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May 4, 2004

Via Hand Delivery

Ms. Victoria Rutson
Chief
Section of Environmental Analysis
Surface Transportation Board
1925 K Street, N.W.
Washington, DC 20402-0001

Re: STB Finance Docket No. 34284, Southwest Gulf Railroad Company – Construction and Operation Exemption – Medina County, TX

Dear Ms. Rutson:

This letter will respond on behalf of Southwest Gulf Railroad Company ("SGR") to your April 19, 2004 Information Request letter concerning the feasibility of using trucks to transport the limestone aggregate that will be produced at the Vulcan Construction Materials, LP ("Vulcan") quarry to the line of the Union Pacific Railroad Company in the event that the proposed rail line were not built. As SGR has previously shown, and as this letter will reiterate, Vulcan could readily operate its Medina quarry were there no railroad, just as it operates other truck-served quarries.

SGR will also respond in this letter with some further information that SGR has developed concerning a proposed rail route that would involve the use of a portion of a 1911 rail route, the so-called Medina Dam Route. SGR will provide further details here as to why that route is not a viable alternative for the SGR line and that therefore it need not be further studied in depth, in contrast to the other alternatives here under consideration.

A. Feasibility of Trucking Alternative

Your April 19 letter asks two specific questions concerning (1) the use of trucks at other Vulcan quarries and (2) the use of trucks to transport local use aggregate. Before responding to these specific questions, we will review in some detail the manner in which truck transportation could feasibly be used in lieu of the proposed rail line. Vulcan believes that the rail option that SGR has proposed represents the safest, and over the long run, the most efficient way to deliver

crushed stone products to the rail system for delivery to their ultimate destination. In the event that this rail line were not built, however, Vulcan would pursue its no-build, i.e., trucking, alternative. This would involve trucking finished aggregate from the quarry approximately 7 miles south to a remote rail loading facility that would be located adjacent to the UP main line near Dunlay. Vulcan will own the property on which the loading facility would be located, as well as the facility itself. Further, Vulcan is quite experienced in the aggregate trucking business. It owns a trucking company, known as Statewide Transport, which delivers hundred of loads of aggregate each day to customers across the State in hundreds of trucks owned or operated by that company. Statewide Transport, is licensed by the Texas Department of Transportation and fully qualified to provide these trucking services, as are numerous other trucking companies.

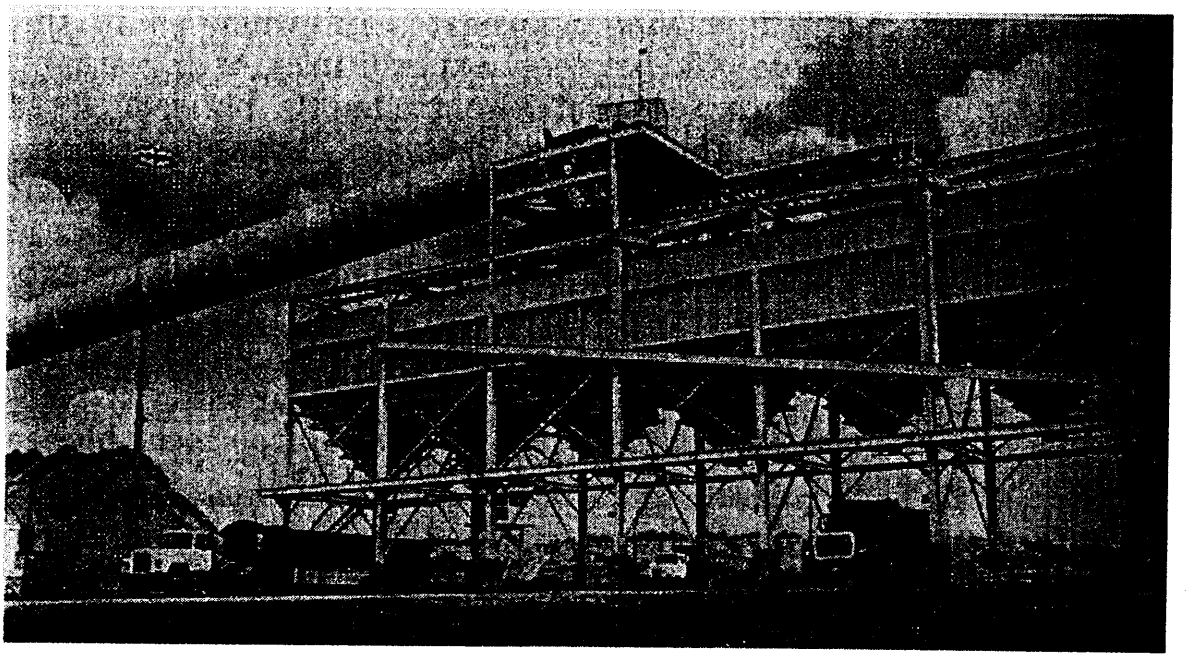
To put the no-build alternative in perspective, it bears note that the majority of aggregate or crushed stone that is transported in this country is transported by truck, not rail. According to the *U.S. Geological Survey Minerals Yearbook for 2002*, of the roughly 44% of crushed stone for which transportation information is available, about 78% was transported by truck and only 6.3% by rail. See http://minerals.usgs.gov/minerals/pubs/commodity/stone_crushed/ The Survey thus reports that, "Shipment by truck remains the most widely used method of transportation for crushed stone." In the case of the Medina quarry, shipment of the aggregate a distance of seven miles to a remote rail loading facility for further rail transportation to more distant markets that would be served by this quarry would be little different from the use of trucks at numerous other quarries to transport aggregate somewhat lesser or greater distances to more proximate end-users.

In the event that the no-build (i.e., no-rail) alternative were followed, Vulcan would design the plant's aggregate loading and handling facilities somewhat differently than in the case of the rail alternatives. One important difference would be that under the no-build alternative, the plant would be designed to accommodate a dedicated system of trucks designed to efficiently transport crushed aggregate from the plant to the remote rail yard. The trailers attached to these trucks would incorporate "bottom dump" systems in which loaded aggregate is discharged from the truck trailers almost instantaneously by the hydraulic opening of gates located at the bottom of the trailer.

Similar in some respects to the planned automated loading of rail cars, the loading of trucks would utilize multiple large elevated storage bins (see illustration). The trucks would drive under the storage bins and via computer controls and hydraulic rams, a pre-measured quantity of aggregate would be dropped into the trailer bed. The loaded trucks would then immediately exit the plant and proceed to the remote rail loading facility. At the remote rail loading facility, the loaded trucks would drive in and stop over a subterranean hopper where the bottom of the trailer would open and the aggregate would instantly drop down into the hopper. The aggregate would then be conveyed from the hopper into waiting rail cars. In addition, some of the aggregate trucked to the remote rail yard would simply be stockpiled and manually loaded into rail cars using wheeled loaders. By using a series of elevated storage bins in the plant,

multiple unloading hoppers in the rail yard, and dedicated trucks with bottom dump trailers, the process of moving finished aggregates from the plant to the remote rail loading facility can be efficient.

Example of Typical Multiple Elevated Storage Bins for Loading Aggregate into Trucks



As to routing, SGR has previously stated in its April 5, 2004 letter on this matter that trucks could traverse the following routing: upon exiting the quarry, 2.5 miles on either CR 351 or CR 353 to FM 2676; south on FM 2676 for 3.5 miles and then east on CR 4516 to the remote loading facility that would be constructed. Upon further review, SGR believes that an alternative routing could also be available as follows: 2.4 miles southbound on CR 353; 1.5 miles on a new, privately-owned road that SGR would construct on property it currently owns connecting CR 353 with CR 365, about 1.25 miles south on CR 365 to CR 4516 and then east of CR 4516 about 1.3 miles to a private road that would lead to the loading facility. (A map showing this alternative truck route is attached.) This route would involve a total distance of 6.45 miles between the crushing plant entrance to the north and the private remote rail loading facility in the south. Of this 6.45 miles, only 4.95 miles is on Medina County roadways, with the remainder on private roads that Vulcan would construct if no rail were available.

