

GUIDANCE

Eligibility for Repair of Local Roads

Overview

Local road surfaces are usually constructed from unclassified materials (a.k.a. dirt roads), aggregate (a.k.a. gravel roads) or bituminous chip and seal (a.k.a. chip and seal). As a tradeoff to higher initial construction costs, these surfaces require more routine maintenance than asphalt and concrete surfaces found on state and federal roads.

There are challenges after natural disasters, especially flooding, in identifying FEMA-eligible disaster related damages on local roads as opposed to normal maintenance that is not eligible for funding. Applicants frequently claim disaster-related damages and request uniform resurfacing of all roads within their jurisdiction rather than repair of damage at specific sites. Many Applicants do not keep records of when and how their roads are maintained in order to show that damages are not the result from lack of maintenance. In other instances, Applicants find it necessary to make repairs to disaster damage prior to site visits by FEMA staff but do not keep photos and other records to assist FEMA in making correct eligibility determinations at a later date.

Purpose and Regulatory Basis

The purpose of this Guidance is to set forth guidance on eligibility of repairing roads back to pre-disaster function and capacity based on 44 CFR § 206.223 **General Work Eligibility** and § 206.226 **Restoration of damaged facilities**. It will address the issue of how maintenance or the lack of maintenance will influence the eligibility determination. It should be noted on page 33 of the PA Guide dated June 2007, “To meet the basic rule of eligibility, an item of work must be required as a direct result of the declared disaster. Normal maintenance items that existed prior to the disaster, such as pothole repair, routine pulling of ditches, and minor gravel replacement, and deferred maintenance such as repairing deteriorated asphalt are not eligible...” The 2nd Appeal for the City of Lackawanna in FEMA-1040-DR-NY dated 2003 was used to gain further insight into FEMA policy. Note: At the end of this Guidance, there is a list of publications used in addressing the technical issues.

General Eligibility

Permanent repair to roads is eligible when there is measurable damage (i.e., appreciable loss of surface, base and/or sub-base such as a minimum of 100 or 200 sq ft of scoured materials) that is the direct result of a disaster. Repair of damage is to restore the roads as they existed immediately prior to the disaster, i.e., pre-disaster function and capacity. The damage should be identified site specific, not broadly described for an entire road system. Applicants should not expect FEMA to fund a new road surface over 100 percent of the road when only 60 percent of the road surface is damaged and the remaining 40 percent is deteriorated from age and use. Descriptions of damage with diagrams should accompany project worksheets such as shown in companion interactive document, *Infrastructure Damage Diagrams*. See sample on page 6.

If road damages are not readily apparent during field visits by FEMA staff, the claims may not be eligible. If repairs have been accomplished prior to visits by FEMA staff, documentation for each site such as photos of damage and specific measurements with labor, equipment and materials used must be available or the claimed damages are not eligible for FEMA funding.

Routine maintenance is not eligible for FEMA funding (Ref: PA Guide, pg.33, dated June 2007). Maintenance is a normal requirement for Applicants, especially for local dirt surface roads, and does not meet the basic eligibility criteria of being damaged directly associated with the disaster. FEMA will not fund repairs due to normal deterioration or loss of useful service due to age. FEMA will not fund the repair of damage from the disaster that is due to lack of maintenance to the road. Loss of gravel or heavy rutting caused by local truck traffic is not damage caused by the disaster and, therefore, not eligible. (See photos starting on page 6).

Disaster-related damage must be visible and measurable adverse alterations to a facility that immediately or imminently threaten the functionality of a road. Projecting the value of loss of future life and functionality is not eligible.

The cost of cleaning road drainage ditches is eligible only when there is a build-up of disaster-generated sediment/silt that would cause an immediate threat to public safety or improved property (i.e., road) by impeding the flow of water or reducing the flow capacity of a ditch so much that it will cause flooding on the roadway or cause saturation to the road base with subsequent failure of the roadway. The disaster-generated sediment/silt must be the majority of that amount necessary to be removed to re-establish the functionality of the ditch; therefore, small amounts or layers of sediment/silt are not eligible. Generally, ditch cleaning should be site specific; therefore, cleaning over long distances (i.e., hundreds of yards or miles) is usually not eligible. (See attached photos.)

Specific Road Types

Dirt Surface Roads

Grading and shaping is generally not eligible because it is a condition of normal maintenance for this type of road design and construction. However, grading and shaping may be eligible if limited to areas where measurable repairs (i.e., loss of base and/or sub-base) are necessary to specific roadway sections.

Rutted surfaces after heavy rains are a common occurrence on dirt roads and grading and shaping is generally not eligible because it is a condition of normal maintenance. When rutting is so severe that it creates a threat to public safety, limited blading to reduce the threat is eligible. FEMA will not pay for the addition of fill material at locations that routinely have rutting problems and reduced access such as low-lying sections of road where water will stand after normal rains and adequate drainage is not in place. Correcting long-standing drainage problems is not eligible. (See attached photos.)

Adding unclassified fill material (not aggregate) is an eligible item at specific sites to fill damaged road surfaces that have severe cutting of base and sub-base caused by swift moving water. When repetitive grading and addition of oversize rock is necessary as a temporary

measure to keep the roadway open, immediately after the incident period, such cost may be eligible if alternate routes are not available. Include the cost with other Category B costs.

Aggregate Surface Roads

Grading and shaping eligibility is limited to areas where measurable repairs (i.e., loss of base and/or /sub-base) are necessary to specific roadway sections. Adding aggregate after heavy rains would be eligible only where it has been eroded by the event and only at specific sites with measurable damages; therefore, adding aggregate uniformly over an entire road system is not eligible. Daily use of aggregate surfaced roads normally causes the loss of material. The addition of aggregate to road surfaces that have not been maintained by routine application of aggregate is not eligible. Maintenance records are required to show routine maintenance has been performed. (See attached photos.)

Bituminous Chip and Seal Surface Roads:

Resurfacing with bituminous chip and seal (to include asphalt concrete) back to the pre-disaster condition is eligible when there are measurable damages (i.e., loss of surface and base) caused by the disaster. When there are numerous small damage areas in a “spotty” or random pattern, the repair estimate may be based on a percentage of the cost to resurface the entire road within which the random damage has occurred rather than by each individual area. The Applicant will need to request Improved Project funding if the Applicant intends to use the FEMA funding towards repaving 100 percent of the road surface.

FEMA will not fund resurfacing when undamaged stretches of the road system show normal deterioration, neglect and lack of maintenance such as alligator cracking, potholes, edge deterioration, widespread cracking, and numerous patches in the chip and seal surface. Pavement failure of this sort is generally due to a combination of insufficient base course, weak sub-base, insufficient drainage in the roadway bed, and/or traffic loading in excess of design parameters. Maintenance records are required to show adequate maintenance has been performed. Applicants are expected to take prudent measures to prevent additional damage after the event. Repair of damage that is due to lack of precautionary measures following an event, such as not barricading to prevent traffic from driving on compromised roads when other routes are available, may not be eligible for FEMA funding. (See attached Photos.)

Applicant Responsibilities

FEMA staff should expect the following from the applicant:

1. Identify maintenance responsibility (State, county, or local government; private; Federal Aid System; or other Federal agency, e.g., Forest Service, Bureau of Indian Affairs [BIA]).
2. Note the county location of roads and location of roads which are the responsibility of the State Highway Department.
3. Be able to demonstrate that the damage is disaster related, and restoration is to pre-disaster conditions and type of pre-disaster road surface.
4. Keep track of road maintenance activities. One never knows when a natural disaster will occur and FEMA grants to repair damaged roads are available. Applicants should be able to show to FEMA that the disaster caused damages to the roads and conditions are not the result of lack of maintenance.

5. Have measurements and photos of the damaged areas before and after repairs when repairs of road damage are necessary prior to site visits by FEMA staff.
6. Set up a filing system to track records of labor, equipment, materials or contract work used for repair for each damage site.
7. Provide evidence of a maintenance program with records to support requests for reimbursement. Documentation should be available to support claims that aggregate was present on the surfaces when the disaster occurred and washed away (i.e., Patch logs, aggregate application, material invoices, daily logs, payroll logs, photographs, age of the road surface.).

Frequently Asked Questions (FAQs)

- 1. Will FEMA pay for a road if it is classified by the Federal Highway Administration (FHWA) as Federal Aid when the Applicant has never received any funding for the maintenance of the road from FHWA?**

FEMA cannot pay for permanent work that can be funded by another federal agency, such as FHWA, even though the Applicant has never received funds from the other federal agency or the agency does not have funding available if requested. There are instances when FEMA may fund emergency/temporary repairs if the FHWA emergency repair program is not activated. [See new Fact Sheet 9580.214 for debris guidance.]

- 2. What if the Applicant doesn't keep maintenance records and the repairs are completed when FEMA staff arrives to assess the damages?**

It is the Applicant's responsibility to demonstrate damages were disaster-related and not the result of lack of maintenance. FEMA staff has to perform due diligence in confirming eligibility of the work completed by the Applicant. FEMA staff may use material purchase invoices and undamaged sections of the Applicant's road system to confirm maintenance or lack of maintenance and to determine the depth and amount of aggregate to approve for the damaged sections of road. If the Applicant cannot provide adequate documentation, the work is not eligible.

- 3. Will FEMA pay for items such as geotextile material, improved drainage and larger culverts to mitigate the road condition?**

It depends on what road conditions these items are expected to mitigate. Mitigating road conditions to reduce future maintenance is not eligible. FEMA will only pay to mitigate those areas of the road that have eligible damage and the work is cost effective in preventing future damages in a similar disaster.

- 4. Why doesn't FEMA pay for the repair of pot-holed and alligator-cracked roads?**

These conditions do not meet the basic rule of eligibility. That is, an item of work must be required as a direct result of the declared disaster. These items are considered normal maintenance conditions that existed prior to the disaster.

- 5. If the disaster has exacerbated the road conditions where potholes or other poor conditions existed prior to the disaster, will FEMA pay to repair the roads?**

No. The potholes are the result of lack of maintenance. The road condition would not have been exacerbated by the disaster if proper maintenance had been performed and the potholes would not have existed.

- 6. Are damages due to extraordinary traffic performing eligible work such as hauling of debris or line trucks repairing power lines eligible for FEMA funding?**

In situations where the extraordinary traffic cannot avoid roads that are not constructed to carry that amount of traffic, FEMA may pay to repair the roads back to their pre-disaster condition when measurable damage has been caused by the abnormal traffic. Damages caused by normal local car and truck traffic are not eligible.

7. Does the age of a chip and seal road affect the eligibility of repairs to damage caused by traffic?

The age of the road may be a factor in determining the amount that FEMA would fund. If the type of road that has been damaged by traffic is at or near the end of its typical life as defined by state or other scientific studies, damage by the normal traffic will be discounted by the percentage of life expectancy remaining. Consideration will be given when extraordinary damage is caused by traffic such as debris or line trucks performing eligible work that the road is not designed for.

