

ENVIRONMENTAL ASSESSMENT

On an Application for an

OPENCUT MINING AMENDMENT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose, and analyze the impacts of a proposed action. This document may disclose impacts that have no legislatively required mitigation measures, or over which there is no regulatory authority.

The state law that regulates gravel mining operations in Montana is the Opencut Mining Act. This law and the rules adopted thereunder place operational guidance and limitations on a project during its lifetime, and provide for the reclamation of land affected by opencut mining operations.

Local governments and other state agencies may have authority over different resources and activities under their regulations. Approval or denial of this Opencut Application will be based on a determination of whether or not the proposed operation complies with the Opencut Mining Act and the rules adopted thereunder. The DEQ approval of this application would not relieve the operator from the obligation to comply with any other applicable federal, state, or county statutes, regulations, or ordinances. The operator is responsible for obtaining any other permits, licenses, approvals, etc. that are required for any part of the proposed operation.

APPLICANT: Richland County Public Works

COUNTY: Richland

SITE NAME: Ralston Pit

DATE: August 2015

LOCATION: Section 34, T28 N, R53 E

PROPOSAL: The applicant proposes to amend an existing permit to mine, crush, stockpile, and transport 500,000 cubic yards of gravel and sand from a 24.5-acre site located just north of County Road 154 and approximately 2.5 miles southeast of Brockton, Montana. The Missouri River is located to the east and north, and at a slightly lower elevation below the proposed mine area. Wetland and riparian areas are located to the north and east. Agricultural fields are located due west and south. The amendment would add 22.5 mine-level acres to the permit, extend the reclamation date, reclaim an area disturbed to the east outside the permit boundary, and bring the site into compliance with current law and rules.

The Richland County Public Works would be liable to reclaim the site to pasture/rangeland by June 2034.

This application contains all items required by the Opencut Mining Act and its implementing rules. Proponent commits to properly conducting opencut operations and would be legally bound by the permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	<p>Primarily flat cropland sloping to the north/northeast toward the Missouri River. A wetland/riparian area is present to the north and east and slightly lower in elevation than the mine area.</p> <p>This site is located directly adjacent to the Missouri River. This stretch of the Missouri is below the Fort Peck Dam but is also fed by the Milk and Poplar Rivers above the mine location. The site appears to be composed of clayey alluvium of stream terraces and ground moraine features.</p> <p>The onsite soils consist of loam, silty clay loam and silty clay. The operator</p>

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	<p>would replace 24 inches of soil and 24 inches of overburden.</p> <p>The site receives approximately 12 to 15 inches of precipitation per year.</p> <p><i>Impacts:</i> An irreversible and irretrievable removal of gravel from the site would occur. A small impact to the quantity and quality of soils from salvaging, stockpiling, and resoiling activities also would occur, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic, geologic, soil, or special reclamation considerations that would prevent reclamation success.</p>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>The amended permit boundary would maintain a minimum 150-foot undisturbed buffer from the adjacent Missouri River. The permit boundary would also prevent any Opencut operations inside the 100-year flood plain. A 50-foot buffer would be established from the existing wetland area to the north. Water would be obtained from an off-site source more than 300 feet from the permit boundary for crushing operations and dust control.</p> <p><i>Impacts:</i> The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p> <p><i>Cumulative:</i> Cumulative impacts by the proposed action on resources would be negligible.</p>
3. AIR QUALITY	<p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). Its program is approved by the Environmental Protection Agency (EPA). These rules and standards are designed to be protective of human health and the environment.</p> <p>Air quality permits would be required on the processing equipment before installment. Machinery, such as generators, crushers and asphalt plants, are individually permitted for allowable emissions. Best Available Control Technology (BACT) is the usual standard applied.</p> <p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. It is considered to be a nuisance but not harmful to health.</p> <p><i>Impacts:</i> Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.</p>
4. VEGETATION COVER, QUANTITY AND QUALITY	<p>There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of crop, kochia, various grasses, and prairie sunflower; and provides approximately 80-90% cover in undisturbed and nonagricultural areas. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed use.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation would occur.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	<p>Although the area is used primarily for cropland, it also supports populations of deer, rodents, song birds, coyotes, foxes, raptors, waterfowl, insects and various other animal species. Population numbers for these species are not known.</p> <p><i>Impacts:</i> The proposed mine is expected to temporarily displace some individual species and it is likely that the site would be re-inhabited following reclamation to similar habitat.</p>