Apart from the crossing of FM 2676, no State highways would be involved with respect to the alternative route described above. Currently, tractor trailer rigs similar in size and weight to that proposed herein utilize all portions of county roads in the area, albeit not at the proposed rate. With the exception of the small segment of CR 4516, none of the roads along this route are

currently paved. Improvements to these roadways would, among other upgrades, involve adding pavement to reduce dust that is currently generated from local travel down the limestone gravel roads. In addition, there are no load zoned bridges on either of the described routes. Although there is a narrow section along CR 365 where that road crosses Quihi Creek, as it does with many places across the country where needed, Vulcan would work with County officials to construct the necessary improvements at this crossing.

A significant cost factor in upgrading, improving, and maintaining this roadway, is the raw materials that would be required. Since Vulcan is in the business of supplying these materials, and will be operating a quarry at the northern end of this route, Vulcan does not see this as a significant economic challenge to the project. The relatively flat terrain would also keep costs down. In fact, the cost of road upgrades needed under the no-build alternative would be far less than the cost of constructing the proposed rail line.

Vulcan does not expect that its trucking plan will lead to traffic jams or other traffic problems. Current traffic levels on these roads are extremely light. Even at the proposed trucking rate contemplated under the no-build alternative, suggestions by some that there would be traffic jams are unsupportable. The most traveled road in the area is FM 2676 and its usage is approximately 500 vehicles per day, which principally occurs early in the morning and late in the afternoon. As discussed, one possible routing does not even utilize FM 2676 except for a single crossing point.

It bears note that Vulcan plans to upgrade CR 353 whether or not its rail line is constructed. This will facilitate employee traffic in/out of the quarry, as well as local-use truck traffic. Again, Vulcan will coordinate this with local county officials as the project moves forward

As discussed above, the distance between the plant and the remote rail yard is 6.45 miles. Adding an additional ¾ miles for trucking distance inside the plant and remote rail yard location, the total estimated trucking distance is approximately 7¼ miles. This equates to 14½ roundtrip miles. Traveling at an average speed of 30 mph, it would take a single tractor trailer approximately 29 minutes to drive between the two points, and return. (This assumes three stops signs: one at FM 2676, one at CR 365, and one at CR 4516) Adding an additional 2 1/2 minutes on each end for the automated loading and unloading, Vulcan believes that a single truck can make a complete roundtrip in about 34 minutes on average. Operating over a typical 10-hour workday, each truck could readily make 17 roundtrips/day. Back to back 10-hour shifts could see as many as 35 trips per day per truck. Depending upon the duration of the operating shift, relief truck drivers would be utilized to provide rest for drivers during the work shifts.

Turning to the level of trucking required, for at least the first several years of quarry operation, and following a start-up period when production would be lower, Vulcan anticipates that production would be approximately 2.5 million tons of aggregate per year. Over time, this is expected to increase to about 5 million tons/year. As described earlier, the process of trucking

from the plant to a remote rail yard would incorporate dedicated trucks and automated loading and unloading facilities, the average weight of aggregate carried by each truck would be 24.5 tons. This per truck figure is somewhat higher than the 23 tons we have previously assumed since we understand that an automated loading system of the type described below will facilitate more productive use of the trucks.

Using these factors, a variety of projections can be made regarding the number of trucks likely to be utilized under the No-Build Alternative. These projections are as follows:

Scenario 1 (2,500,000 tons per year, 250 Working Days, 10-Hour Trucking Shift)

Aggregate Production	Rail Cars to Be Loaded Per Day	Truckloads Per Day[1]	Total Trucks	Minutes Between Trucks
2,500,000 tons	100	408	24	1.5

Scenario 2 (5,000,000 tons per year, 250 Working Days, 20-Hour Trucking Shift)

Aggregate Production	Rail Cars to Be Loaded Per Day	Truckloads Per Day	Total Trucks	Minutes Between Trucks
5,000,000 tons	200	816	24	1.5

In considering these various alternative scenarios, it is important to recognize that with proper plant design utilizing multiple elevated storage bins, six or more trucks could be loaded simultaneously, in less than a minute.

In summary, Vulcan's experience in trucking material including with its own trucking company (Statewide Transport) which utilizes hundreds of trucks per day across Texas, combined with its position as the industry leader in processing and marketing aggregate, leads it to believe that the no-build alternative, although not preferable to rail for efficient and lower-cost handling of the volumes at issue, is certainly feasible. In addition, Vulcan's 1604 Quarry in San Antonio and other quarries outside Texas (discussed further below) produce volumes somewhat comparable to, or greater than, what Vulcan is proposing for the Medina quarry for the reasonably foreseeable future. In the case of the 1604 Quarry, which is entirely truck-served, the average truck haul distances substantially exceed that which is contemplated for the Medina quarry no-build alternative route.

MCEAA, and some of its leaders, have suggested that the trucking alternative is not feasible and that the quarry could not operate unless a rail line were built. We have shown above

[1] This reflects the number of trucks/day loaded with aggregate departing from the quarry. For each scenario, this number should be doubled to attain the number of loaded and empty trucks that would move from/to the quarry daily. The timing between the trucks takes into loaded and empty vehicles.

that this is not correct, and that MCEAA criticisms are uninformed. While it is not Vulcan's preferred alternative, the feasibility of a no-rail alternative should put to rest MCEAA's repeated contention that "no rail" is the equivalent of "no quarry" and its argument that the rail and quarry are connected actions.

Turning to your two specific questions about the no-build alternative, our responses are as follows:

1. Please provide a detailed description of the use of truck transportation at other Vulcan Materials Company quarries, including how much limestone aggregate is transported by truck from each quarry per year, the number of round truck trips per day and per year, the types of trucks used (hauling capacity), and the types of roadways use (paved or unpaved and roadway width).

Response:

Vulcan Materials Company, one of the largest aggregate producers in the United States, operates over 220 stone crushing facilities across the country. These facilities range from small portable crushing operations that operate for a few months and produce as little as 50,000 tons per year to large scale operations producing nearly 10,000,000 tons annually. Transportation of stone products from these facilities ranges from small over-the-road trucks carrying between 4 tons and 25 tons, rail unit trains of 10,000 tons each, river barges carrying tens of thousands of tons, and even ocean going freighters carrying in excess of 60,000 tons each. In all of these operations, there is a some percentage of stone that is transported to the local market by over-the-road trucks.

While many Vulcan quarries are rail-served, trucking remains the most common means of transporting aggregate, as noted above. Below are the key points regarding the various factors impacting the nature of trucking stone from a quarry to its end use.

General Plant Design Considerations

Vulcan designs its plants to be as efficient as possible for the specific nature of the market it is serving. Because of this, variation in plant design exists based upon the transportation dynamics and other environmental and regulatory requirements of the specific location. Vulcan quarries that are principally rail served have high speed aggregate loading facilities incorporating large aggregate storage bins. The rail cars are placed under these bins and pre-measured quantities of aggregate are automatically dropped into each car. At these quarries, there is invariably some smaller component of local truck delivery. Because it is a secondary focus, the truck loading facility of the operation may not be as efficient, generally incorporating rubber tired front end loader loading and individual weighing of trucks. Consequently, the process is much slower. By contrast, other quarries that do not have rail

service incorporate highly efficient automatic loading of pre-measured aggregate quantities into trucks, just as Vulcan would use were no rail available at the Medina quarry.

In all quarry locations, environmental conditions, reserve life, regulatory permitting, or stone quality issues may dictate the nature of the transportation methods employed at the quarry. In addition, competitive business practices and market strategy impact the nature of the quarry operation. In summary, the market and operational dynamics associated with any one quarry are usually unique to that quarry. As a result, the process or design employed at one quarry may not have anything to do with what may occur at another quarry.

Trucking Distance

Generally, in regions where high quality stone is present, trucking of material occurs in a radius of approximately 40 miles around the quarry location. In markets where high quality stone is either limited or non-existent, material is trucked in from quarries as far away as 75 miles or more. Even in those regions of the country where no local stone is available and the stone is brought in by rail, the rock must be transported from the rail yard to the job site by trucks. This "secondary" trucking distance can be as great as 40 miles from the rail distribution yard, again, depending on the location of the end use of the stone. As mentioned previously, factors driving the sale and transportation of aggregate from a quarry are also controlled by competitive business forces.