8. When a roadside ditch is not performing as it should due to sediment/silt buildup, is the cost of removing all of the sediment/silt eligible?

Not all cost for removing the sediment/silt in the ditches may be eligible for FEMA funding. Only the cost to remove disaster-generated sediment/silt back to the pre-disaster condition of the ditch is eligible and should be site specific, not continuous lengths for hundreds of yards or miles. The applicant is responsible for providing maintenance records that shows it has a routine schedule of cleaning the road ditches and when the ditches were last cleaned. It may be necessary to dig a sample of sediment to identify the layers of eligible and ineligible sediment/silt and estimate the percentage that would be disaster-related. The estimated cost of cleaning ditches will be based upon the past practice of the applicant and the type of equipment used. The cost of a backhoe to estimate the cost of ditch cleaning should not be used when the applicant normally uses the blade of a motor grader.

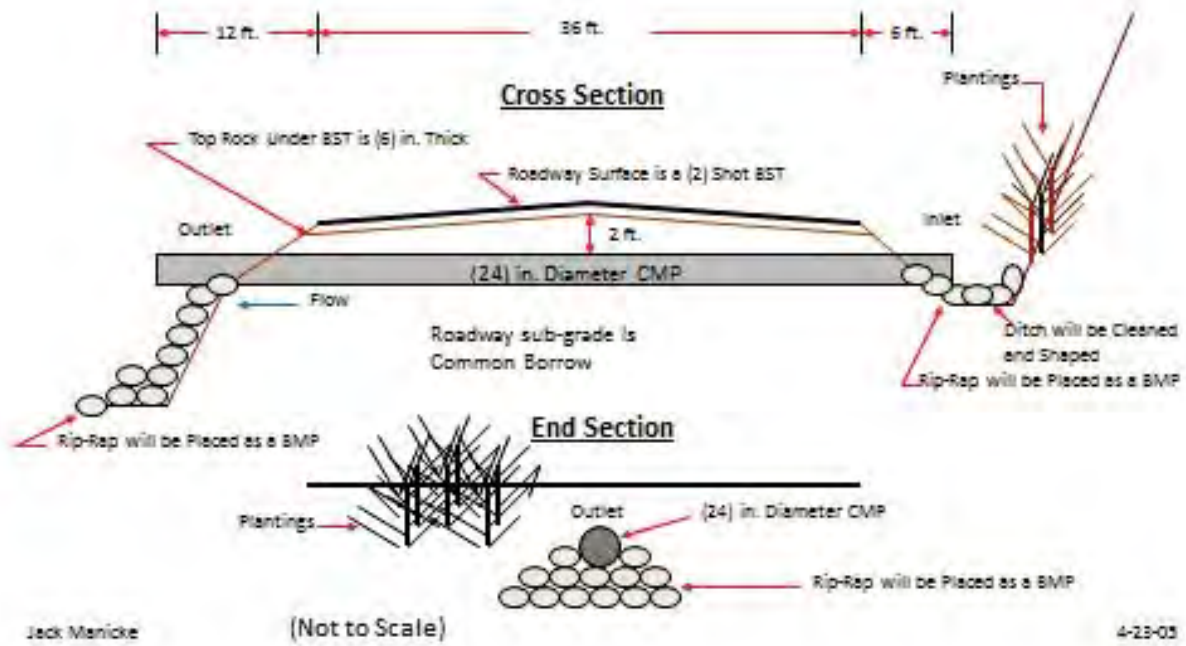
9. When a roadway has been inundated for an extended period of time, will FEMA pay for the value of the projected loss of life of the road due to the long term effects the inundation might have on the road?

No. Damages must be visible and measurable and be affecting the functionality of the road.

Technical References

- Long-Term Pavement Performance, (LTPP) Data Analysis Support, National Pooled Fund Study (TPF-5(013) - November 2006
- Modeling Road Deterioration and Maintenance Effects in HDM-4, October 1995
- The Kenya Maintenance Study on Unpaved Roads: Research on Deterioration, 1984
- A Field Study on the Deterioration of Unpaved Roads and the Effects of Different Maintenance Strategies, 1984
- Gravel Roads, Maintenance and Design Manual, November 2000
- Low Volume Roads Workshop, 2007
- Highway Design and Maintenance Standards Model, 1987
- Rural Truck Traffic and Pavement Conditions in Texas, October 2003
- Local Roads Maintenance Workers' Manual, 2006

Road Repairs



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Rule for Road Repairs:

Repair of damage is to restore the roads as they existed immediately prior to the disaster, i.e. pre-disaster function and capacity.

44 CFR 206.223 (a), states: General. “To be eligible for financial

assistance, an item of work must:

(1): Be required as the result of the major disaster event” .

Public Assistance Guide, FEMA 322, page, 33.

Maintenance: “To meet the basic rule of eligibility, an item of work must be required as a direct result of the declared disaster. Normal maintenance items that existed prior to the disaster, such as pothole repair, routine pulling of ditches, and minor gravel replacement; and deferred maintenance, such as replacing rotted timber, and repairing deteriorated asphalt and leaking roofs, are not eligible because they do not meet the criterion of being disaster-related” .

Public Assistance Digest, FEMA 321, page, 115.

“Damage to the road must be disaster-related to be eligible for repair. In addition, repairs necessary as the result of normal deterioration, such as “alligator cracking,” are not eligible because it is pre-disaster damage” .



Asphalt road with pot hole and cracking, pre-existing

Not eligible - Pre-existing asphalt separation and sinkage, road bed saturated, coldpatch temporary repair.



Not eligible – Pre-existing asphalt separation and sinkage, roadbed saturated, coldpatched for temporary repair.



Asphalt cracked and patched, cracks bleed through patch. Pre-existing damage.

Not eligible – Pre-existing asphalt separation and sinkage, road bed saturated , coldpatch for temporary repair.

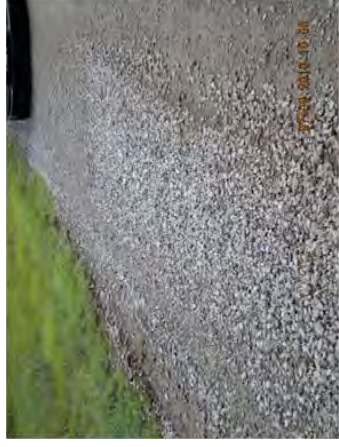
Loc 27



Loc 63



Not eligible. Not disaster-related.



Not eligible - Roads had been pulverized by a Bomag machine in selected areas. Sections of that had not been worked on show lots of potholes and large areas of alligator cracking. This leads to the conclusion that the damaged areas had the same type of problems and would not be eligible.



Ineligible. Normal deterioration such as “alligator cracking” are not eligible as it is pre disaster damage.



Not eligible - Not disaster related. Result of normal deterioration such as “alligator cracking” are not eligible as it is pre disaster damage.

Pre-existing damage
in all photos



Not eligible - Damage attributed poor condition of road prior to the event as evidenced by potholes, edge deterioration, cracking, alligator cracks, and numerous patches in the chip and seal surface.

Pre-existing damage and cracking not repaired before chip and seal

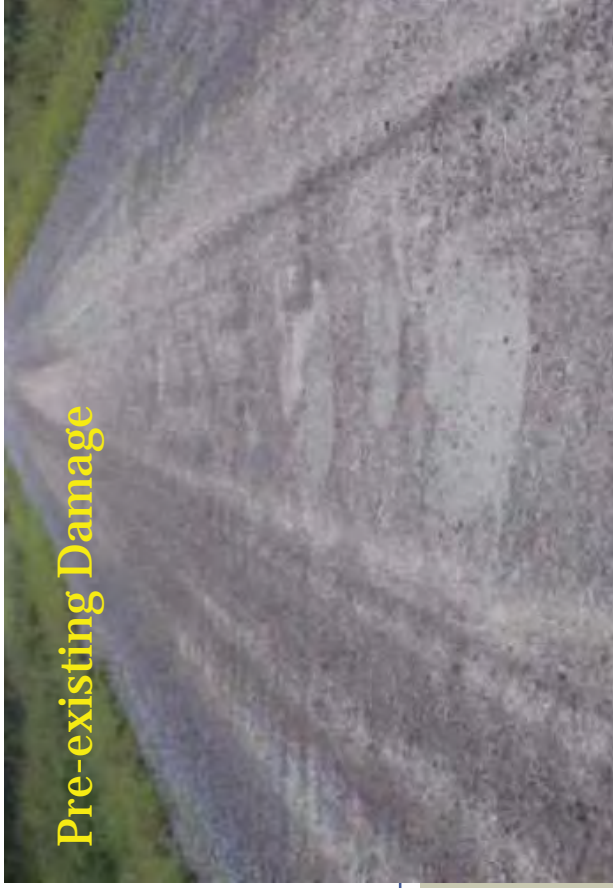


Not eligible - Damage caused by a combination of deferred maintenance and pre-existing conditions to chip and seal parking lot in the front of the building.



Ineligible - Applicant stated all three sites damaged by vehicular traffic. No documentation showing that the damage to the culverts, was directly related to the declared event.
Not disaster related (**State** , says culverts not adequately covered.)

Pre-existing Damage



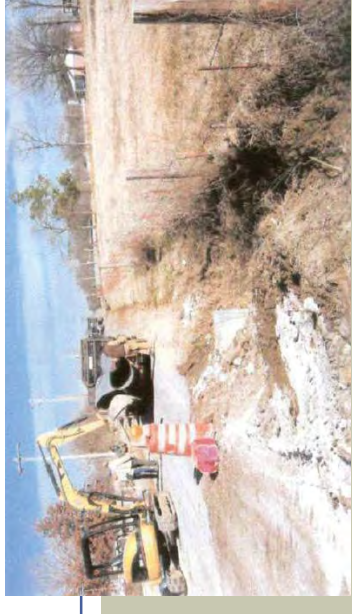
Not eligible-Damage was pre-existing and does not appear to be storm related as observed numerous patches and alligator cracking along the road indicating deferred maintenance.



Not eligible - Damage cannot be shown to be caused by the declared event, as opposed to deferred maintenance.



Not eligible - Damage not storm related due to numerous patches and alligator cracking along the road leading to the damage site indicating deferred maintenance.



Not eligible - No documentation provided to establish to declared event and the damage. In the absence of such documentation and evidence to the contrary - ineligible work



Not eligible - Chip and seal roadway surface has considerable alligator cracking and potholes. The roads have considerable alligator cracking well beyond the damaged locations.

No damage is apparent due to event



Not eligible - No eligible damage is apparent due to the event.



