

Missouri River Freight Corridor
Assessment and Development Plan

Inventory Report, Tables

(Tables of Section 2, from Technical Memo 2)



Prepared By



Hanson Professional Services, Inc.



Supporting Document Prepared for Missouri Department of Transportation
2011 October

Project TRyy1018

Report cmr 12 - 006

2.6 Main Inventory Table

Main Inventory Table							
Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
1	1	Central Stone Co.	Central Stone Co.	Mile 7.8, right bank	Active	Quarry at rear has unlimited storage for stone and sand. No river equipment; clients bring in their own. One surface track - not in service. Sand receiving about once a year. Clients pick up rock about once a year.	1
2	1	Central Stone Co.	Not operated	Mile 8.5, right bank	Inactive	Open storage area in rear has capacity for approximately 15,000 tons of sand. Asphalt plant uses land now. No facilities seen or used.	5
4	2	Leuke Hauling, Inc.	Joe Tori Dredging, Inc. (Fred Weber)	Mile 16.8, right bank	Active	Open storage area at rear has capacity for 30,000 tons of sand. Is in operation on occasion when needed. No river facilities. Equipment is floated in when needed.	6
5	3	Lafarge Corp	Limited Leasing	Mile 27.8, right bank	Active	Open storage area at rear has capacity for 30,000 tons of sand and 60,000 tons of material. Large land available in adjacent acres downstream of current yard. Interested in possible other uses of dock. Have done steel and salt in past, but now only sand.	1
6	3	Lafarge Corp	Limited Leasing	Mile 28.0, right bank	Active	Open storage area at rear has capacity for approximately 20,000 tons of material. Large land available in adjacent acres downstream of current yard. Interested in possible other uses of dock. Have done steel and salt in past, but now only sand	1
7	3	City of St. Charles	City of St. Charles	Mile 28.8, left bank	Unknown	Mooring excursion vessels. Freight use unlikely.	6

Main Inventory Table							
Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
8	4	Lafarge Corp	Joe Tori Dredging, Inc.	Mile 31.5, left bank	Active	Barges anchor 40 feet offshore, crane moors inboard of barges and unloads into hopper on shore. Limestone quarry and open storage area for 80,000 tons of sand located in rear. Any new expansion unlikely due to Katy Trail Crossing. Could only handle conveyed material.	1
9	4	Lafarge Corp	Joe Tori Dredging, Inc.	Mile 31.3, left bank	Active	Limestone quarry and open storage area for 80,000 tons of sand are located in rear.	1
10	5	Lafarge Corp	Limited Leasing	Mile 43.8, right bank	Unknown	Open storage area has capacity for approximately 80,000 tons of material.	1
11	6	Capital Sand Co.	Washington Sand Co., LLC	Mile 65.4, right bank	Active	Facility was moved in 2004. Large storage available. Only receives sand about once a year.	1
12	7	Maczuk Industries, Inc.	Maczuk Industries, Inc.	Mile 81.7, right bank	Inactive	Two 6-inch pipelines extend from wharf to 21 steel storage tanks at terminal in rear, total capacity 2,247,700 gallons. One 10-car capacity surface track; appears not in service. Pipeline available but tanks seem unconnected or moved.	3
13	8	Hermann Sand & Gravel, Inc.	Hermann Sand & Gravel, Inc.	Mile 96.9, left bank	Active	Open storage area at rear has capacity for 30,000 tons of sand. Capability to load outbound bulk material from truck.	1
14	9	United States Government	U.S. Army Corps of Engineers	Mile 104.5, left bank	Active	Facility is operated on a seasonal basis as necessary. One 2-inch, diesel fuel pipeline extends to bulkhead from one 10,000-gallon storage tank at rear. Appears active per Google.	6