Types of Roadways Used By the Trucks

Because the end use of the crushed stone is so diverse, the class of roadways used for the trucking of aggregate is highly variable. Across the country, Vulcan's quarries are situated in areas where trucks entering and exiting the plant travel on unpaved county roads, unpaved private roads, paved county roads, state farm to market roads, state highways, city streets, and even Interstate highways. In areas where utilization of county roads are necessary to enter the quarry, Vulcan has generally negotiated agreements with local county governments to upgrade, if necessary, and participate in maintenance of these county roads.

The actual number of individual trucks utilized in a day varies dramatically depending on the locations of the various job sites. Through the course of a day, the trucks may deliver materials to dozens of end use sites. Depending upon the distance to the job site and the quantity of material ordered, an individual truck may make several trips a day or just a single trip.

Examples of Truck-Served Quarries[2]

Vulcan operates hundreds of stone quarries across the country. For purposes of addressing the question specifically, some examples from the San Antonio area and from notable Vulcan quarries outside Texas are provided below.

Vulcan's 1604 Quarry (located in San Antonio at O'Conner Road and Loop 1604):

Approximately 3,000,000 tons of crushed limestone is produced and sold annually from this location. Typical sales of aggregate can range from 8,000 to 15,000 tons per day. All of the aggregate sold at this location is transported from the quarry by truck. These trucks are owned by Vulcan's own trucking subsidiary, Statewide Transport, independent trucking companies, highway construction companies, or local county and city governments. The carrying capacity of these trucks can range from 4 tons to 25 tons. Vulcan's Statewide Transport trucks are all 25 ton capacity trucks, but some independent contractors use tandem axle trucks carrying only 12 tons. Given an average truck load capacity of 20 tons, in a typical day, as many as 600 loaded trucks may exit the plant. These trucks deliver the aggregate to locations generally within 45 miles of the quarry. Depending upon the distance to the job site and the volume of material ordered, the number of loads an individual truck may make in a single day can vary from as few as one to more than a dozen. These trucks travel on all types of roads.

The 1604 Quarry has limestone reserves sufficient to last for many decades at the current pace of mining. It is likely that stone sales from this operation will increase over time as the market area continues to grow and competitor quarries deplete reserves.

Vulcan's Helotes Quarry (located on FM 1560 in Helotes Texas)

Approximately 1,500,000 tons of crushed limestone is produced and sold annually from this location. Typical sales of aggregate can range from 5,000 to 7,000 tons per day. All of the aggregate sold at this location leaves the quarry by trucks. These trucks are owned by Statewide Transport, independent trucking companies, highway construction companies, or local county and city governments. The carrying capacity of these trucks can range from 4 tons to 25 tons. As noted, Statewide Transport trucks are all 25 ton capacity trucks. Using an 20 tons per load as an average, as many as 350 loaded trucks may exit the plant daily. These trucks deliver the aggregate to locations generally within 45 miles of the quarry. The types of roads these trucks drive on ranges from small county roads, housing subdivision roads, private driveways, state highways, expressways, and interstate highways.

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[2] While your letter asks for trucking information relative to each Vulcan quarry (of which there are over 300 operations and more than 220 quarries), we are advised that a sampling of information from quarries will be sufficient. We provide that sampling here.

The Helotes Quarry has limestone reserves sufficient to last for several decades at the current pace of mining. It is likely that stone sales from this operation will increase over time as the market area continues to grow and competitor quarries deplete reserves.

Vulcan's Geronimo Quarry (located on FM 1283 in Medina County)

This operation produces approximately 250,000 tons of crushed limestone annually. Sales of aggregate are approximately 1000 tons per day. All of the aggregate sold at this location exits the quarry by trucks. These trucks are owned by Statewide Transport, independent trucking companies, highway construction companies, or local county and city governments (including Medina County). The carrying capacity of these trucks can range from 4 tons to 25 tons. Using 20 tons as an average, as many as 50 loaded trucks may exit the plant daily. These trucks deliver the aggregate to locations generally within 30 miles of the quarry. The types of roads these trucks drive on ranges from small county roads, housing subdivision roads, private driveways, and state highways.

The Geronimo Quarry has limestone reserves sufficient to last for many decades at the current pace of mining. It is likely that stone sales from this operation will increase over time as the market area continues to grow and competitor quarries deplete reserves.

Other Notable Operations

In addition to the above-named quarries, Vulcan operates a quarry in the Chicago, Illinois area that has in excess of 6,000,000 tons of aggregate trucked out of the quarry annually. In addition, Vulcan owns two stone quarries in the Atlanta, Georgia, area that have each shipped in excess of 4,000,000 tons of aggregate by truck annually. In these examples, the distance the aggregate is trucked from the quarries is similar to those described above for the San Antonio area quarries. These quarries, among others, amply demonstrate the feasibility of trucking large volumes of aggregate either to a local market destination or, as contemplated under no-build alternative under review here, to a remote rail loading facility for further transportation to more distant markets.

2. Please provide an estimate or how much limestone aggregate would be transported by truck from Vulcan's quarry to local markets, including the number of round truck trips per day and the approximate distances these trucks would travel.

Response: As SGR stated in its September 2, 2003 letter addressed to Ms. Rini Ghosh, it anticipates that about 20-30 loaded trucks per day will be needed to serve local area needs.

The primary purpose of Vulcan's Medina Quarry will be to produce and sell crushed stone to areas served by rail. Nonetheless, Vulcan believes that a small portion of its sales from this quarry will be to customers in the local area. With the existence of a quarry, local customers including the local city and county governments, will likely look towards this quarry for their

construction material needs. Although Medina County is growing, its aggregate demand is relatively small. As a result, over the immediately foreseeable few years, the estimated annual volume of crushed stone sold in the first several years of operation will likely be in the100,000 ton per year range.

As with quarries in the San Antonio area, the likely distance trucks would travel to deliver crushed stone to a job site will range from a few short miles to as much as 40 miles. Based upon 20 tons per loaded truck and a 250 day work year, the estimated number of loaded trucks exiting the quarry would be as follows:

Annual Local Sales	Daily Tons Sold	Daily Loaded Trucks
100,000 tons	400 tons	20 to 30

Assuming that the average distance to each job site was 15 miles, or 30 miles roundtrip, it is estimated that the turnaround time for a single truck would be approximately 1 hour (45 minutes of travel time, 5 minutes to load at quarry, 10 minutes to unload at job site). Under these scenarios, a single truck could make 8 roundtrip's in a single day.

B. Medina Dam Line

MCEAA and some of its individual members have suggested that SGR should take advantage of an entirely different alignment, one several miles to the east of its proposed alternative alignments that "takes advantage" of a line built in 1911 to construct the Medina Dam. This proposal offers the impression that that rail line, which existed for about one year almost one hundred years ago, offers some unique advantages that would be akin to building the SGR line in an area that is already graded and ready to accommodate a new rail line.

Nothing could be further from the truth. While a railroad was in place to serve the Medina Dam for a one year period early last century, there is little or no obvious evidence today of that railroad and precious little evidence of grading since, as discussed further below, the 1911 railroad was built on top of a plateau for several miles and included relatively steep grades. Further, there are no rail easements remaining from this railroad, no railbed, and no track remaining in place. This Medina Dam route should therefore not be equated in any way with an abandoned rail line that might be readily susceptible of reactivation. It is nothing more than a line on some old maps, and offers no advantages whatever to SGR or Vulcan.

Moreover, not only does the route not connect the two end points that SGR needs to connect (the point on the UP line north of US 90 and the proposed quarry), but "connections" between the old rail route and those points would pose infeasible engineering challenges for an SGR line that, in stark contrast to this entirely invisible 1911 line, must be engineered to accommodate large unit trains. This point too is discussed further below.

While the Medina Dam route poses serious engineering problems, since MCEAA has suggested that this is a viable alternative that should be considered in the Draft EIS, SGR offers this further discussion of the route. The information provided here has been reviewed with a professional rail construction expert, Mr. Joseph Hudson, a principal of Intercoastal Contractors, Inc., a San Antonio rail construction firm that is knowledgeable in design matters such as those at issue here.