No eligible damage is apparent due to the event

No eligible damage



No eligible damage is apparent due to the event



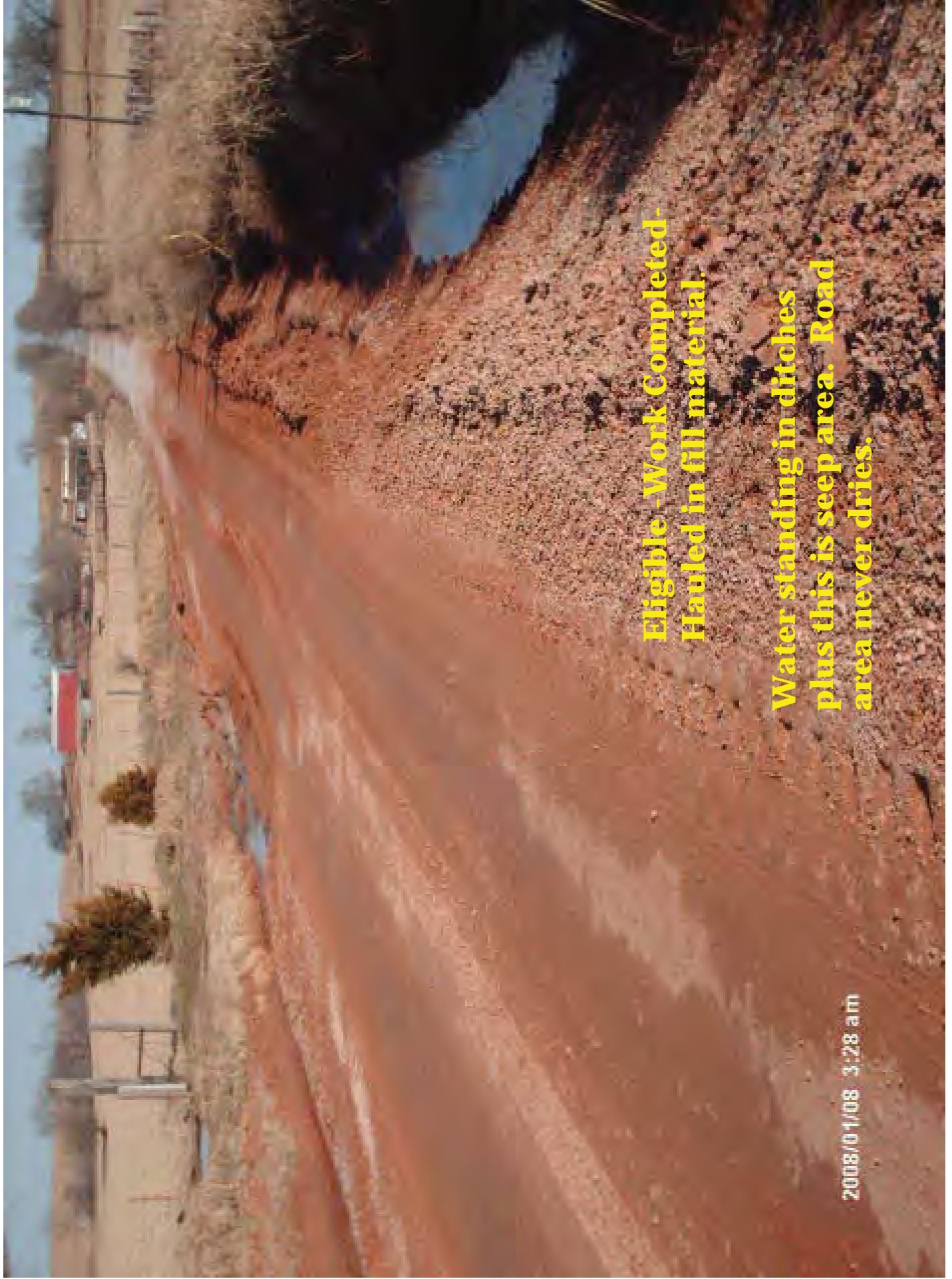
Damages ineligible per FEMA 322 page 33, based on the lack of maintenance at the sites.

Sub-grade failure. Pre-existing damage: potholes, alligator cracking.



Not eligible - Damages ineligible per FEMA 322 page 33, based on the lack of maintenance at the sites, pre-existing damage: potholes alligator cracking.

10) TIJITSUTI It ACE ROADS



**Eligible - Work Completed -
Hauled in fill material.**

**Water standing in ditches
plus this is seep area. Road
area never dries.**

2008/01/08 3:28 am



Washed Out
Aggregate

**Eligible - No Ditches- Applicant Has Lost Surface
Aggregate. Fix By Pulling Fill Material From
Ditches and Placing Approximately 1" Thickness of
Aggregate**

13:09



**Not eligible - Potholes & Rutting -
normal maintenance**



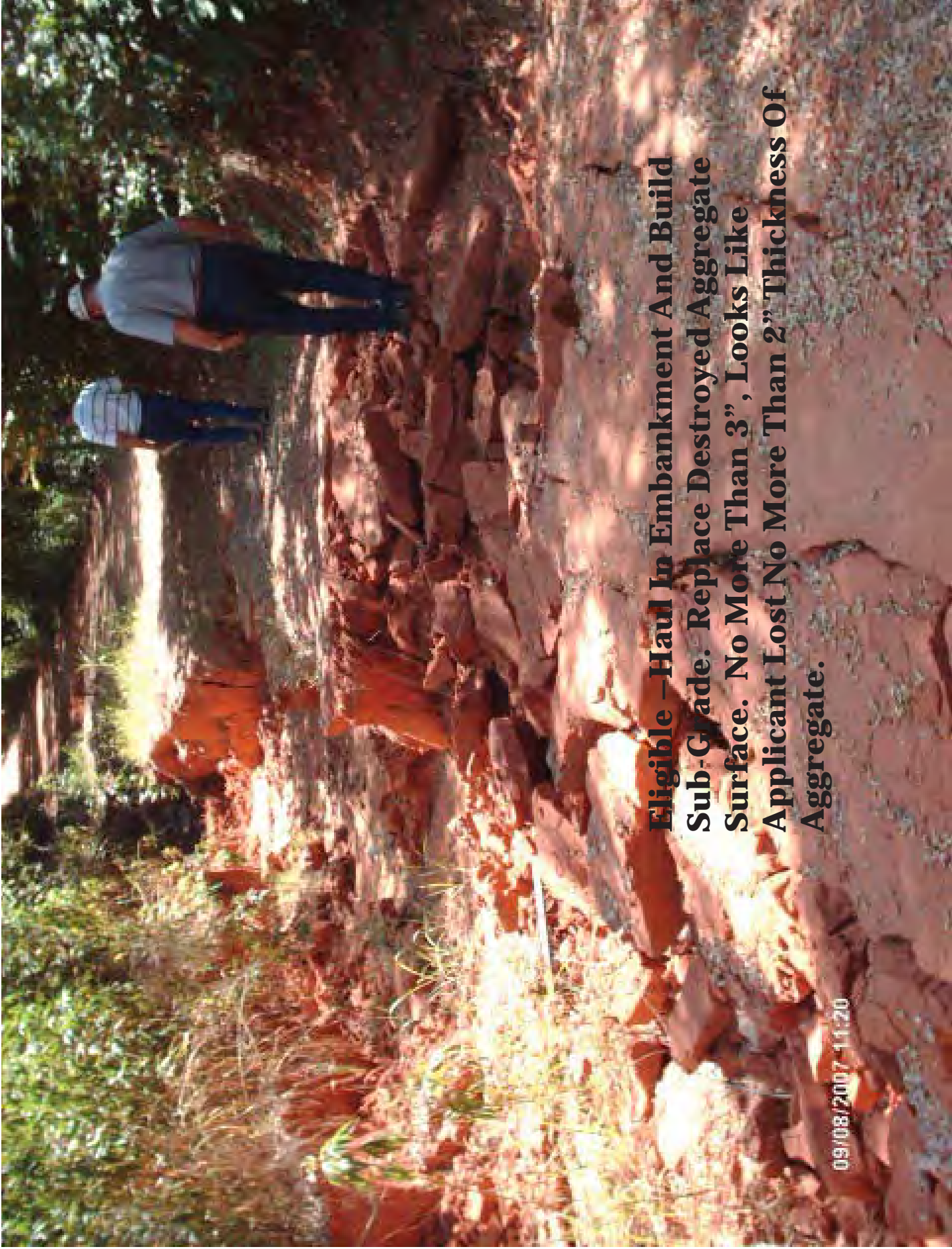
Not eligible - Maintenance Problem.

06/22/2011



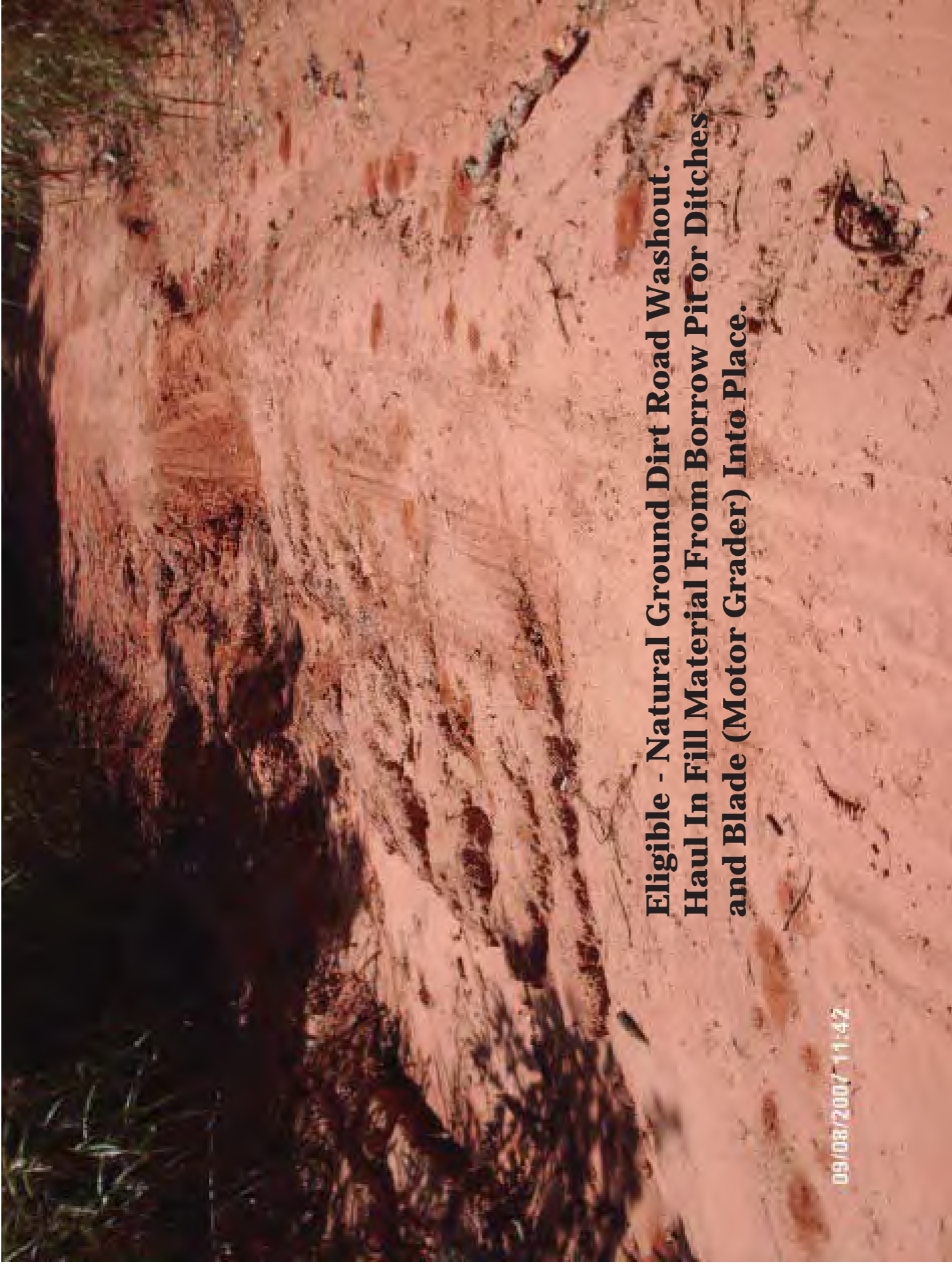
**Not eligible – Maintenance problem -LOW Area In
Aggregate Surface Roadway. Nowhere For Water To Go.**

