are (12) twelve required submittals for the project and status of each is as follows:

- CPM Schedule Software Request – Approved
- Bearing Device Assembly – Approved
- Rail Box Beam – Approved
- CPM Schedule – Approved
- Precast Structure Design – Approved
- EPSC Plan – Approved
- Reinforcing Steel – Approved
- Traffic Control Plan – Approved



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HPC Rapid Set Mix – Approved
Piling Information / WEAP – Approved
Lighting Plan – Approved
Precast Structure Erection Plan – Pending Revised Submission

Pre-Construction activities also include the procurement of material. The status of material with significant lead time is as follows:

Bearing Device Assembly – Stockpiled at Miller Construction, Inc.
Piling – Rolled and Stockpiled at R.W. Conklin Steel
Bridge & Approach Rail – Ordered and will be stockpiled at F.R. Lafayette
Level II Reinforcing Steel – Stockpiled at Dimension Fabricators, Inc.
Precast Concrete – Stockpiled at J.P. Carrara & Sons, Inc.

A potential conflict that exists is the cost of stockpiling material. Due to the short duration of the project, material must be on hand well before the start of construction. Because stockpile payments are not allowed for items with Contract bid amount less than \$25,000, several items (Piling, Bearing Device Assembly, Reinforcing Steel, and certain Rail Items) must be paid for up front by Miller Construction Inc. with no payment for said items being received until the months of July and August. Additionally, no Raw Material Stockpile Payment or exception to the 75% Cap on Stockpiled Materials has been authorized for the project.

Pre-Construction activities also include the submission and subsequent approval of all proposed subcontracts. Currently, all anticipated subcontracts for the project have been submitted and approved.

Pre-Closure:

Pre-Closure activities include the Resident Engineer's trailer setup, building inspection of the property located at 8354 VT Rt. 107/12, detour signage installation, and equipment mobilization.

Resident Engineer's Trailer Setup:

An agreement has been made with a landowner to stage the Engineer's trailer on an adjacent property. Use of this site has been approved by VTrans Natural and Cultural Resources.

Building Inspection:

Continental Placer, Inc. will perform a building inspection of the property located at 8354 VT Rt. 12/107 prior to any construction activity.

Detour Signage Installation:

Detour signage shall be installed and covered in the Month of May. Covers shall remain in place until Route 12 is closed and the detour is opened.



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Equipment Mobilization:

Other projects and commitments have been scheduled so that maintenance and mobilization of equipment can occur during the second week in June.

One potential conflict that exists is that the Engineer's trailer location is within a special flood hazard area. The project is late in the season and it is expected that there is minimum potential for flooding in the area. Should this location be uninhabitable, an alternate area in either an adjacent structure or within the paved approach area shall be utilized.

Closure:

Closure activities include the removal of the existing temporary bridge and subsequent construction of the new structure. All work up to, and including the membrane, base course of pavement on the approaches, and line striping targets is required to open the bridge to two-way traffic.

One potential conflict that exists is the piling operation. It is assumed that piles can be driven unobstructed to the required minimum tolerance, depth, and resistance. Piling falls on the critical path, so any unforeseen issues and/or inefficiencies will be detrimental to schedule and to the project.

A second potential conflict that exists is weather. As with any project, it is possible to experience conditions to include, but not limited to, extreme heat, rain, flood, and wind. The contract states that that the BCP is absolutely fixed and will not be changed for any Act of God, omission, improper action, direction of the Engineer, or any other reason unless done so by the Secretary and only under extreme conditions as determined by the Secretary. Every effort shall be made to work though extreme conditions in a safe and productive manner.

Post-Closure:

Post-Closure activities include the removal of the detour signage and traffic control devices, demobilization, and subsequent removal of the Engineer's Trailer.

All contract items may not be complete at the time of releasing traffic onto Route 12. Such remaining items include, but are not limited to, final pavement, line striping, and site reclamation. If required, such work shall be performed with full time, certified flaggers and the schedule adjusted accordingly.

Resources:

It is assumed that two crews will be working extended hours over a seven-day workweek during the BCP. At this time, no night work is anticipated, but it shall be implemented should it be deemed necessary.

Crew fatigue is a major concern for the project. Safety and productivity will need to be monitored on a continuous basis and crew adjustments made accordingly.



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Duration Justification:

Channel Excavation and Stone Fill activities exceed the 12 Hr. task limit during the BCP. None of these activities with the exception of work at Abutment 1 within the bridge limit fall on the Critical Path. All efforts shall be made to expedite the Stone Fill activity at Abutment 1.

Removing Rail & Deck and Hauling of the Temporary Bridge both exceed the 12 Hr. task limit during the BCP. The hauling operation is independent of all other activities after the removal of the Temporary Bridge but falls on the Critical Path because it takes resources away from the project. Should it negatively affect the schedule, bridge components shall be stored and then hauled after the BCP has ended.