As part of its rail line design effort, Vulcan learned about the history of a long abandoned rail road that had been constructed in 1911 as part of the Medina Irrigation Company's effort to construct the Medina Lake Dam. Through discussions with local residents, Vulcan learned the general location of this route and compared it with other alternatives under review. This so-called Medina Dam route was rejected from further detailed consideration by Vulcan based on several considerations.

First, it would have to be much longer than any other alternatives being considered, and thus more costly to build, maintain and operate. Second, the southern portion of the route was built on the top of a plateau from which it descended as it proceeded northward, presenting difficult engineering issues not posed by other alternatives. Third, the route offers no special advantages over other alternatives under consideration in terms of available right of way since the easements for the route no longer exist and the track was dismantled after 1912, after the Medina Dam was built and the need for the railroad eliminated. Fourth, as a longer route, it impacted substantially more individual properties and thus would have more adverse local community impacts than other routes under review. Fifth, the route started south of US Highway 90 at Dunlay, and would necessitate a grade separation across that highway were it followed to its southern terminus. Sixth, the northern portion of the route veered well east of the quarry location. Seventh, deviations from the route needed to avoid the need for the grade separation at the south end and to allow the route to serve the quarry at the north end would present serious engineering/design problems, as discussed further below.

Using copies of old property maps of Medina County obtained from the Library of Congress, SGR has projected the location of the Medina Dam route onto modern U.S.G.S topographic maps. While the quality of the historic maps is poor, the general area of the right of way is identifiable on the maps. **Figure 1** is a copy of this old Medina Dam route. Because the map is not scaled, and all of the information is hand drawn, the area depicted by the line of the route is approximately 300 to 500 feet.

Figure 2 is the Medina Dam route projected onto the USGS Map for the area, along with the location of the four alternative routes being studied by the SEA. As is immediately obvious, this route starts south of US Highway 90 at Dunlay and heads well east of the quarry location. Because it is not practical to build a grade separation across US Highway 90, a deviation from the 1911 route on the southern end of that route must be made to link to the UP line on the north side of US 90. Indeed, connection with the UP line on the north side of US 90, thereby avoiding a crossing of that busy dual line divided highway, is one of the primary advantages of the

alternatives under consideration to date in this proceeding. In addition, because the 1911 route went to the Medina Dam, a deviation on the northern portion of the route must be made so that the route would enter the grounds of the quarry.[3]

Before addressing the specific deviations from the Medina Dam route that would be required by SGR, it might be useful to point out the obvious technical benefits that the Medina Dam railroad construction engineers must have considered in laying out their route almost one hundred years ago. The starting point at the south end was near the small community of Dunlay, which at that time was likely larger and more active than it may be today. Moving north from Dunlay, the Medina Dam rail engineers certainly did not have to concern themselves with U.S. Highway 90. (The primary means of road transportation in this area in 1911 was horse-drawn carriage.) They took advantage of the elevated farm lands and pasture that exists along the first seven or so miles of the route on a plateau on which Dunlay is located, and which extends north and south from Dunlay.

The elevation change across the southernmost seven miles of the Medina Dam route is roughly only 50 feet. For these seven miles, the Medina Dam line was built atop the plateau on which Dunlay is located. At a point about seven miles north of Dunlay, the line came off the plateau and down an escarpment into the valley below, a drop in elevation of about 130 feet over a relatively short distance. Coming off this escarpment was likely not an easy feat for the railroad and steep grades were encountered. However, considering that this 1911 railroad was not pulling 100-car unit trains with weights approaching 14,000 tons, as the SGR plans to transport, and considering the short timeframe the 1911 railroad would operate, its design could apparently handle grades of four, five, or even six percent, which the Medina Dam line incurred on the northern section of the line.

In that regard, it is reasonable to assume that the Medina Dam railroad was used in 1911 to haul no more than a rail car or two at a time, and that those cars would have contained only the cement, fuel, dynamite and other equipment needed to build a single structure, the Medina Dam. Designing a railroad for short term, low level use by a handful of cars gives rise to a very different set of engineering considerations relative to designing one to haul 100 car unit trains. Grades and curves were simply not as critical to the 1911 engineers, whose railroad was in place for only one year, as they are to SGR's engineers and the needs of a modern, heavy-haul, long term railroad designed for use by Vulcan and other shippers that may locate in the area.

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[3] SGR notes that MCEAA has not proposed or offered any views on the deviations needed to make use of the Medina Dam route, i.e., to connect the route to the quarry at the north end and to the UP line at the proposed intersection point at the south end. To the contrary, in its February 24, 2004 Scoping Comments, MCEAA suggests that the route should "be evaluated with the assumption that a grade separated crossing will exist across U.S. 90," dismissing cost as a factor worthy of consideration. Given the analysis set forth in this letter, the notion that a line should be built by SGR to connect with the UP line at a point south of U.S. 90 warrants no further attention. Such an alignment would not resolve the fundamental grade and curve problems described below.

In considering the Medina Dam route and the necessary deviations from this route at the north and south ends, SGR applied the engineering design criteria used in connection with its initial assessment of potential alternatives. These design criteria, set forth in the attached excerpted copy of the 1999 TRAX Engineering & Associates Report used by SGR in assessing alternative routes for its line, are as follows:

Grades: Limited to 1.0 %, consistent with typical industry practice for new heavy haul rail lines. In areas throughout trackage where trains will either be loading or standing without locomotives attached, the grades are limited to 0.15 %. This insures ease of operation while loading, and the relative safety of leaving trains unattended for interchange. In the area of the UP line, any grade on the trackage should be sloped away from the UP line.

Curves: Curves in the central portion of the track are limited to 3 degrees to accommodate speeds of up to 40 mph. Curves on the ends of the lines are limited to 4 degrees to accommodate speeds of up to 35 mph.

Several potential deviations from the Medina Dam route on its south end and north end were evaluated. **Figure 3** depicts these various alternative deviations, each assigned a letter code, that have been considered by SGR. Several factors were considered in identifying these potential deviations. First, the connection with the UP main line must be such that loaded trains on the SGR line enter the UP main line with the *eastbound orientation*, since the vast majority of the SGR rail shipments will be going east, where it is expected that the primary markets for aggregate will be located. It is also likely that the traffic of other shippers that might locate on the line will be headed eastbound since there are more potential markets to the east of the area. Likewise, empty cars will most likely be coming from the east, moving west, and must be able to enter the SGR line moving in a westerly direction.

The second consideration taken into account with respect to the identification of potential deviations was the design limitation against curves in excess of 4 degrees. The eastbound orientation consideration, coupled with this limitation on curves, suggests only two possibilities for "connecting" the Medina Dam route to the alternatives under review, specifically, the preferred alternative and alternative 3 at a point north of where those alternatives intersect the UP line. These are Deviations A and B discussed below and shown on Figure 3. Similarly, the limitation on curves was also taken into account in identifying the potential Deviations (C, D and E) from the Medina Dam route that would be needed to connect that route to the quarry. These deviations and the 3 degree curves associated with them are illustrated on Figure 3.

The specific problems with these deviations, and thus with the Medina Dam route, are discussed next.

Deviation A (South End)

Starting on the southern end, the first deviation point (A) would involve a 4 degree curve connecting into the UP line in approximately the same location as that shown for the preferred alternative and alternative 3. To utilize a portion of the Medina Dam route, this deviation would require the route to turn due east, and merge into the Medina Dam route approximately one mile north of US Highway 90. The key problems associated with this deviation would be twofold. First, the existing natural grades in this area approach 7 %, far in excess of what is operationally feasible for the unit trains that SGR would transport. Second, the slope of the line would be directed downwards toward the main UP line as opposed to being away from it. From a safety standpoint, it is more desirable to have rail that is either flat heading into the main UP line, or if a slope is necessary, that it be directed away from the main UP line.

While the grade problem could possibly be addressed with an enormous volume of cut and fill, SGR understandably desires to avoid any unnecessary and avoidable scarring of the area's landscape and the host of environmental issues that would be associated with cut and fill. By contrast, the other alternatives under consideration, including the preferred alternative, would require little, if any, cut and fill as they traverse largely flat terrain.