01/01/2006 10:34 pm



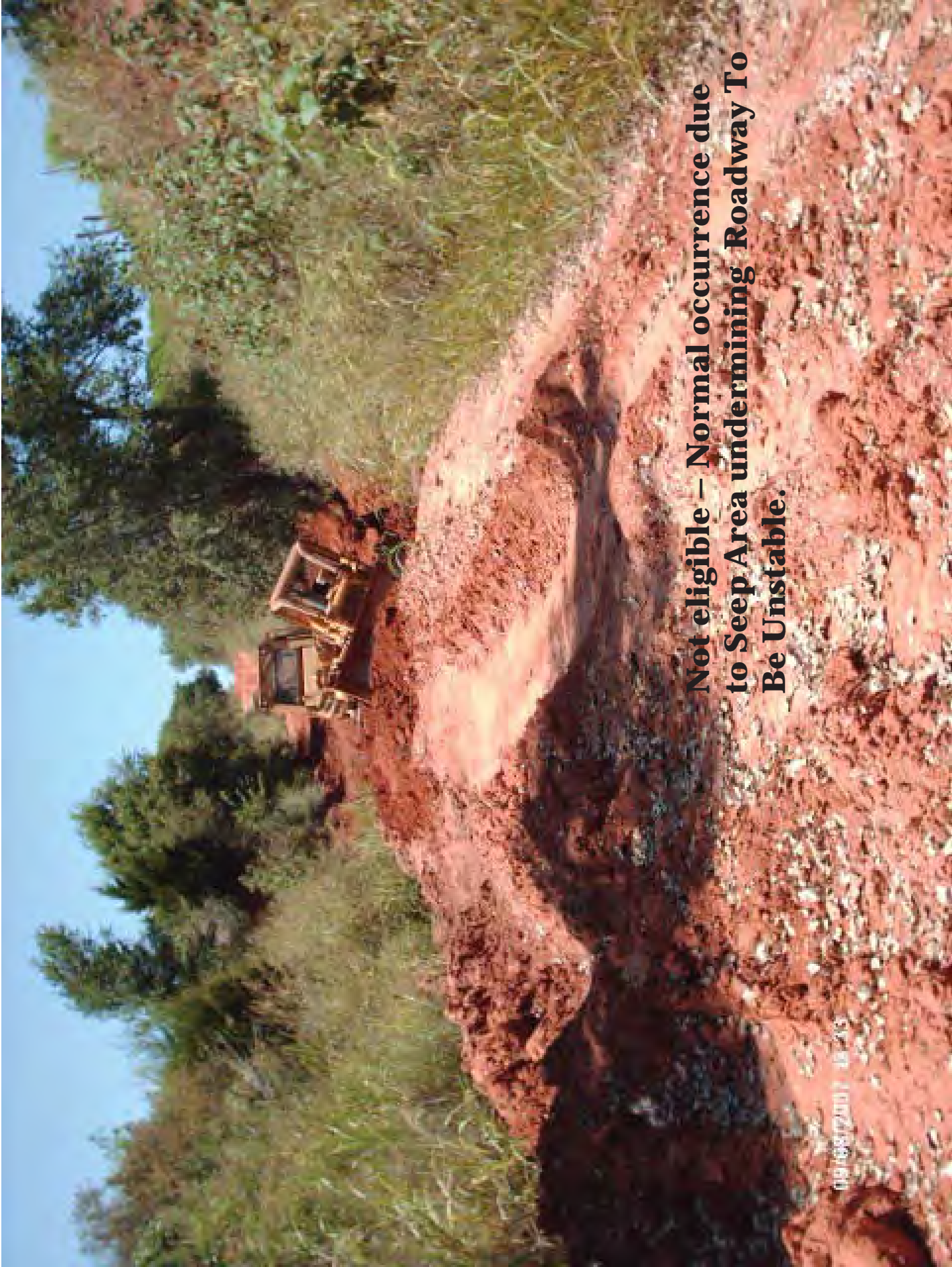
**Eligible –Haul In Embankment And Build
Sub-Grade. Replace Destroyed Aggregate
Surface. No More Than 3", Looks Like
Applicant Lost No More Than 2" Thickness Of
Aggregate.**

09/08/2007 11:20



**Eligible - Natural Ground Dirt Road Washout.
Haul In Fill Material From Borrow Pit or Ditches
and Blade (Motor Grader) Into Place.**

09/08/2007 11:42



Not eligible – Normal occurrence due to Seep Area undermining Roadway To Be Unstable.

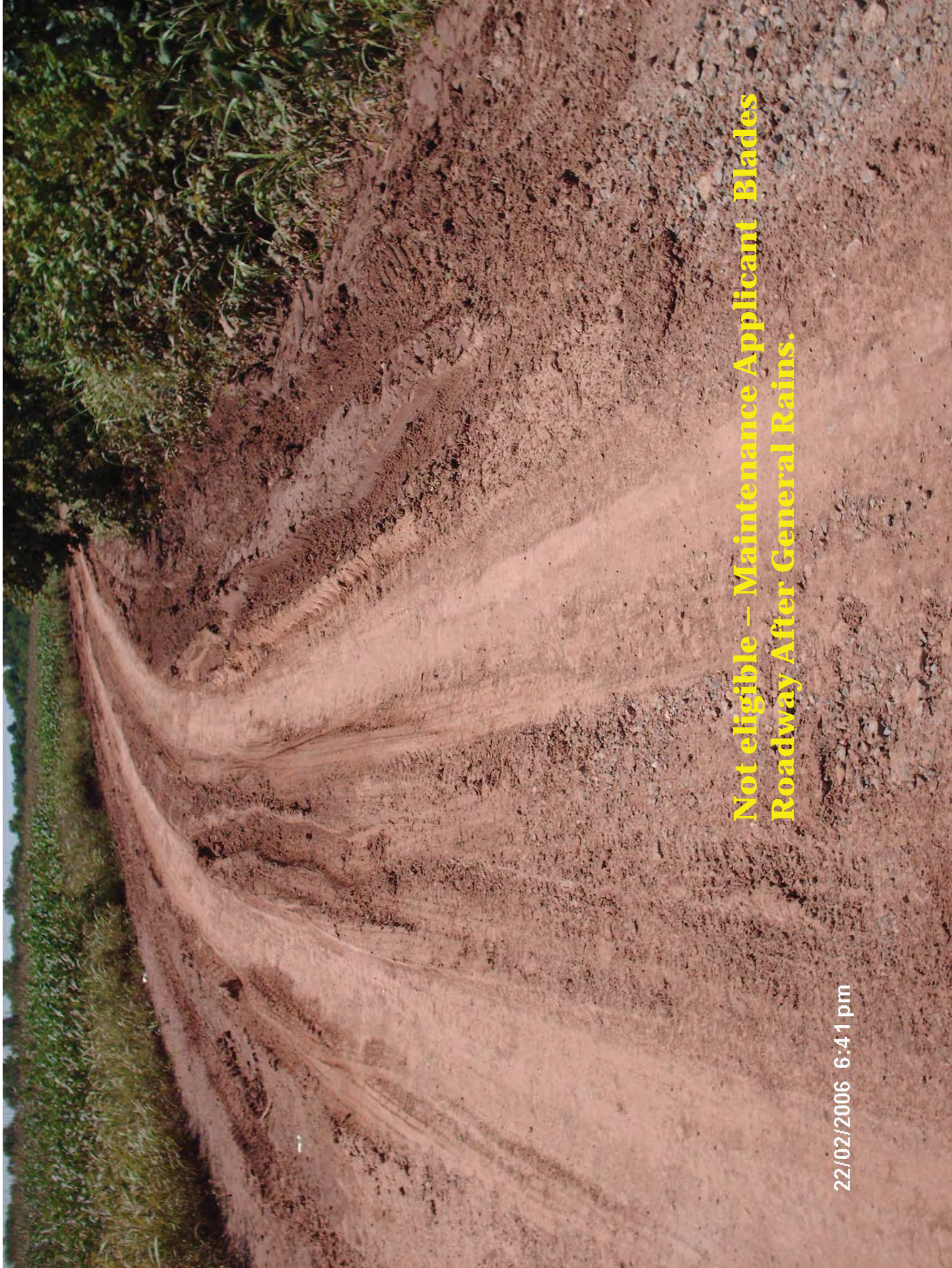
019468172007 08-2013

Pipe
Culvert

Washed Off
Surface Aggr.

Eligible - Aggr. Surfaced County
Road- Ditch Overflow (If There
Was A Ditch) causing Washout Of
Roadway.