Forming of the Backwalls exceeds the 12 Hr. task limit during the BCP. Formwork around the NEXT Beam stems account for the long duration. All efforts shall be made to prefabricate forms in order to expedite the activity.

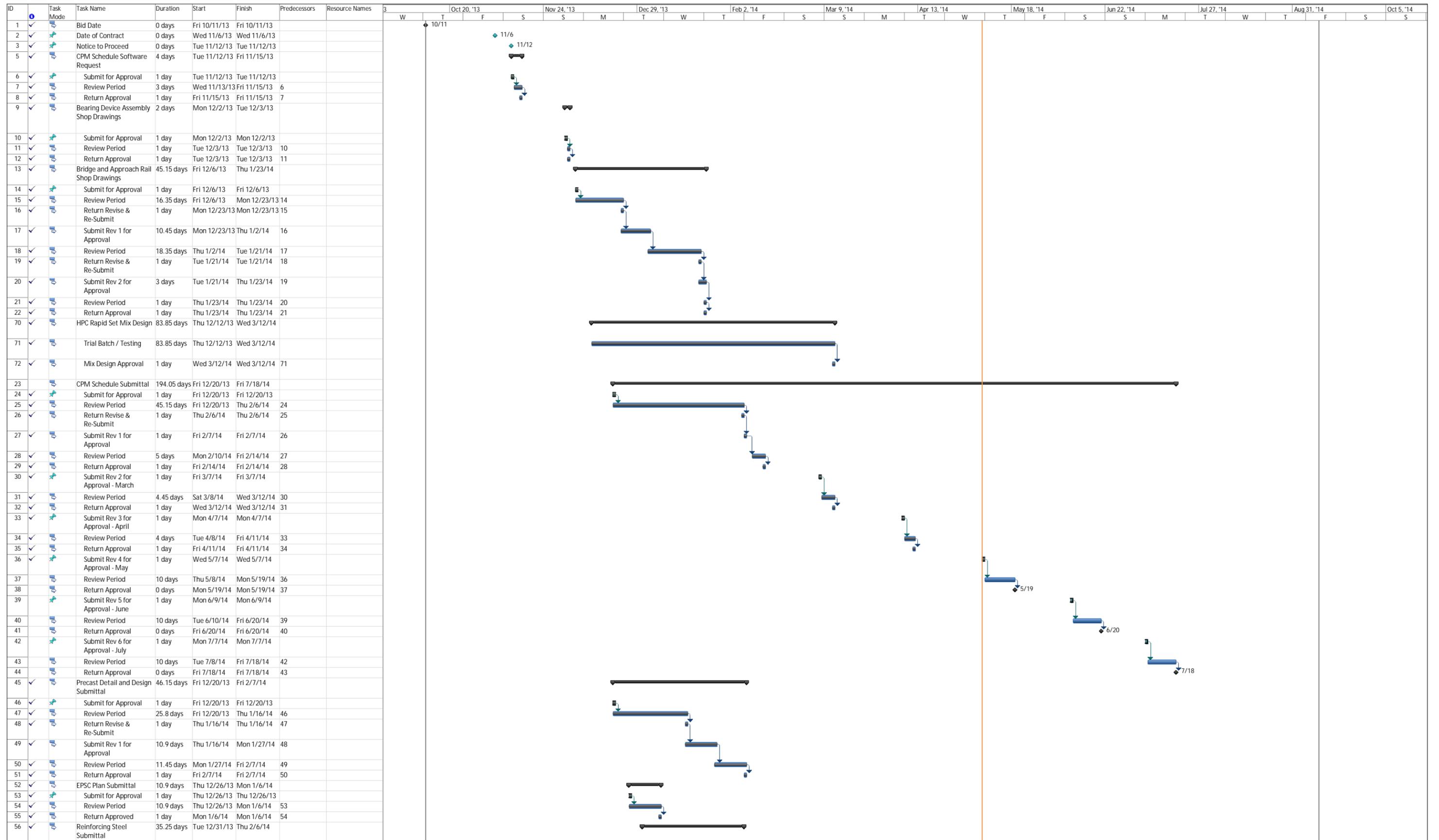
Critical Path:

The Critical Path task bars are colored red, and Critical Path items highlighted yellow.