Deviation B (South End)

To overcome the difficulties described in Deviation A, the route could utilize the first 1 ½ miles of alternative 3 of the preferred route. To then utilize the Medina Dam route, the track would have to climb up the hillside in the area of CR 4516 and then connect with the Medina Dam route at a point approximately 1400 feet north of CR 4516. However, the problem with this approach is that the existing natural grade coming up this hill exceeds 6% over a long distance, far in excess of the design criteria. To eliminate this grade problem would again necessitate enormous volumes of cut and fill. In addition, the crossing location of CR 4516 on a gradient is certainly not desirable from a safety standpoint. In fact, as in the case of Deviation A, it would be very difficult if not infeasible to construct a track that did not slope back toward the UP line.

Deviations C, D, & E (North End)

On the northern edge of the plateau where the Medina Dam line was located, there are three potential alternative deviations from that route to the quarry that were considered. In the case of all three of these deviations, the existing natural grades would exceed 6%, far in excess of the operational criteria for the SGR line. To meet those criteria would necessitate enormous amounts of cut and fill. In addition to this cut and fill problem, slope stabilities would become an important factor to consider. Issues such as these make these deviations very impractical if not infeasible from an engineering perspective.

In addition to the failure of the route and needed deviations to meet the technical design criteria, the length of the Medina Dam route would vary from a minimum of 11 to as much as 13

miles, depending on which deviation is chosen. In such case, the actual portion of the original Medina Dam route that could conceivably be used would range from as little as 3 miles (27% of total route length) to at most, 5.5 miles (50% of total route length).

As noted above, there are no advantages to following even these small portions of the 1911 route. The Medina Dam route is today no more than a phantom, an imaginary line on a map with no corresponding grade or other advantages of the type one might expect from following an abandoned rail line when building a new one.

In addition, there are many more landowners whose properties would be impacted by the Medina Dam route than is the case with respect to any of the preferred routes, more acreage would be disturbed (including agricultural properties), more structures would be impacted, and more creeks or roads (including FM 2676) would have to be crossed, relative to any of the alternatives now under review. The engineering issues noted above, however, preclude the need for further comparative analysis of this type since the route simply could not feasibly carry the traffic being proposed for the SGR line.

The information offered here, and previously offered by SGR, provides a sufficient basis on which SEA can take the "hard look" at this alternative route proposal and make a reasoned determination to dismiss it from more detailed consideration. The alternative is both infeasible from an engineering perspective and inconsistent with the objective of the SGR line -- to efficiently serve the quarry and other shippers that might locate in the area proximate to its line. While other alternatives and route variations may often be available, SEA is not "obligated 'to consider in detail each and every conceivable variation of the alternatives stated'; 'it need only set forth those alternatives' sufficient(ly) to permit a reasoned choice." *Monroe County Conservation Council, Inc. v. Adams*, 566 F.2d 419, 425 (2nd Cir. 1977), quoting *Coalition for Responsible Regional Development v. Coleman*, 555 F.2d 398, 400 (4th Cir. 1977). Further, an alternative that does not meet the objectives of the federal action may be excluded from consideration. In that regard, NEPA was never intended to be applied as a substantive statute so as to redefine a project's objectives; the starting point for the choice of reasonable alternatives to be examined are not environmental goals, but rather whether the alternatives meet the project's purpose. *See Alexandria v. Slater*, 198 F.3d 862, 866-869 (D.C. Cir. 1999) (upholding DOT's decision not to assess an alternative bridge design on grounds that the alternative would not have satisfied the traffic relief objectives of the project).

Here, there are no transportation advantages associated with a Medina Dam route, a route which exists only on some old maps and that is more illusory than real. SGR would not benefit in any way from following that 1911 route given the absence of any grading or other physical advantages normally associated with an abandoned rail line, and the apparent absence of rail easements. To the contrary, there are several significant disadvantages noted above to using any portion of the Medina Dam route, including that the line does not come close to meeting the reasonable design criteria needed for the efficient operation of a rail line to carry the unit train traffic proposed for the SGR line. The fact that neither the Medina Dam route's origin and

destination are located at points that SGR's line needs to serve (the quarry and the planned point of intersection with the UP line), and that the route is considerably longer and less efficient than the alternatives proposed, only underscores that this is not an alternative that merits further analysis.

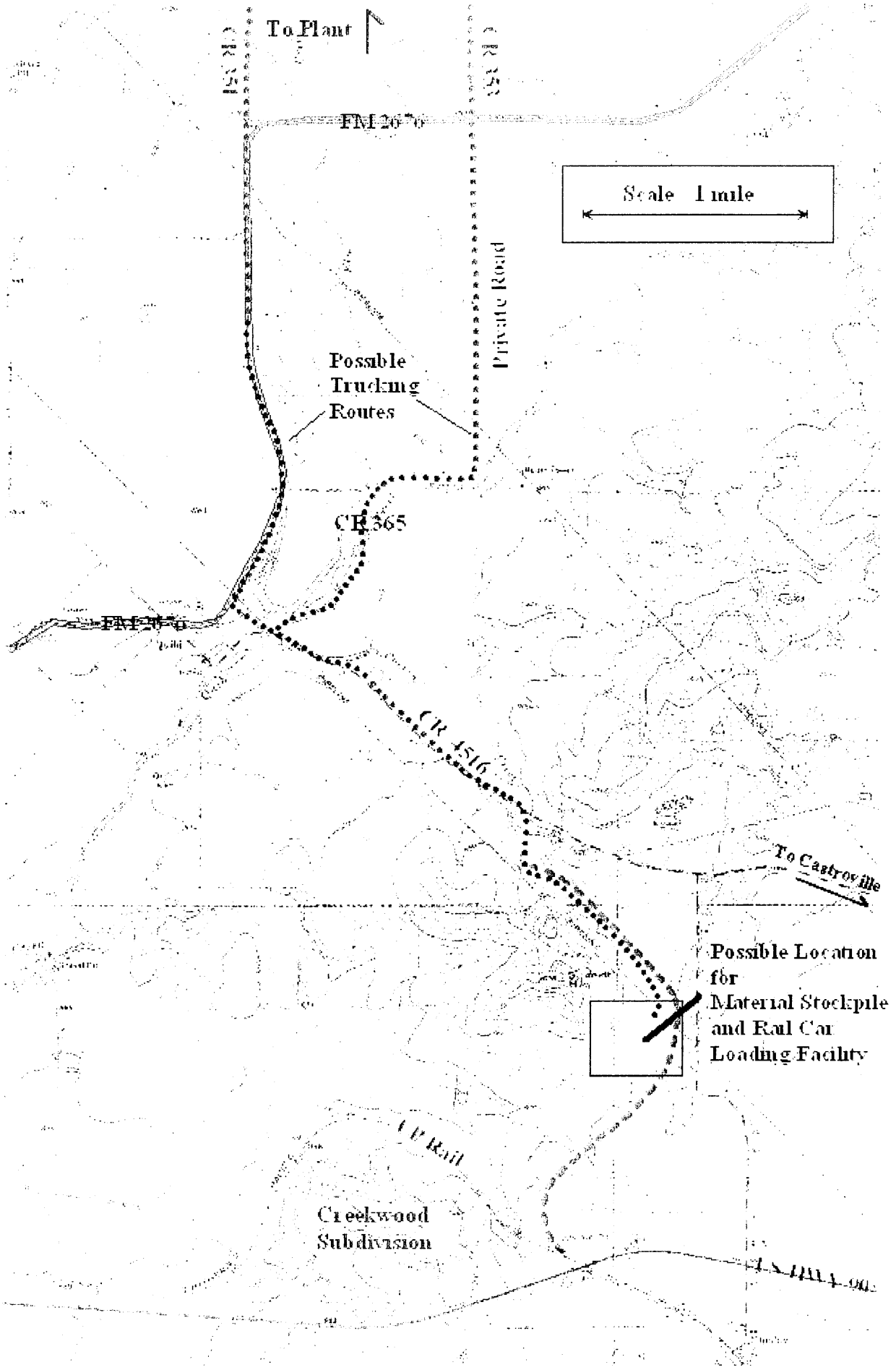
In short, we believe that the above information, and the information provided by the attached maps, should lay to rest any notion that the STB needs to consider further the Medina Dam route.