11/07/2007 15:23



**Not eligible – Maintenance Applicant Blades
Roadway After General Rains.**

22/02/2006 6:41 pm



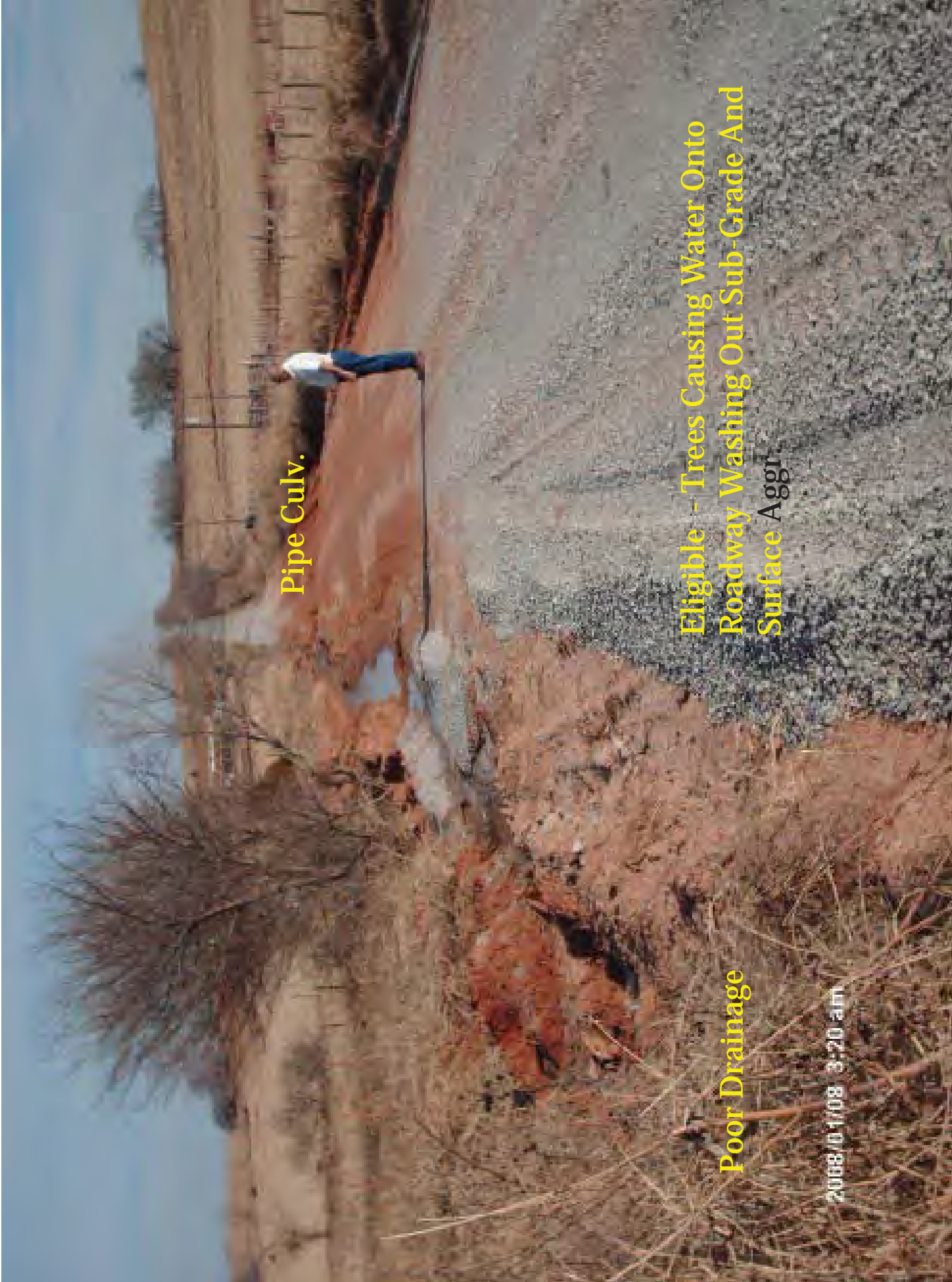
**Mud Hole -- No Drainage -
Ineligible**

25/02/2006 6:59 pm

No Ditch

No Drainage- Not Eligible --
Deferred Maintenance

25/02/2006 6:18 pm



Pipe Culv.

Eligible - Trees Causing Water Onto
Roadway Washing Out Sub-Grade And
Surface Aggr.

Poor Drainage

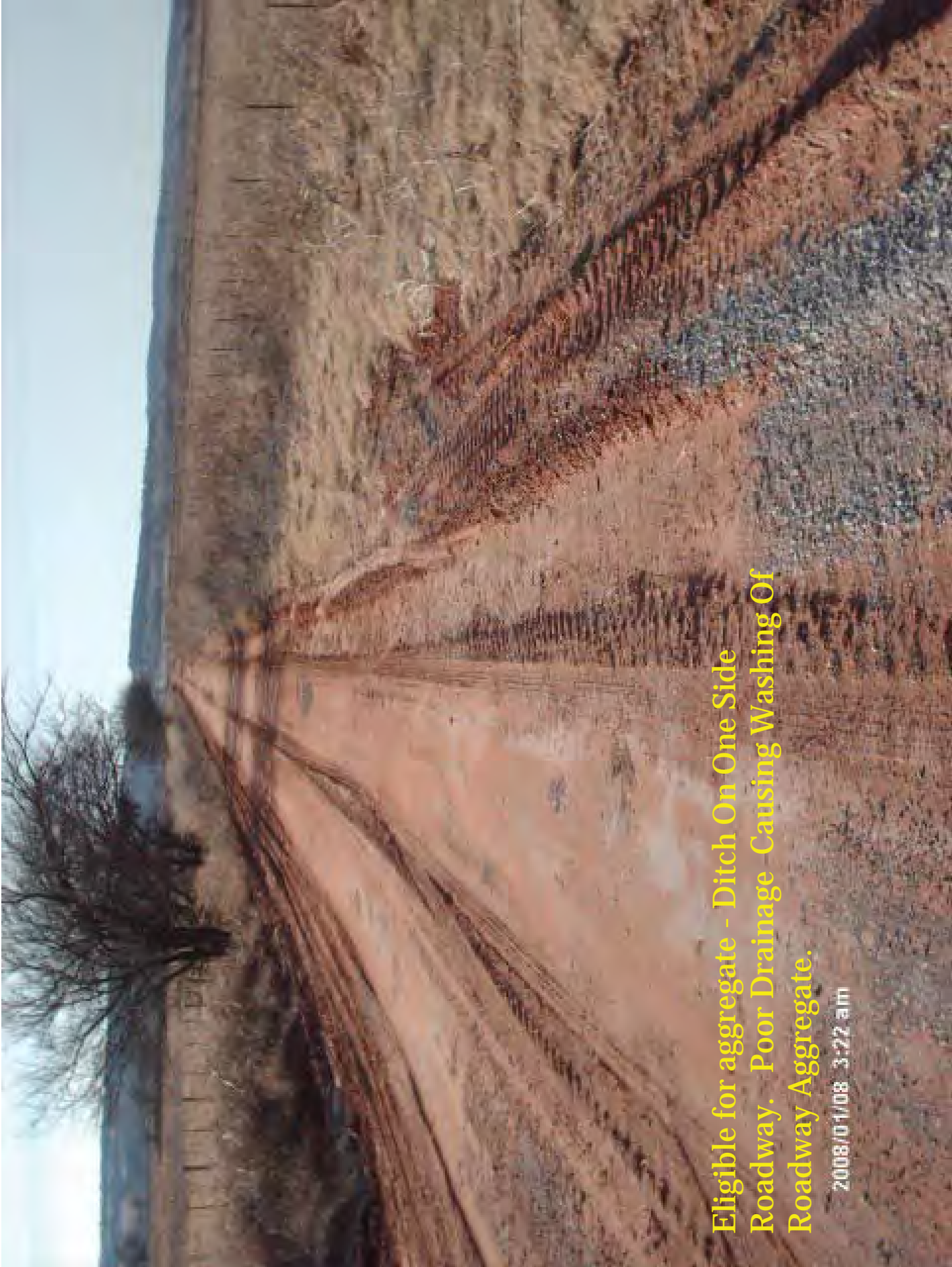
2008/01/08 3:20 am



Every

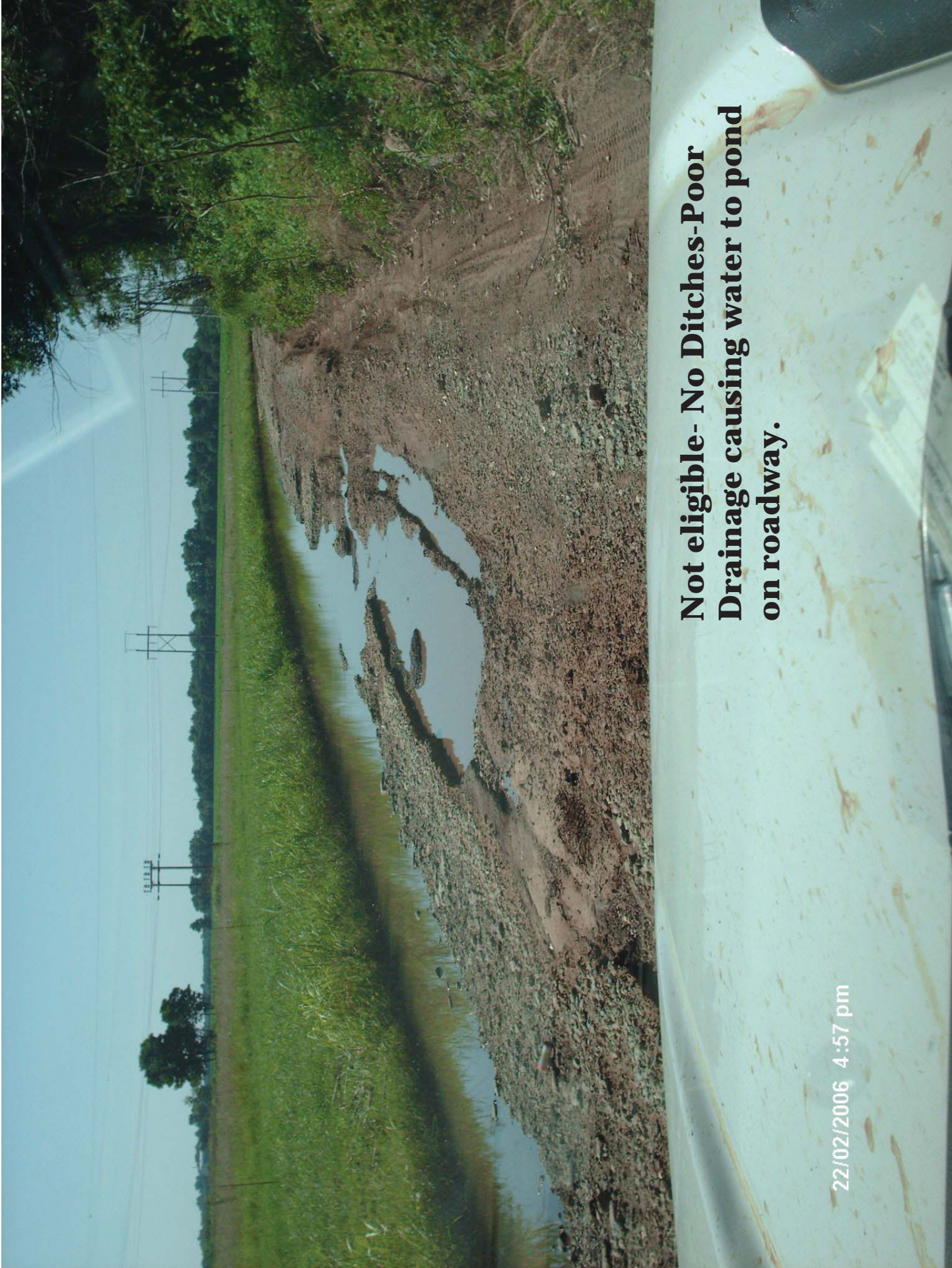
**Eligible for rock only - Low Area
Placed Aggr. In Low Area To Keep
Traffic From Getting Stuck. Little
Maintenance.**

22/02/2006 6:34 pm



Eligible for aggregate - Ditch On One Side
Roadway. Poor Drainage Causing Washing Of
Roadway Aggregate.

