

# WHISTLE REDUCTION EFFORT OVERVIEW



## GOAL

*Reduce train whistles through downtown by implementing the public quiet zone requirements at subject crossings. Subject crossings are at Weber Avenue, Sixth Street, and 8th Street crossings.*

On August 17, 2006, the Federal Railroad Administration (FRA) issued 49 CFR Parts 222 and 229, the Final Rule on Use of Locomotive Horns at Highway-Rail Grade Crossings (Final Rule). The purpose of the rule is to mandate a federal requirement for the sounding of locomotive horns at all public highway-rail grade crossings. This rule also establishes both minimum and maximum decibel levels for the locomotive horns themselves. While the purpose of the rule was to require the sounding of locomotive horns, it also created a methodology by which communities could create quiet zones.

## Requirements for Public Quiet Zone Crossings

In accordance with the Final Rule, each public highway-rail grade crossing within a quiet zone must be equipped with flashing lights, gates and at least one bell. Each public crossing must also be equipped with a Constant Warning Time Device where reasonably practical. A Constant Warning Time Device is an electronic device that activates the railroad gates and lights based on the speed of an approaching train, ensuring consistent warning times for motorists before the train's arrival.

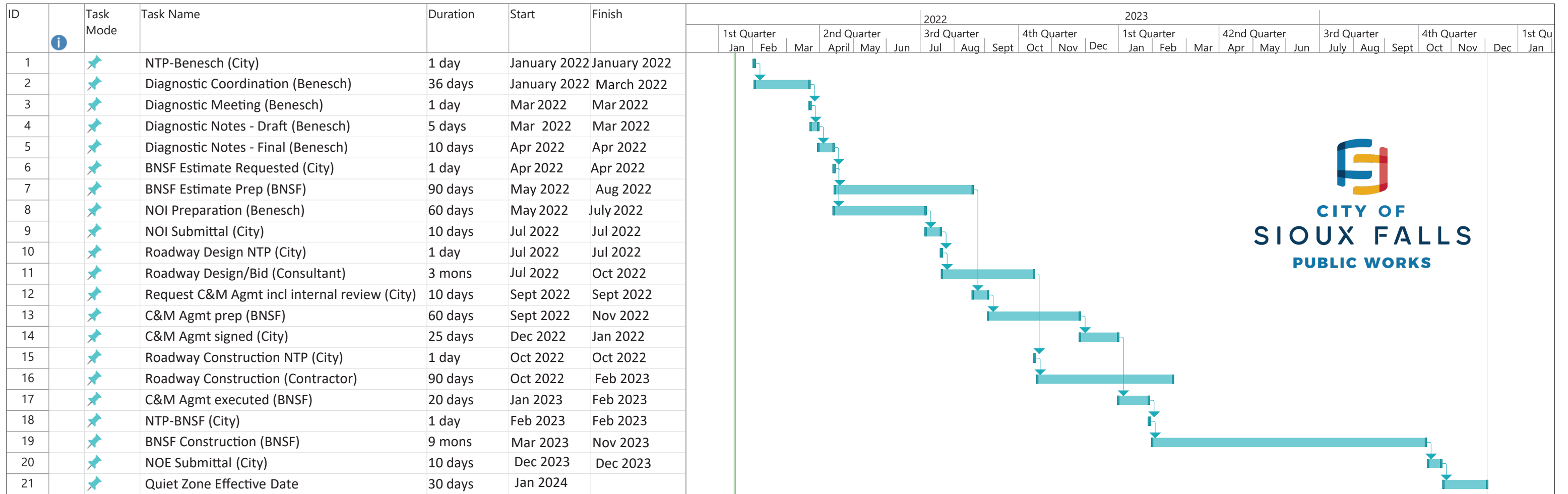
## Supplemental Safety Measures (SSM)

Routine locomotive horn hounding is not required if each highway-rail grade crossing in the proposed quiet zone is equipped with Supplemental Safety Measures (SSMs). SSMs are safety measures that have been determined by the FRA to adequately compensate for the lack of a locomotive horn. Examples of SSMs include:

- Temporary or permanent closure of a crossing
- One-way street with gates
- Gates with medians (non-traversable curbs) or channelization devices
- Four quadrant gate systems

## Sounding of Horns Within a Quiet Zone

The establishment of a quiet zone does not result in total elimination of all train horn noise. The Final Rule allows for the locomotive engineer to sound the locomotive horn before starting movement, to warn men or equipment performing work around or on track, or to comply with other operating rules. It also allows engineers to provide a warning to vehicle operators, animals, pedestrians, trespassers or crews on other trains in an emergency if, in the locomotive engineer's sole judgment, such action is appropriate to prevent imminent injury, death or property damage.



**City of Sioux Falls Notes:**

- City to hire consultant to complete concepts for each intersection layout,; Weber Street, 6th Street, 8th Street. This step was completed in May-November 2021.
- The schedule above uses an example of January 1st Notice to Proceed. Typical time frame is 24 months.
- If approved to move forward, a diagnostic meeting between City, IDG, BNSF and their consultant should be planned for January 2022.
- City maintains the quiet zones for perpetuity, There are annual maintenance costs due to BNSF, roughly \$50K a year.
- Every two and a half years, FRA has to reauthorize the quiet zone. This includes inspection of the pavement markings, confirming median length and height, as any street maintenance impacting the height of the median, signals, and other related items.
- No environmental assessment is required by FRA to install quiet zones. This means no noise studies before/after, no traffic studies, no alternatives analysis, no required public input.
- The pedestrian crossings are the biggest unknown for the design. If we expect a high number of pedestrians crossing, pedestrian gates may be required.
- City to hire an engineering firm to complete all necessary street improvements. For example, the median, sidewalks, pavement markings, street narrowing, signage, communication with traffic signals, etc.
- BNSF will design the actual gates, arms, signals, communication with flashing beacons. They will bill City for the design work and the installation costs.
- City can build the street independently of the gates/arms etc. This means, if need be, we can narrow up the street before BNSF has the crossing designed.
- BNSF is required to sound its horn 1/4 mile in advance of a normal crossing. Cliff Avenue and 14th Street rail crossings are 1/2 mile away. However, the bike trail crossing north of 6th Street is within that 1/4 mile from both the Weber Crossing and the 6th Street crossing. We need to look into this further.

Project: Sioux Falls QZ Schedule Date: Fri 12/6/21	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			