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6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	<p>The Montana Natural Heritage Program (MNHP) lists the following 12 species of concern in the vicinity of the site:</p> <p>Piping Plover (<i>Charadrius melodus</i>) is a small bird weighing only about 46 to 63 grams. Its wings, cheek patches crown and breast band are pale grey, while the rest of its body is white, except the tail, which is dark above the white terminal ends and upper tail coverts. The piping plover is migratory and usually arrives in Montana in early May and leaves the state by late August. They like unvegetated sand or pebble beaches on shorelines. They eat fly larvae, worms and various other small insects.</p> <p>Least tern (<i>Sternula antillarum</i>) is the smallest tern in North America, averaging 21 to 24 cm long with a wingspan of 51 cm. Its diminutive size, yellow bill, and white forehead are distinctive. The sexes are virtually identical. Least terns nest on unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana. Sites with gravel substrate provide the most suitable sites for nesting. Generally the least tern consumes small fishes (generally less than 9 cm long), but sometimes eats crustaceans or insects.</p> <p>Pallid Sturgeon (<i>Scaphirhynchus albus</i>) is the larger of the species of sturgeon found east of the continental divide. It grows to about 60 pounds. Because it is rare, little is known about this fish. The Pallid Sturgeon uses the Yellowstone River during spring and summer and the Missouri River below the confluence of the Yellowstone in the fall and winter. The Pallid sturgeon consumes minnows and bugs.</p> <p>Paddlefish (<i>Polyodon spathula</i>) is an ancient mostly cartilaginous fish with smooth skin and a close relative of the sturgeon. It grows up to 150 pounds or more. They are readily identifiable by the long paddle-like snout, long, tapered gill covers, and the backbone bent up into the upper lobe of the tail fin. Spawning migrations are tied closely with the timing of spring high water. Although young of the year paddlefish will “bite” at small food particles, they eventually switch to filtering for food.</p> <p>Shortnose Gar (<i>Lepisosteus platostomus</i>) is a fish native to Montana and is found at only one location--the dredge ponds below Fort Peck Reservoir. Shortnose gar may reach a size and weight of about 31 inches and about 3.5 pounds. This prehistoric-appearing fish is cylindrically shaped, with an elongated bony head and snout containing one row of sharp, conical teeth. The dorsal fin is located well posterior and the pectoral and pelvic fins have no spots. The skin is covered with diamond shaped ganoid scales arranged in oblique rows, providing a very protective surface armor. Color varies from brownish or olive-green on the dorsal surface lightening to yellow on the sides and white on the belly. Gars are predaceous. They are spring, broadcast spawners. They have several unusual features including rectangular scales found only in primitive fishes, and a gas bladder that can function like a lung. Gars can survive in waters that have very little oxygen where most other fish would perish. Gar eggs are poisonous to humans.</p> <p>Northern Redbelly Dace (<i>Phoxinus eos</i>) is a Montana small minnow. Its maximum size is about 3 inches. The Northern Redbelly Dace is olive to dark brown above; the lower side and belly are yellow or silvery except on adult males during summer when the lower side is red. Northern Redbelly Dace are found in clear, cool, slow-flowing creeks, ponds and lakes with aquatic vegetation,</p>