2008/01/08 3:22 am



**Not eligible- No Ditches-Poor
Drainage causing water to pond
on roadway.**

22/02/2006 4:57 pm

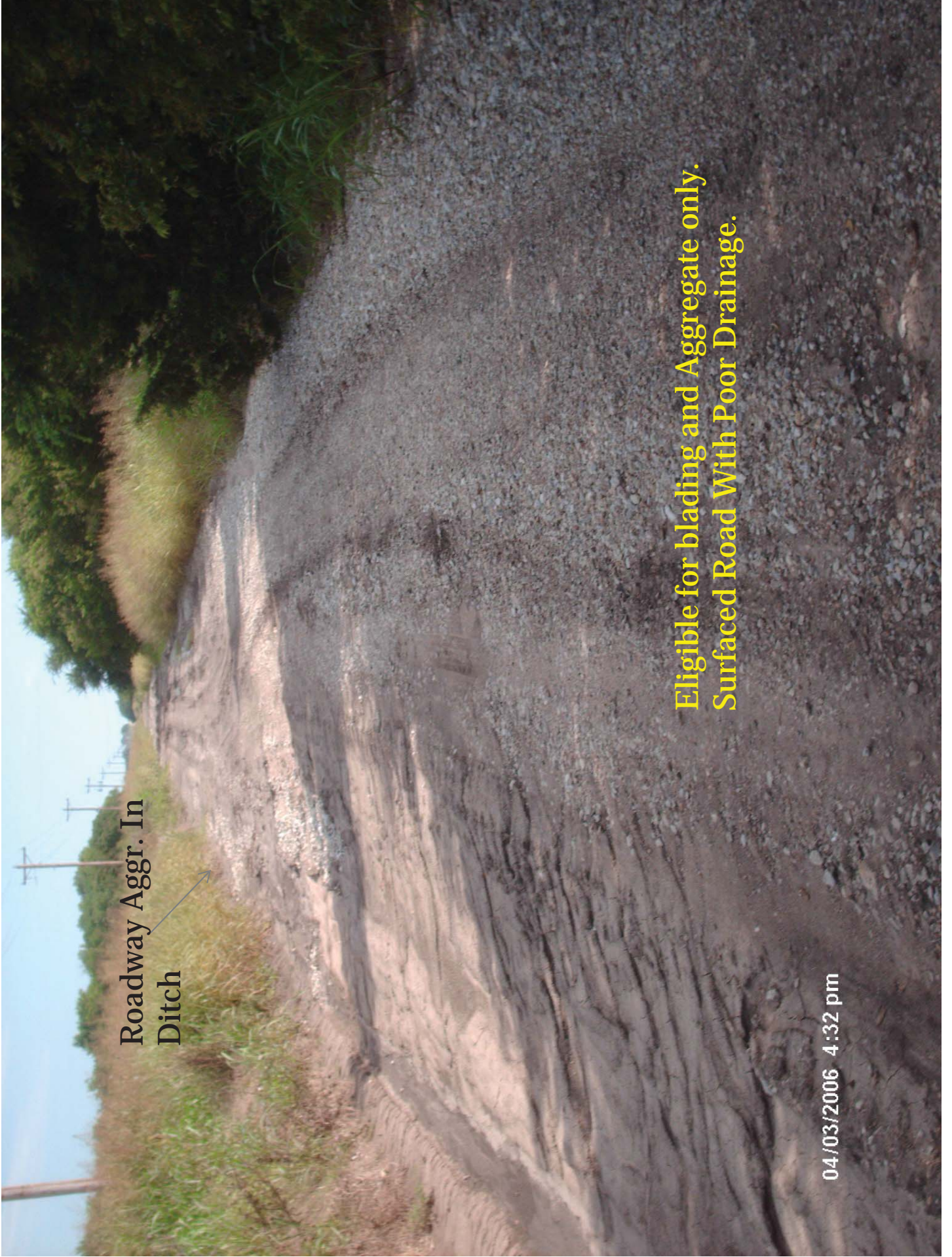
AGGREGATE SURFACE ROADS

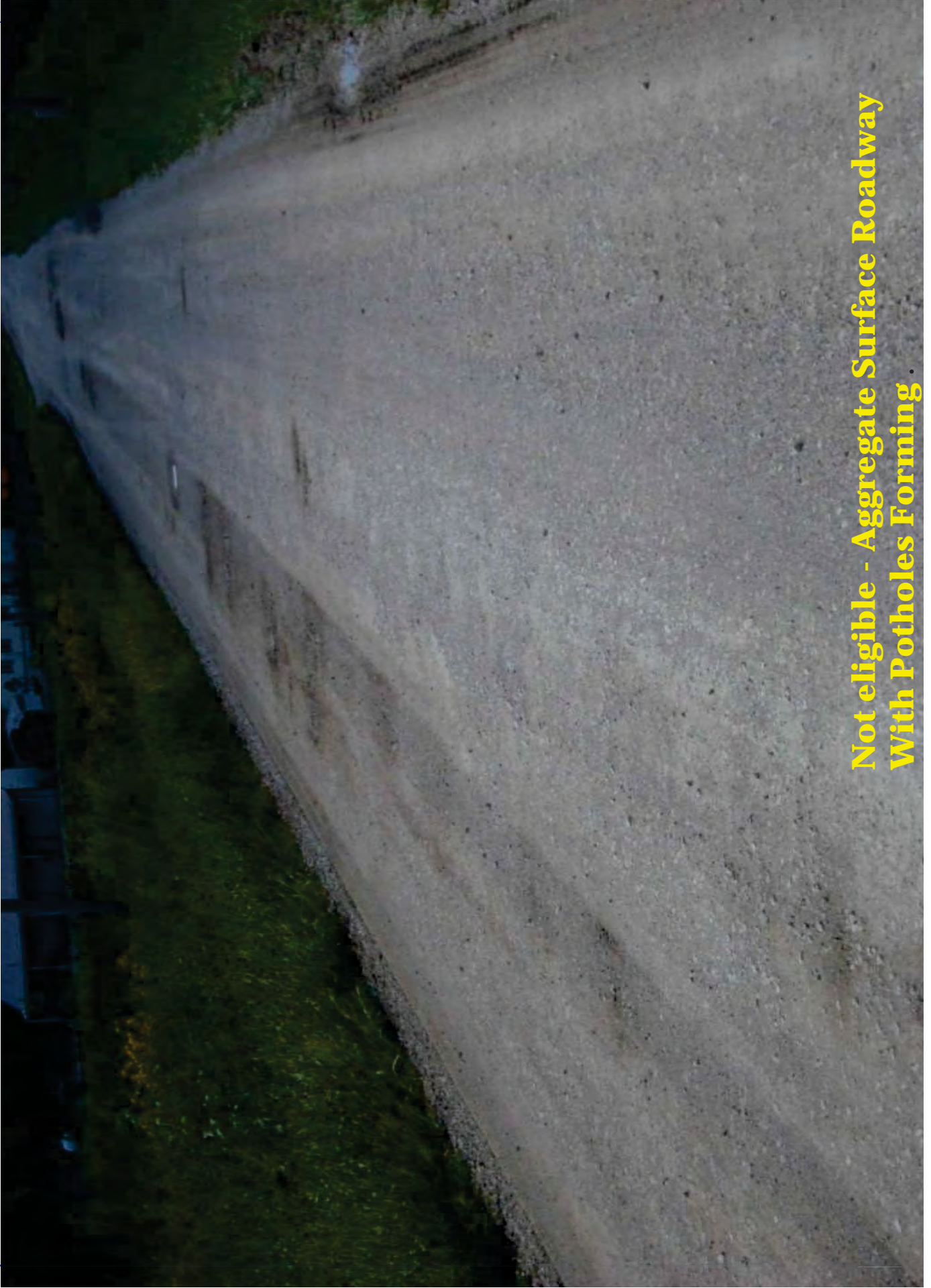
Gravel

Roadway Aggr. In
Ditch

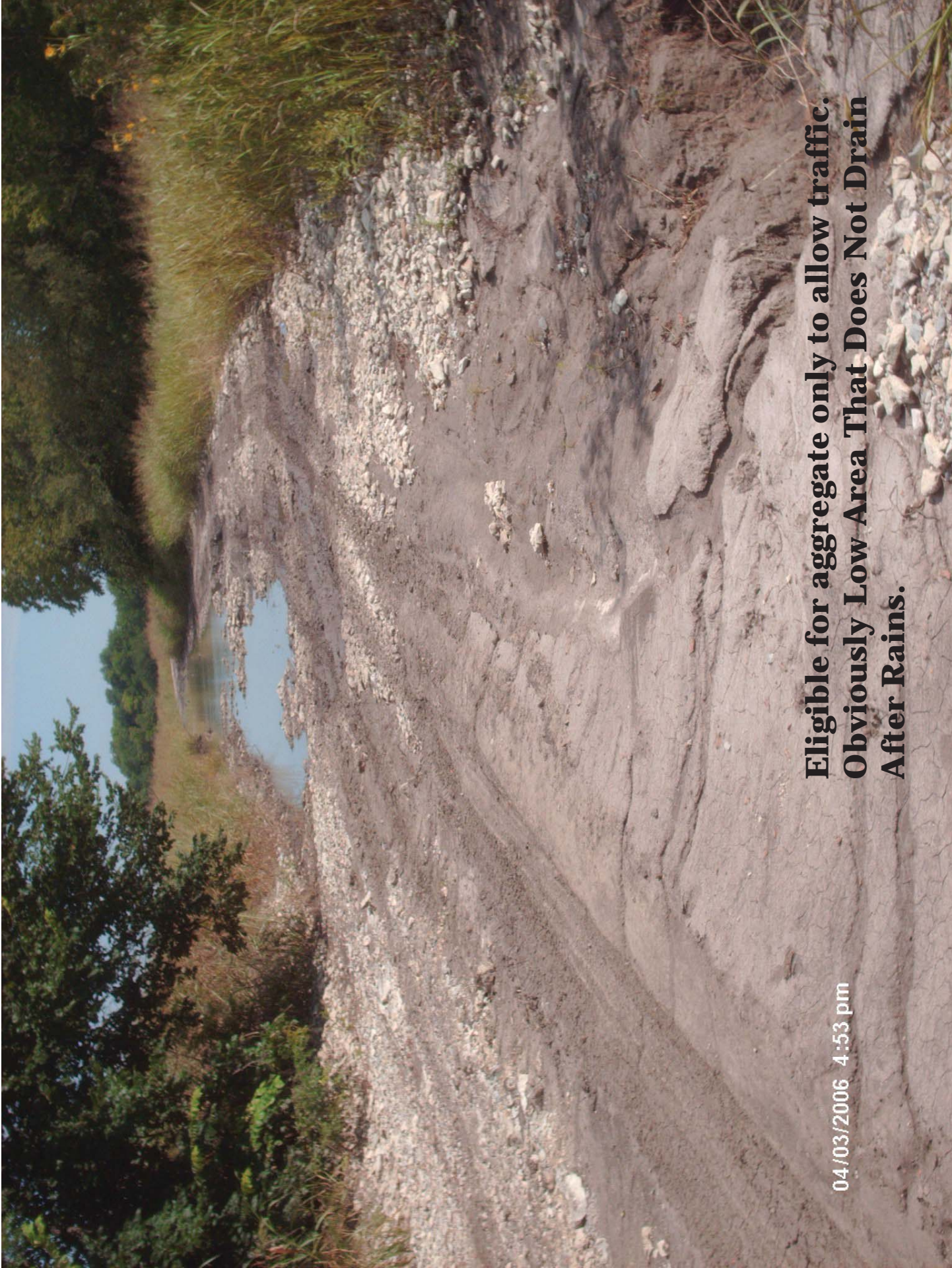
Eligible for blading and Aggregate only.
Surfaced Road With Poor Drainage.