Finally, SGR wishes to bring to the attention of the STB an article (copy attached) that appeared in the April 23, 2004 edition of the San Antonio Express News, entitled "Medina group digs in to fight quarry idea." The article makes clear that MCEAA is in fact fighting the quarry, and using this proceeding to do so, in the hope of delaying the quarry project. According to the article, the "group's primary line of defense is to block the rail spur without which it contends the quarry plan would crumble." While MCEAA's claims that the quarry would not be operational without a rail line are wrong, its real goal of blocking or delaying the quarry speaks to the lack of credibility of its claims about the viability of truck service, its suggestion that the Medina Dam route should be studied and the host of other assertions it has made and is likely to continue to make. This delay game is not one that SEA should tolerate.

Respectfully submitted,

David H. Coburn
Attorney for Southwest Gulf
Railroad Company

cc: Rini Ghosh
Jaya Zyman-Ponebshek



No-Build Alternative:
SGR Remote Rail Loading Facility Conceptual Layout

Prepared by Vulcan
Materials Company
May 2004

TRAX
Engineering &
Associates, Inc.

Boise, Idaho
November 11, 1999

RE:Vulcan Materials - Dunlay Project - Conceptual Design

TO: Mr. Bob Irvine
TO: Mr. Darrell Brownlow

FROM: Jerry Heavin

We have completed a conceptual plan and cost estimate for construction of a rail line between Union Pacific's main track west of Dunlay, Texas and the proposed quarry site north of the community of Quihi, Texas.

Character of Design Work

The accompanying drawings and estimate are the result of a conceptual-level engineering effort to locate a proposed railroad line and to estimate construction cost. The design criteria is based on American Railway Engineering and Maintenance of Way (AREMA) recommended practices for heavy-haul rail lines with allowances made for the specifics of your intended use of the facility. A conceptual-level effort implies that the design is not yet "optimized" from the standpoint of minimizing construction cost and maximizing return on investment. I am confident that as the process enters the preliminary design phase, costs and returns can be improved. As we discussed, Vulcan is in a better position to address permitting concerns than TRAX, so we have given no consideration to environmental concerns at this early design stage. These and other related issues must be addressed as part of subsequent project development.

Routes Considered

A total of 15 routes were developed between Union Pacific Railroad Company's (UP) main line and the proposed loading facility near the quarry. The routes were designated as Alignment "A", "B"... "K-1", "K-2", etc. Many of the alignments are minor iterations of others and for the purposes of this report, drawings of the less significant variations have been excluded from the attached documents (but remain on file if needed). The 8 selected alignments, portrayed by the accompanying drawings, document the evolution of a conceptual design that meets your requirements for serviceability. The design incorporates sound railway engineering principles that will translate to cost effective maintenance and operating characteristics throughout the life of the quarry. Our recommended alignments "K-1" and "K-2" have evolved from our discussions and are practical to build and operate. Based on the industry standard Davis formula, Chart 1 gives approximate horsepower requirements based on 5-mph speed increments and the physical characteristics of the proposed lines. The final route will be approximately 7.2 miles long from UP main track to the south edge of the quarry property. Construction of the loading loop raises the total mileage to be built to 9.1 miles

Base Operations

Gross train weights exceeding 14,000 tons can be expected from a 100 car consist of 100-ton capacity cars. From a practical standpoint, a minimum of 9000 horsepower will be required to move these heavy trains to the main track. Once on the UP main track, since their grades and speeds exceed those planned for the line, additional locomotives will be added. Except for the loop tracks, track geometry will allow 40-mph maximum speed operations; however, 25 mph will meet the needs of the quarry for the

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foreseeable future and operating at this speed will help keep track maintenance costs low. Speeds obtained while climbing the 1-percent ruling grade near station 80+00 could as low as 12 mph with 9000 horsepower. This will not introduce delays since speeds will be reduced as the loaded train prepares to enter the UP main causing no practical impact on running time. A loaded 14,000-ton train with a 0.64 horsepower per trailing ton ratio will be able to take advantage of 25-mph design speeds on the remainder of the line.

Loading Loop Track Layout

Conceptual design of the loading loop is based on established industry practices for unit-train operation. As illustrated by the drawings, a phased construction is recommended with the track layout expanding as needed to accommodate future increase in quarry output. Assuming interchange of trains with UP occurs smoothly and loading time for trains is less than 8 hours, the first phase of construction will allow for production of up to 1-100 car loaded train per day. With 10,000 net tons in each train and a 250 day work year, quarry output of 2.5 million rail tons could be supplied to the aggregate market with phase 1. The construction of the second phase will accommodate 4 loaded trains (10 million tons) and for more than 4 trains, the third phase must be considered.

Subsequent Engineering

The accuracy of this engineering effort is limited to that of the topographic information used. In general, the coordinates of the alignment (presented on the drawings for alignments "K-1" and "K-2") may be considered to be within approximately 100 feet of the desired location. However, subsequent modifications to the alignment, as a result of regulatory agency's concerns or further engineering efforts to optimize the alignment (minimize cost) could affect the location. It is recommended that State and Federal regulatory agencies become involved in the development of this project prior to further advancement of the rail line design. The requirements of these agencies, particularly in regard to any environmental issues raised, could have significant impacts on the location of the alignment. Satisfactorily addressing any such issues, through modification of the conceptual design, will facilitate efficient and timely execution of subsequent Preliminary and Final design efforts. Preliminary design should focus on optimizing the alignment (based on more detailed topographic information), while Final design will provide detailed drawings for all items required for construction of the project.

Data

Mapping

Raster images of USGS 7.5-min. topographic maps, as provided by SurelMaps, were a fundamental basis for design of the route. This data has been geo-referenced to the Texas State Plane Coordinate System, south-central zone. Geologic data comes from the Geologic Atlas of Texas, San Antonio Sheet, 1982 published by The University of Texas at Austin.

Aerial Photography

As a supplement to the USGS topographic maps, raster images of aerial photographs were used to evaluate the physical features of the route in greater detail.

Digital Terrain Model

USGS 7.5-min. Digital Elevation Models covering the proposed route were used as the basis for earthwork calculations. This data has been geo-referenced to the Texas State Plane Coordinate System, south-central zone.

Hydrology

Data presented in the USGS publication "Magnitude and Frequency of Floods in the United States" (Part 8) was used as the basis for culvert and bridge sizing.

Design Criteria

Grades

Grades have been limited to 1.0%, consistent typical industry practice for new heavy-haul rail lines. This grade is also somewhat less than ruling grades on the U.P. between Dunlay and Houston (1.2-1.4%). Consequently, if run-through power is used between that loading facility and destination points, tonnage ratings will be governed by the grades on the U.P. rather than those of the proposed rail line. Vertical curves between grades have been designed in accordance with AREMA recommended practice. Grades are generally limited to 0.15% throughout trackage where trains will either be loading or standing without locomotives attached (the latter case applies to the potential interchange yard site near the connection with the U.P. mainline). This insures ease of operation while loading, and reliable safety of leaving trains unattended for interchange. All grades comply with Union Pacific Standards for Industrial Trackage dated February 1997, publication PB22029.

Curves

Curves have been limited to 7° 30' at the loading loop, consistent with typical industry practice for new unit-train loading and unloading loops. Curves for the portion of the line used by loaded trains have been limited to 6° 30', again consistent with typical industry practice. These curvatures insure safety and limit rail wear and corresponding track maintenance to reasonable levels. Curves exceeding 4° 00' have been limited to the ends of the line only, where speeds will be relatively low. The majority of the central portion of the line is designed with curves of 3° 00' or less, permitting potential operating speeds of up to 40 mph. Allowance for incorporation of proper spirals (in subsequent design work) has been provided. Assuming a maximum curve super-elevation 4.5", the following table describes maximum track speeds.