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	<p>including filamentous algae, and sandy or gravelly bottoms interspersed with silt. As with many small native stream fishes, Northern Redbelly Dace could be adversely affected by stream channelization, reductions to discharge, changes in water quality and temperature, and introductions of non-native predatory fishes.</p> <p>Sturgeon Chub (<i>Macrhybopsis gelida</i>) is a native minnow found in the eastern Montana prairie river drainages. They have small eyes and many external papillae on their bodies and fins. They feed mostly on small invertebrates living on the bottom substrate.</p> <p>Sicklefin Chub (<i>Macrhybopsis meeki</i>) is one of the rarest fishes in Montana. It is found in large, turbid streams in the plains region of Montana. It is similar to the sturgeon chub in appearance except that its pectoral fins are strikingly long. They have a conspicuous barbell at each corner of the mouth. They are a bottom feeder which locates its food primarily by taste.</p> <p>Pearl Dace (<i>Margariscus margarita</i>) is a fish native to both the eastern and northern drainages within the glaciated plains of Montana. It has a dark back, sides that are dusky-silver, and white underside. They prefer small cool streams either clear or turbid. They eat a variety of aquatic organisms including insects, crustaceans, worms, and small fish.</p> <p>Blue Sucker (<i>Cycleptus elongates</i>) is a fish that appears to inhabit only the larger streams, primarily the Missouri and Yellowstone rivers. It has an elongated shape, long dorsal fin and slate-blue coloration. It grows to slightly larger than 10 pounds. They prefer water with low turbidity and swift current. They feed mainly on aquatic insects.</p> <p>Iowa Darter (<i>Etheostoma exile</i>) is a fish that is greenish or brownish with about eight saddle bands across the back and about nine to twelve dark blotches on the side. They range across much of south-central Canada and the north-central United States. They prefer clear slow-flowing streams with solid bottoms, although they have a wide range of tolerance for changes in water flow rates. Food consists mostly of small crustaceans and aquatic insect larvae.</p> <p>Sauger (<i>Sander canadensis</i>) is a fish native to Montana east of the Continental Divide. It inhabits both large rivers and reservoirs, but is mainly a river fish. In the spring, sauger broadcast their spawn over riffles in rivers. Sauger are a highly prized sport fish and in some areas outside Montana are also a commercial fish. Their major food items are insects and small fish.</p> <p><i>Impacts:</i> None of the listed species have been found on this site. Even if suitable habitat did exist on this site, the disturbance area would be small and large areas of similar or identical habitat surrounds the site. The possible impact to these species would be minimal.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES	<p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that no have been discovered previously within the designated search locale. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. No signs were evident at depth in the previously disturbed area. SHPO does not feel that a cultural resource inventory is warranted at this site at this time.</p> <p><i>Impacts:</i> If during operations resources were to be discovered, activities would be temporarily moved to another area or halted until SHPO was contacted and the importance of the resources was determined.</p>

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8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	<p>There are no unusual demands on land, water, air or energy anticipated as a result of this project.</p> <p><i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	<p>Richland County zoning clearance has been obtained.</p> <p>The site is not zoned.</p>
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>As seen on the aerial photo of the surrounding area, there is one residence approximately 950 feet southeast of the mine site.</p> <p><i>Impact:</i> This county pit is being sited in this area because of the location of the resource.</p>
11. AESTHETICS	<p>The site is located in a common agricultural area. There would be a temporary alteration of aesthetics while mining is under way. However, reclamation would return the area to a visually acceptable landscape. This project is considered to be long-term, i.e., planned to take 19 years to complete.</p> <p>The operator would restrict hours of operation to 7 a.m. to 7 p.m. Monday through Saturday in order to mitigate impacts to the nearby residence.</p>
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<p>Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs.</p> <p><i>Impacts:</i> New employment opportunities would be limited.</p>
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<p>The acreage listed in the proposal would be taken out of agricultural use. Upon completion of mining, the land would be reclaimed to pasture/rangeland.</p> <p><i>Impacts:</i> Agricultural production would be reduced as soil stripping and operations progress across the site. When the entire site is opened up for mining and mine-related activities, all agricultural activities would cease, but pasture/range would be restored as the site is reclaimed.</p>
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	<p>Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, etc., from the companies, employees, or landowners benefitting from this operation. Following reclamation, it is assumed the tax base would revert to pre-mine levels.</p>
15. DEMAND FOR GOVERNMENT SERVICES	<p>Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.</p>
16. HUMAN HEALTH AND SAFETY	<p>Any industrial activity would increase the opportunities for accidental injury. There are agencies that require the Operator to implement specific safety measures. If followed there is no reason to believe that significant safety issues would be present.</p>
17. ACCESS TO AND QUALITY OF	<p>This activity would not inhibit the use of the identified resources.</p>