04/03/2006 4:32 pm



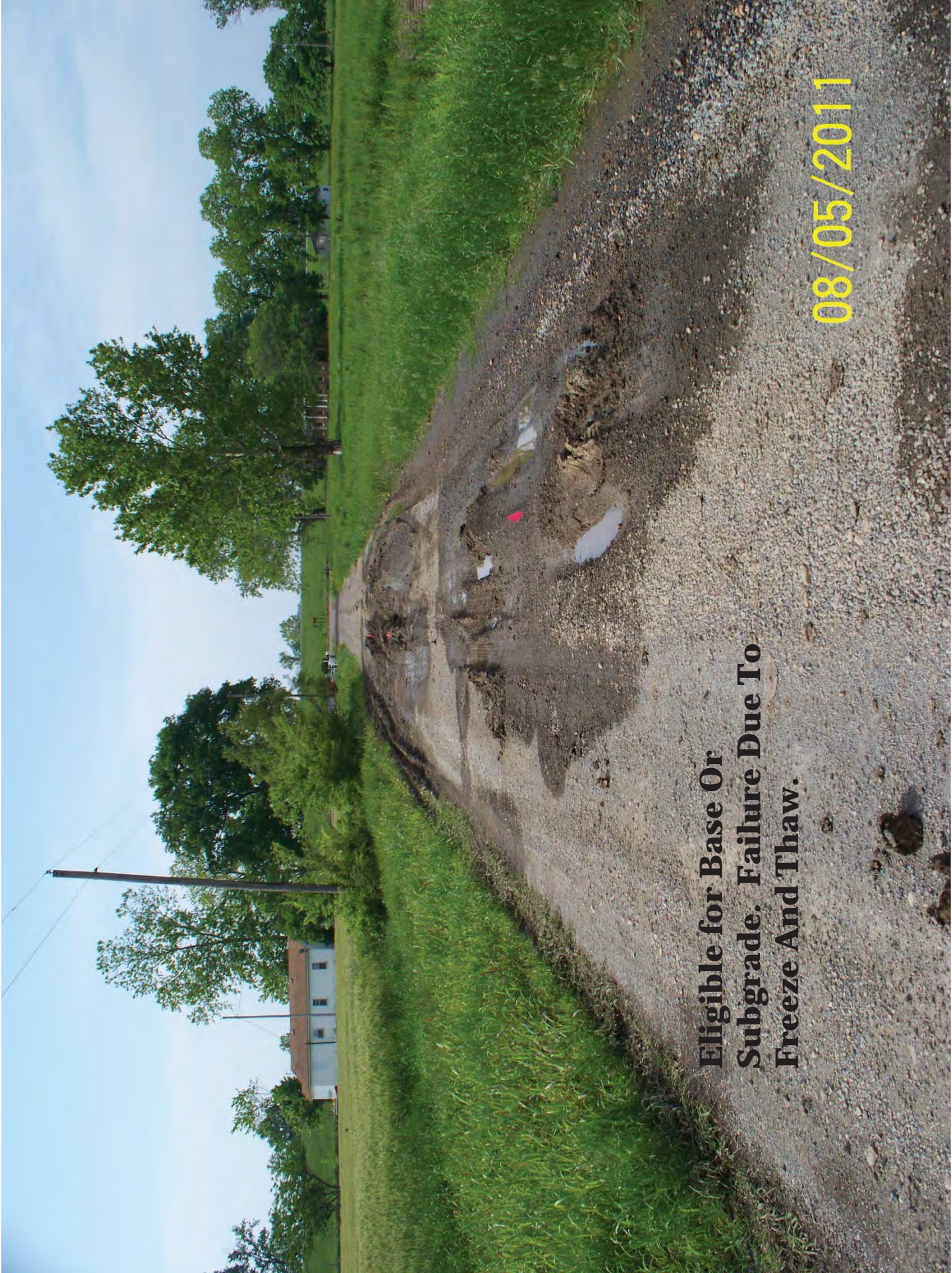


**Not eligible - Aggregate Surface Roadway
With Potholes Forming**



04/03/2006 4:53 pm

**Eligible for aggregate only to allow traffic.
Obviously Low Area That Does Not Drain
After Rains.**



**Eligible for Base Or
Subgrade. Failure Due To
Freeze And Thaw.**

08/05/2011



**Not Eligible – Closed
To Public. Farm Field
Road.**

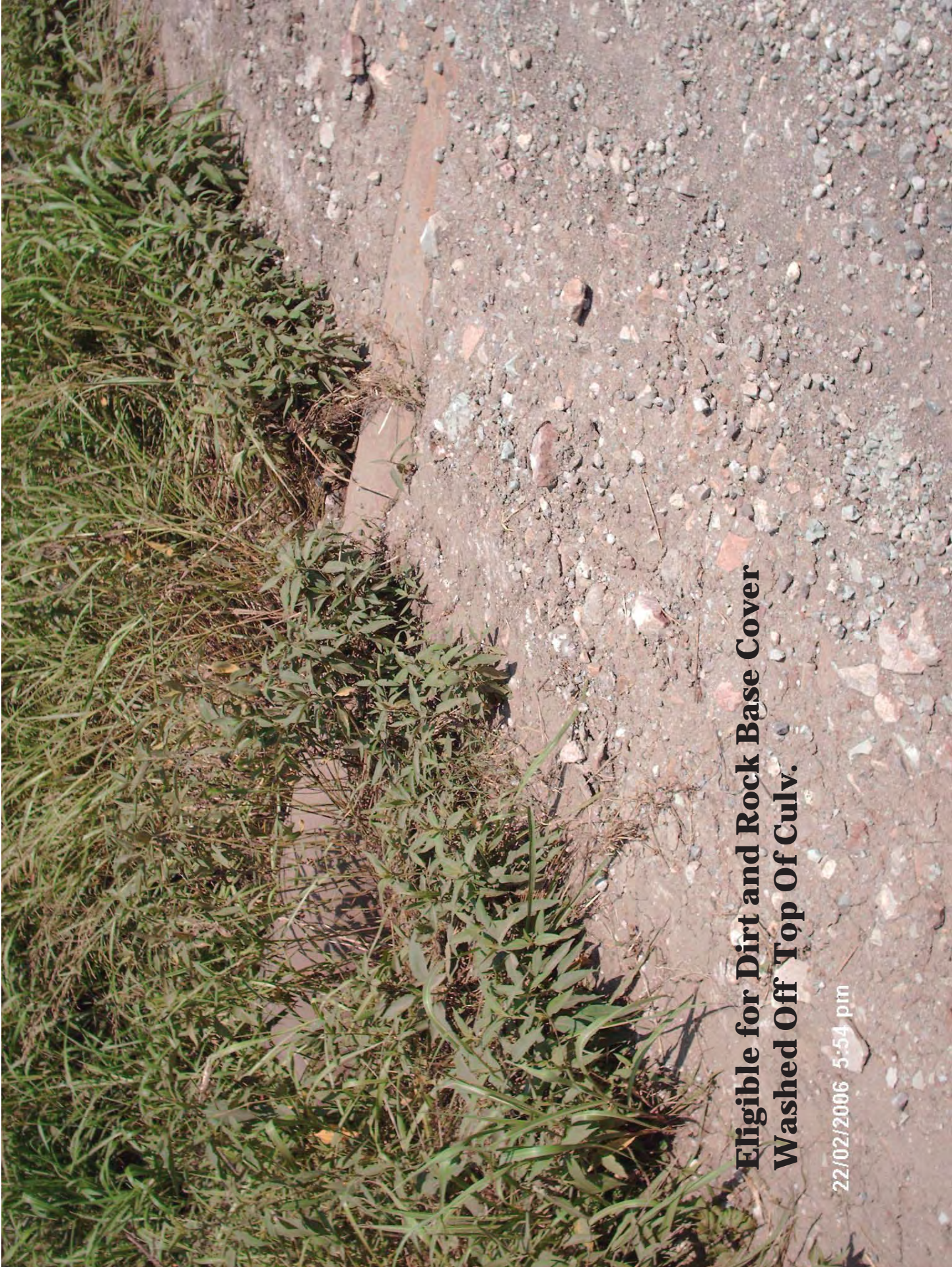
Looks Like
Roadway
Surface
Washout.

Concrete
Low Water
Crossing.