Milestone Dates are as follows:

10/11/13 Bid Date
11/06/13 Date of Contract
11/12/13 Notice to Proceed
02/19/14 Pre-Construction Meeting
06/20/14 Begin BCP
07/09/14 Superstructure Set
07/18/14 End BCP
08/28/14 Project Completion

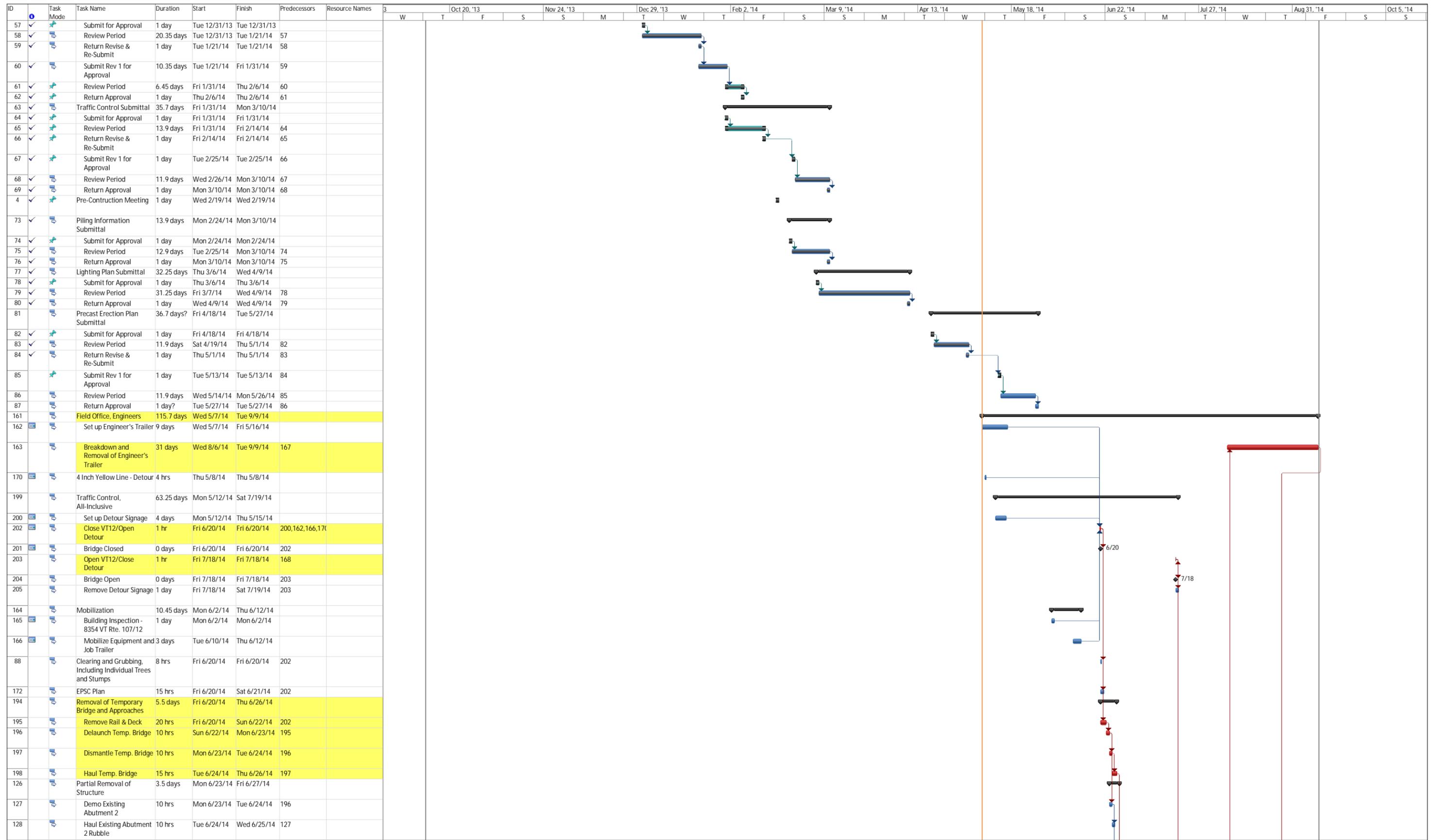
BCP duration is 28 consecutive calendar days.



Project: Barnard ER BRF 0241 (39) Date: Wed 5/7/14

Task Split

■ Milestone ◆ Project Summary ▬ External Milestone ◆ Inactive Milestone ◇ Manual Task
●●●●● Summary ▬ External Tasks ▬ Inactive Task ▬ Inactive Summary ▬ Duration-only ▬ Manual Summary Rollup ▬ Manual Summary ▬ Start-only ▬ Finish-only ▬ Deadline ▬ Critical ▬ Progress ▬ Critical Split



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 Date: Wed 5/7/14

Task Split

Milestone (Blue diamond)
 Summary (Blue dotted line)
 Project Summary (Black diamond)
 External Tasks (Black arrow)
 External Milestone (Grey diamond)
 Inactive Task (Grey arrow)
 Inactive Milestone (Grey diamond)
 Inactive Summary (Grey dotted line)
 Manual Task (Green bar)
 Duration-only (Green arrow)
 Manual Summary Rollup (Green bar with arrow)
 Manual Summary (Green bar)
 Start-only (Blue bar with arrow)
 Finish-only (Blue bar with arrow)
 Deadline (Black square)
 Critical (Black square)
 Critical Split (Green arrow)
 Progress (Red bar)
 (Dotted line)

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