Degree of Curve	Curve Radius	Maximum Speed (mph)
3° 00'	1909.9'	40
4° 00'	1432.4'	35
6° 30'	881.5'	25
7° 30'	764.0'	25

Turnouts

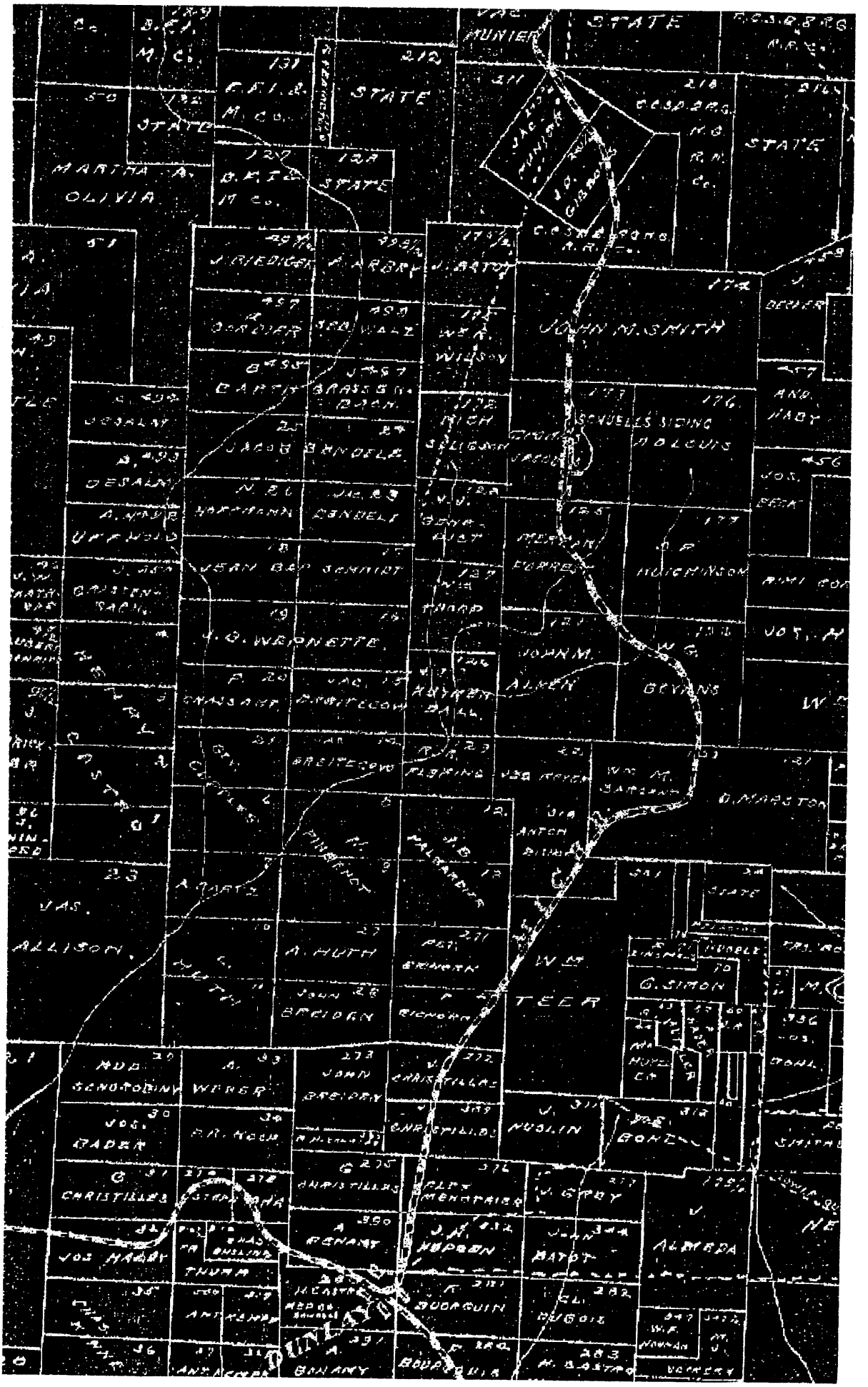
Trackwork geometry provides adequate space for #10 turnouts in all cases. Larger turnouts can be accommodated with minor changes to the proposed geometry. Discussions with Union Pacific may develop a sufficient return on investment from reduced train delay to warrant a 25-mph #14 remote control turnout at the main line connection.

Hydrology and Land Use

Sizing of bridges and culverts is based on a flood frequency of 25 years. Constraints on the location of the route, in regards to specific parcels of property, were the primary driver in most location decisions and were established by our many discussions.