**Not eligible - No Traffic!!! Grass
Growing In Roadway.**

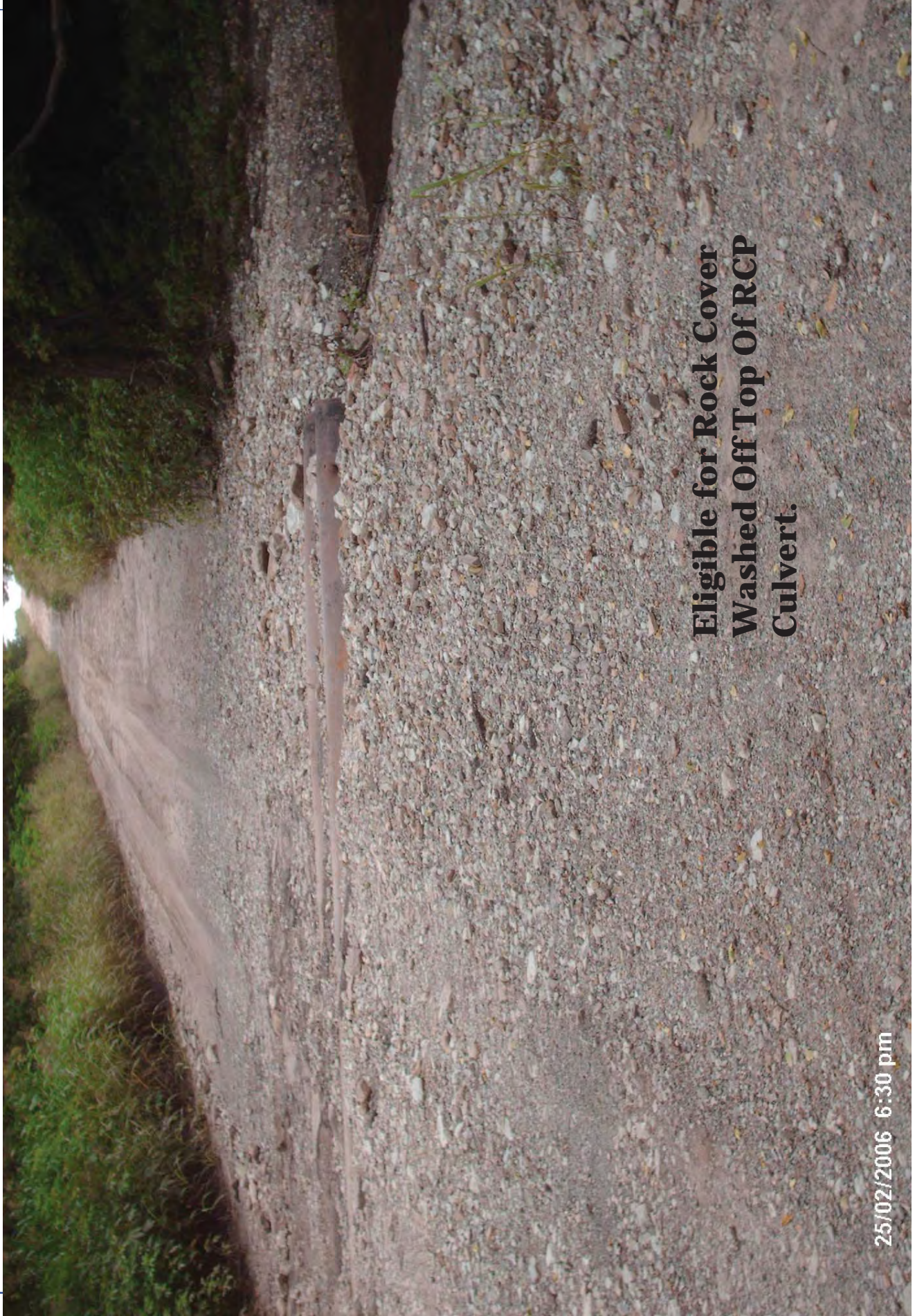


**CMP AND BOX
COVERTS UNDER
ROADWAY
SURFACES**



**Eligible for Dirt and Rock Base Cover
Washed Off Top Of Culv.**

22/02/2006 5:54 pm



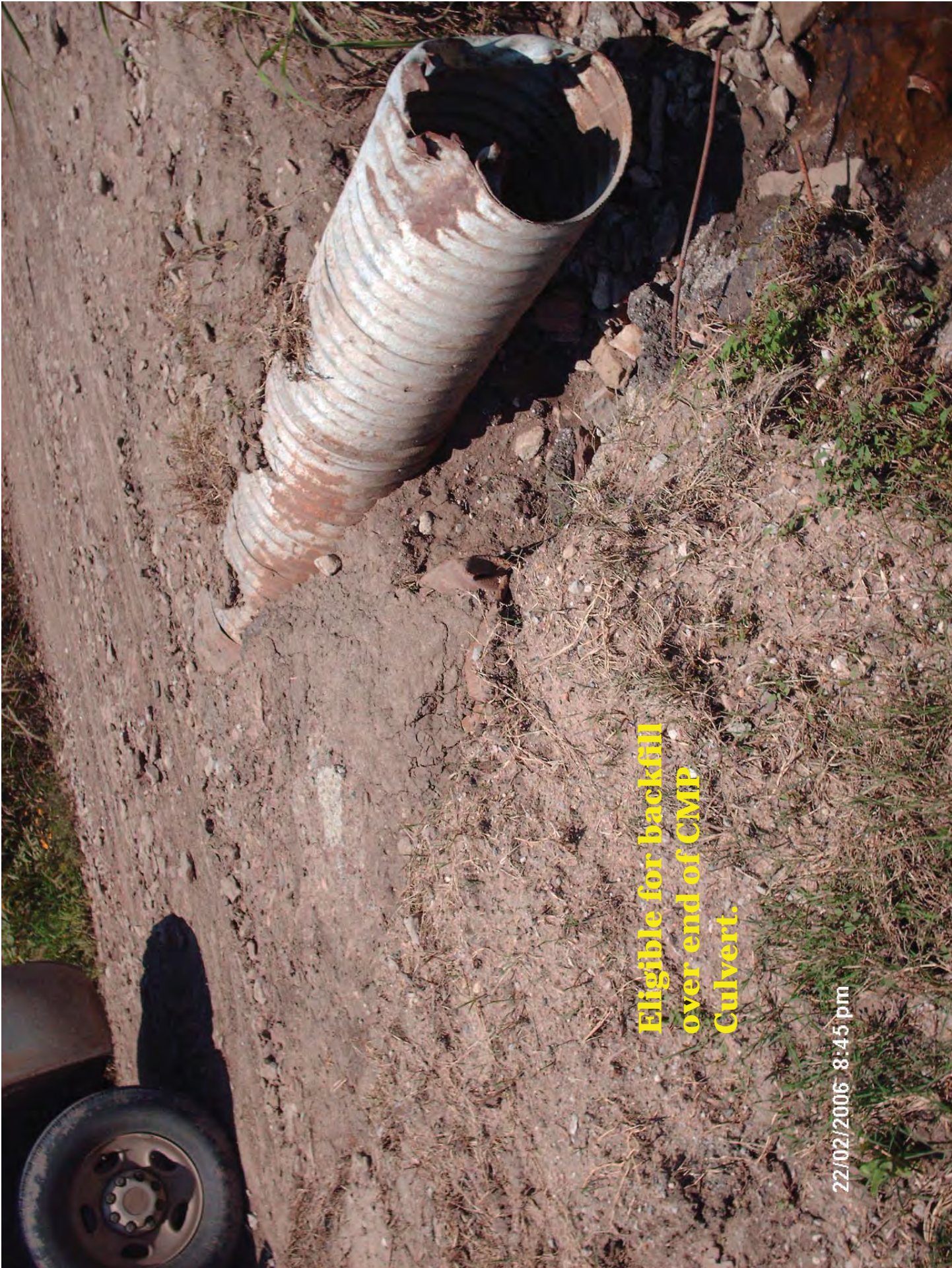
**Eligible for Rock Cover
Washed Off Top Of RCP
Culvert.**

25/02/2006 6:30 pm



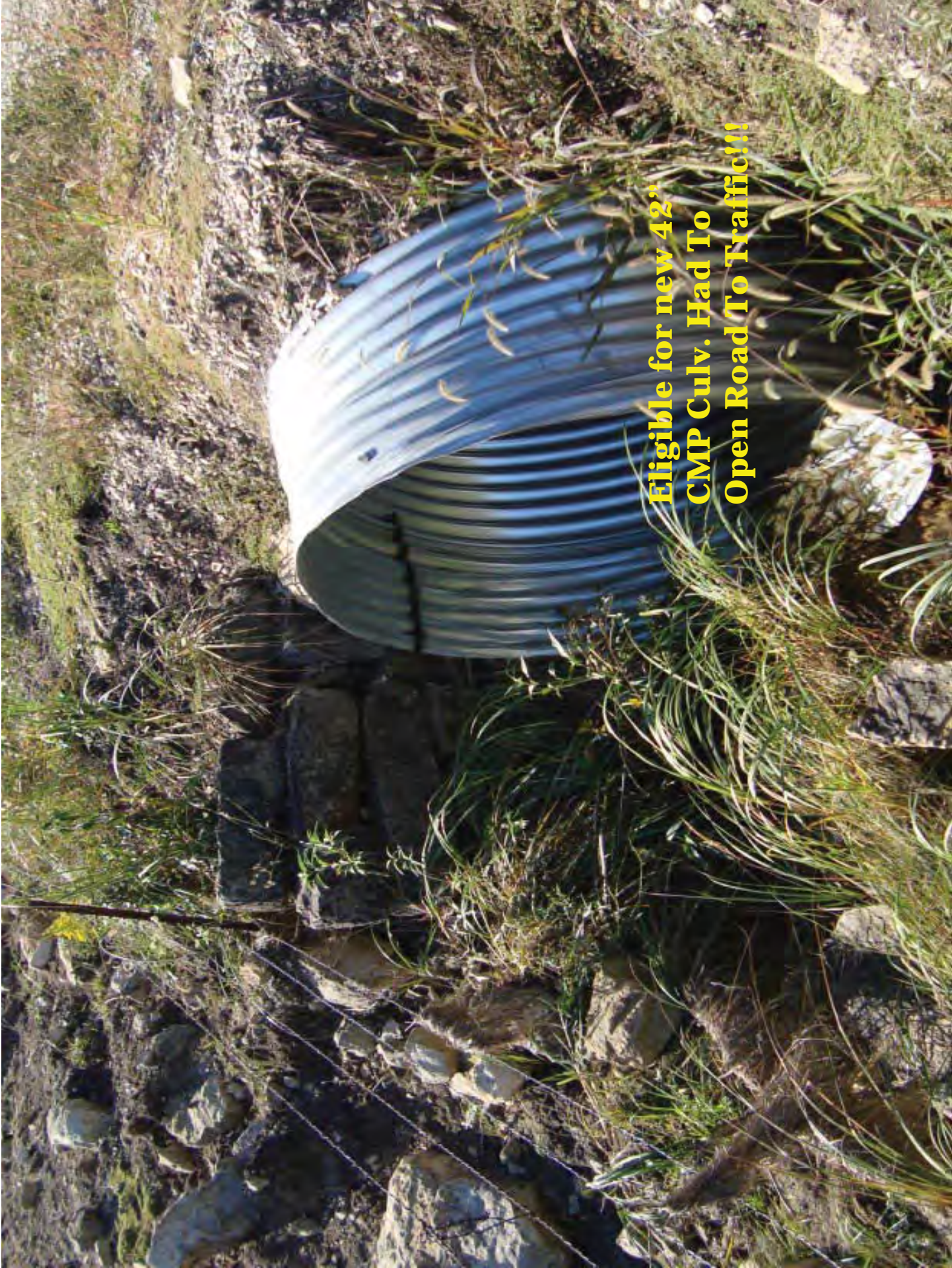
Eligible for backfill and aggregate.

27/02/2006 9:11 pm



**Eligible for backfill
over end of CMP
Culvert.**

22/02/2006 8:45 pm



**Eligible for new 42"
CMP Culv. Had To
Open Road To Traffic!!!**



Not eligible-deferred Maintenance

**BITUMINOUS CHIM
AND SEAL SURFACJE
ROADS**



Alligator Cracking-Pot
Holes-

Not eligible - Pre-
Existing Damage
**Just Old Wore Out
Paved City Street.**



**Not eligible - Deteriorated Chip &
Seal Pavement On City Street.**

Pothole Patch & Alligator
Cracking

03/27/2013 08:59





**Not eligible - Base & Sub-Grade Failure.
Usually Caused by Not Enough Depth Of
Base.**

03/27/2013 08:40



**Not eligible - Blade On Patch-Normal
Maintenance**