IMPACTS ON THE HUMAN POPULATION	
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RECREATIONAL AND WILDERNESS ACTIVITIES	
18. NATIVE CULTURAL CONCERNS	<i>Impacts:</i> None identified.

19. Alternatives Considered:

- A. Denial Alternative: The Department would deny an application that does not comply with the Act and Rules. No impacts to the natural or human environment would occur.
- B. Approval Alternative: The Department would approve an application that complies with the Act and Rules. Impacts of this application are addressed in the body of the EA.

20. Public Involvement, Agencies, Groups or Individuals contacted: Montana State Historic Preservation Office, Montana Natural Heritage Program.

21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to: Richland County Commission or County Planning Department (zoning), Richland County Weed Control Board, MSHA and OSHA (worker safety), DEQ ARMB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights), and MDT (road access).

22. Regulatory Impact on Private Property: The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

23. Magnitude and Significance of Potential Impacts: This proposal is not likely to create impacts of significance due to mitigation, restrictions, and oversight mandated by the Opencut Mining Act and pursuant rules and the Montana Clean Air Act.

24. Recommendation for Further Environmental Analysis: [] EIS [X] No Further Analysis

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Name Title

EA Reviewed By: JJ Conner Opencut Mining Program Unit Coordinator
Name Title

PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

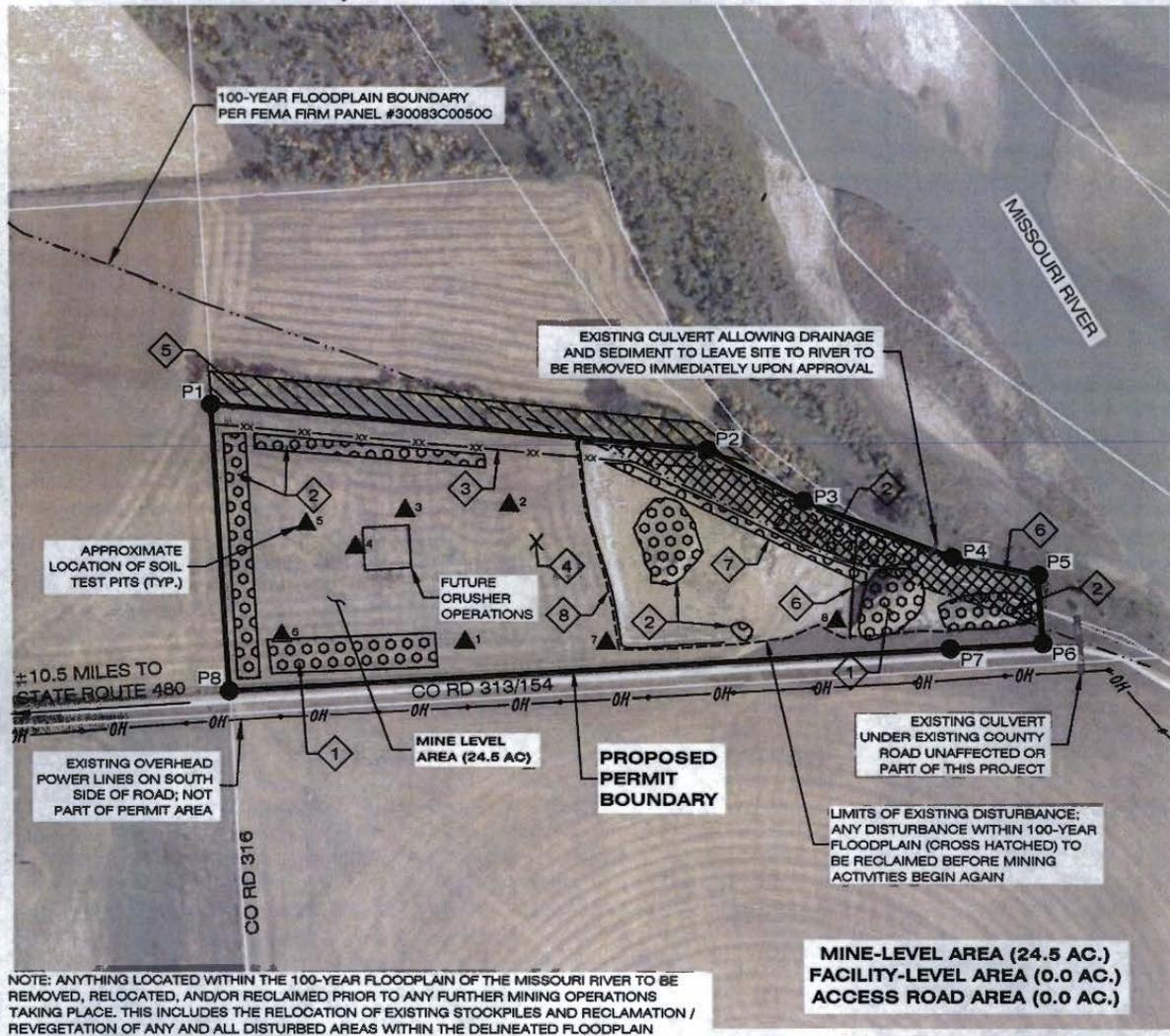
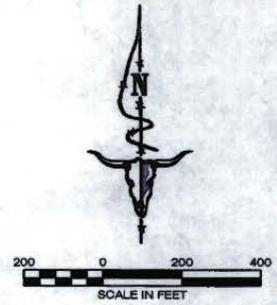
If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.