Figure 1

Map of Medina County depicting the MICO RR circa 1912



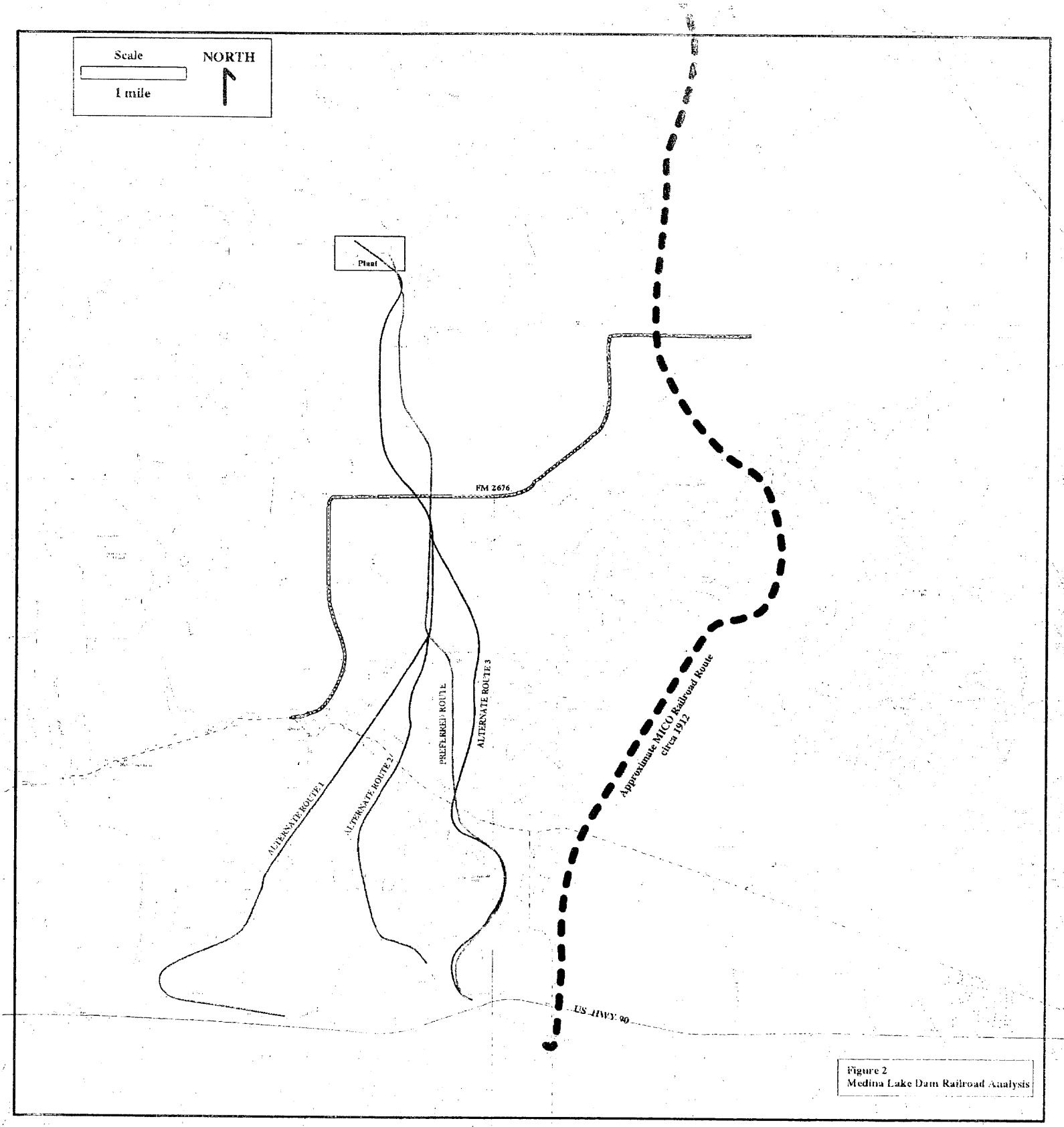


Figure 2
Medina Lake Dam Railroad Analysis

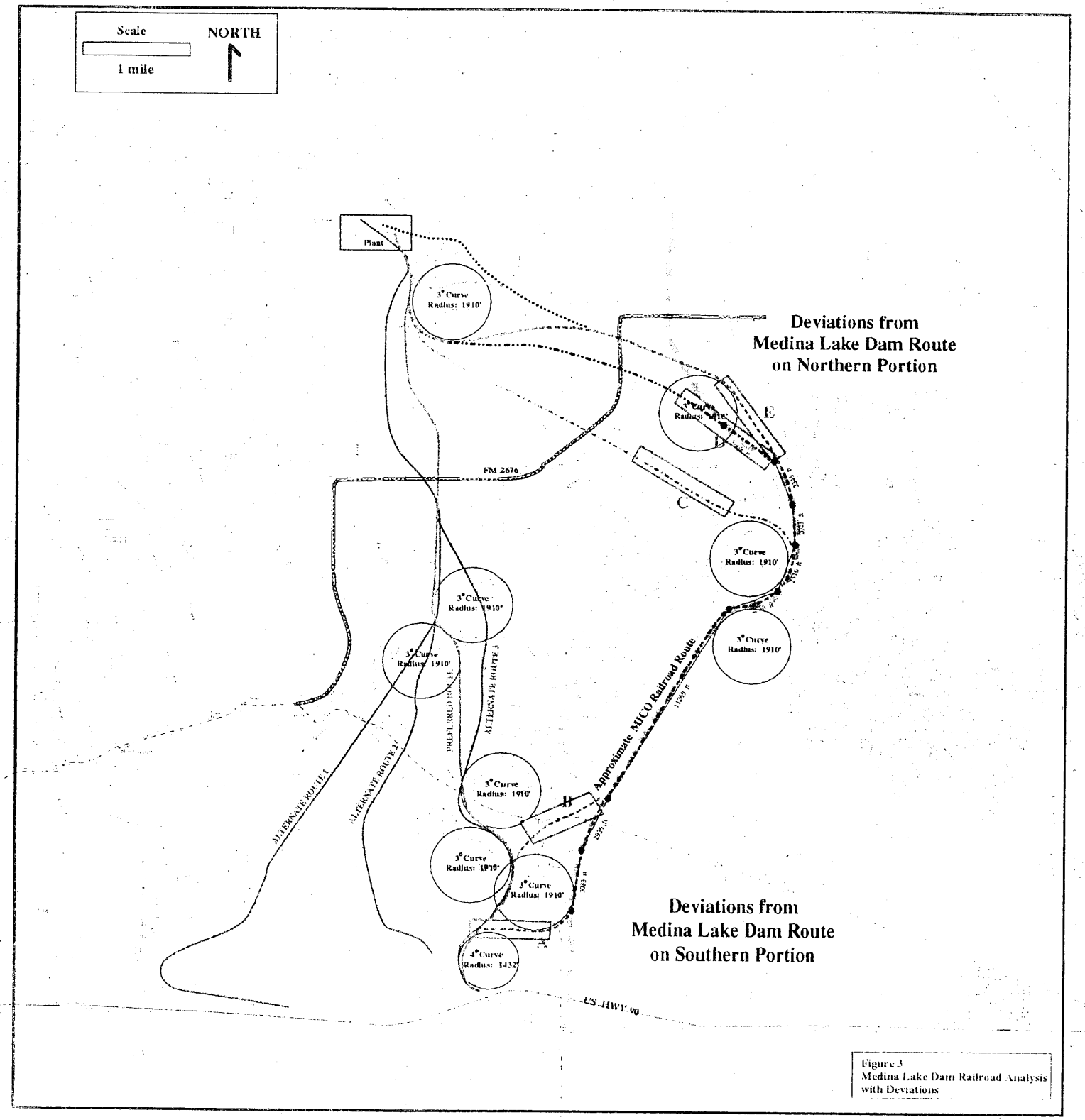


Figure 3
Medina Lake Dam Railroad Analysis
with Deviations

Medina group digs in to fight quarry idea

By Zeke MacCormack
Express-News Staff Writer

QUIHI — Hesitant murmurs about incorporating this quiet farming hamlet into a city now being heard among locals reflect how deeply opposition runs here to a new quarry proposed to open nearby.

"I don't want it at all," said Chris McCoy of Vulcan Materials' plan to mine 8 million tons of limestone annually from 1,800 acres the firm has leased in Medina County since 1999.

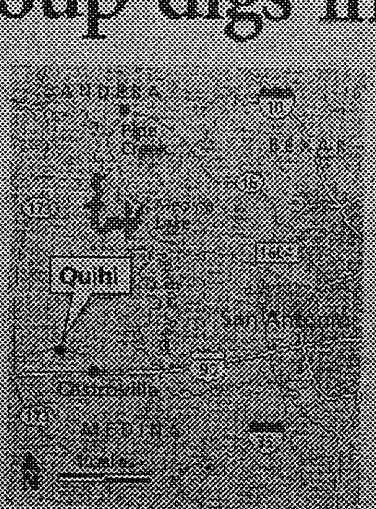
"I want our quiet country rural lifestyle," said McCoy, 52, from her ranch on FM 2676.

Incorporation is just one strategy being explored to fight the quarry and a rail spur that Vulcan wants built to carry rock from the pit seven miles south to tracks in Dunley.

"If it will help keep them away, it would be OK," said Judy Dittmer, 65. "But I don't know if we're enough people" to be a city.

Quarry opposition is led by the Medina County Environmental Action League, a group of 130 families that will hold its fifth annual membership meeting Saturday at 6 p.m. at the Quihi Lutheran Church.

Critics say the project would increase local flooding, create traffic problems and damage local roads and historical sites in the area settled in the 1840s and named for the Mexican eagle buzzard, the quiche or teechile, seen there.



PATRICK ZELLER/EXPRESS-NEWS

The group's primary line of defense is to block the rail spur without which it contends the quarry plan would crumble.

"It wouldn't be profitable to run a quarry that's served only by trucks," said Robert Fitzgerald, the group's president. "You've got to pay the truck driver, the insurance, fuel, labor, the maintenance costs on the trucks and improve the roads."

But the no-railroad-equals-no-quarry equation is dismissed by Tom Ransdell, president of Vulcan's Southwest Division, in San Antonio.

Vulcan officials say 650 truck trips a day — about one a minute over a 12-hour shift — would be needed to serve the quarry if the Federal Surface Transportation Board doesn't back the rail line.

Fitzgerald wants the federal panel to expand its environmental impact study on the rail path to include the quarry site.

He said that could add three years to the development timetable.

"It will be a definite victory for us and help protect the water supply if we can convince the people at Surface Transportation Board that an environmental impact study on the quarry is needed," Fitzgerald said.

Vulcan, which already has U.S. Fish and Wildlife Service approval to mine in designated areas, hopes the transportation board will announce this summer that its impact study will cover only the rail line.

"We believe it's a separate issue," because the railroad is not proposed to just serve the quarry, Ransdell said.

Vulcan received preliminary federal approval last year for the spur to the Southwest Gulf Railroad, a company Vulcan formed to haul the aggregate.

Engineering and design work has started, but construction must await environmental approval and a final vote by the surface transportation panel.

Vulcan has asked for its railroad to be designated as a common carrier, giving it the power of eminent domain, allowing it to condemn land, which would allow it to get around covenants placed on several properties along its preferred route prohibiting railroad tracks or conveyor belts.

Ransdell talked of establishing a dialogue with opponents "to do what's best for that area out there."

But the only dialogue Fitzgerald seems interested in is hearing Vulcan say, "We quit."

"We've tried to tell them every way we know that we don't want a railroad through here," he said.

"We don't feel it's right for a private company to create a railroad just so it can get eminent domain power."

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