LEGEND

- (P) PROPOSED PERMIT BOUNDARY
- PERMIT BOUNDARY COORDINATES
- STOCKPILE AREA
- WETLAND AREA
- AREA TO BE RECLAIMED
- SOIL TEST PIT
- (P) SILT FENCE
- (E) OVERHEAD POWER
- (E) 100-YEAR FLOODPLAIN
- (E) LIMITS OF DISTURBANCE

KEYED NOTES

- 1 MINE MATERIAL STOCKPILE AREA (EXISTING AND/OR PROPOSED)
- 2 OVERBURDEN / SOIL STOCKPILE AREA (EXISTING AND/OR PROPOSED)
- 3 PROPOSED SILT FENCE (OR OTHER ACCEPTABLE BMPs) ALONG 50' BUFFER LIMITS OF WETLAND AREA AND RIVER TO PREVENT SEDIMENT LEAVING SITE AND POLLUTING WATERWAYS.
- 4 APPROXIMATE CENTER OF MAIN PERMIT AREA
- 5 EXISTING WETLANDS NORTH OF SITE TO BE PROTECTED BY 50' BUFFER AND BMPs TO ENSURE NO SEDIMENT LEAVES THE SITE TO WATERWAYS
- 6 APPROXIMATE AREA OF UNPERMITTED DISTURBANCE OUTSIDE OF BOUNDARY PER THE DEPARTMENT'S INSPECTION ON MARCH 10, 2015
- 7 PROPOSED SOIL BERM MINIMUM 5' IN HEIGHT ALONG BOUNDARY ON RIVER SIDE
- 8 EXISTING 3' HIGH BERM ALONG LIMITS OF DISTURBANCE TO THE WEST



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SITE MAP
 RALSTON GRAVEL PIT
 RICHLAND COUNTY PUBLIC WORKS
 S34, T28N, R53E, P.M.M.
 RICHLAND COUNTY, MONTANA

PROJECT#: 14-3393D
 TAB: SITE MAP
 DRAFTER: AM
 DATE: 5/20/2015
 SHEET 1 OF 1

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