Main Inventory Table							
Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
15	10	Central Electric Power Cooperative	Central Electric Power Cooperative - Chamois	Mile 117.1, right bank	Inactive	Open storage area has capacity for 100,000 tons of coal. Two surface tracks with total capacity for 34 cars serve undertrack pit at open storage area. Dock intact; conveyor/hopper poor condition.	3
16	12	Jefferson City River Terminal, Inc.	Jefferson City River Terminal, Inc.	Mile 143.0, left bank	Active	Approximately 80 acres of open area are located in rear, 4 acres of which were developed for storage at time of survey. Ancillary facilities include a 15,000 square foot steel frame metal-covered warehouse. General cargo operations capability and other bulk. Dry cargo dock and equipment.	1
17	12	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 143.4, left bank	Active	Open storage area at rear has capacity for 80,000 tons of sand.	1
18	12	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 143.8, left bank	Active	Fleeting area.	1
19	13	Amoco Oil Co.	Not operated	Mile 148.6, left bank	Inactive	Formerly used for handling petroleum products. Unable to access or verify if pipelines exist on wharf. No shore facility observed or identified. Google indicates mooring still intact.	6
20	14	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 186.4, left bank	Active	Open storage area in rear has capacity for 65,000 tons of sand. Operating at time of survey.	1
21	15	Gavilon Fertilizer, LLC and Howard/Cooper Regional Port Authority	Not operated	Mile 196.4, left bank	Inactive	One 8-inch pipeline extends from wharf to one 1,500,000 gallon liquid fertilizer storage tank; one 12-inch pipeline with two 6-inch barge connections extends to one 1,500,000 gallon molasses storage tank. No dockside pipelines identified to serve liquid storage tanks. Scale available. Dry bulk storage in good condition.	3

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
22	15	Gavilon Fertilizer, LLC	Capital Sand Co., Inc.	Mile 196.4, left bank	Active	Facility moved to lease space at Gavilon Fertilizer, LLC. Inducement operation. Former River Mile 197 dock fronts casino; availability unknown. Open storage area at rear has capacity for 30,000 tons of sand.	1
23	16	Capital Sand Co., Inc.	Glasgow Sand Plant	Mile 226.2, left bank	Active	Open storage area at rear has capacity for 31,000 tons of sand. Operating at time of survey.	1
24	16	MFA Agri Services	MFA Agri Services - Glasgow	Mile 226.4, left bank	Inactive	Grain elevator at rear, consisting of 63 concrete silos and interstices, has capacity for 1,220,000 bushels. One surface track with capacity for 15 cars serves loading spout. Reported approximately \$40,000 for equipment repairs.	2
25	16	United States Government	U.S. Army Corps of Engineers	Mile 226.5, left bank	Active	U.S. Army Corps of Engineers field office and small storage shed located at rear. Small dock area.	1
26	17	Brunswick River Terminal, Inc.	AgriServices of Brunswick LLC	Mile 256.2, left bank	Active	Steel and concrete A-frame storage building at rear has capacity for 45,000 tons of fertilizer. One 6-inch pipeline extends from wharf to 3 steel liquid fertilizer storage tanks, total capacity 15,000 tons. Two surface tracks with total capacity for 24 cars serve 2 undertrack pits.	1
27	18	Cooperative #1	Central Missouri AGRIService	Mile 262.8, right bank	Inactive	Grain elevator at rear consisting of 18 concrete silos with 20 interstices and two steel tanks not verified. At time of survey (2010), barge loading facility was inactive. Reported no barge loading since 90's.	4
28	19	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 286.9, left bank	Active	Open storage area at rear has capacity for 30,000 tons of sand.	1

Main Inventory Table							
Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
29	20	Bartlett and Co.	Bartlett and Co. - Waverly	Mile 293.2, right bank	Inactive	Grain elevator at rear, consisting of 20 concrete silos and 7 interstices has total capacity for 1,380,000 bushels. One 6-inch pipeline extends from upper dolphin to one 5,500-ton-capacity liquid fertilizer storage. One surface track with capacity for five cars serves undertrack pit and loading spouts. Investment needed is indicated to be approximately \$30,000.	2
30	20	Central Missouri AGRIService	Central Missouri AGRIService	Mile 293.4, right bank	Inactive	Grain elevator at rear, consisting of 29 concrete silos and interstices, three steel tanks, and one flat storage building has total capacity for 1,100,000 bushels. One surface track with capacity for 12 cars serves loading spout. Reported as generally good condition but upgrade needed.	2
31	21	Division of Capital Sand Co., Inc.	Lexington Sand Co.	Mile 317.2, left bank	Active	Open storage area at rear has capacity for 70,000 tons of sand.	1
32	21	MFA Agri Services	MFA Agri Services - Lexington	Mile 318.2, right bank	Inactive	Grain elevator at rear consisting of three steel tanks has total capacity for 450,000 bushels. One surface track with capacity for 5 cars serves loading spout. Reported in generally good condition but an estimated \$90,000 needed.	2
33	22	Independence Power Corp.	Independence Power - Missouri City	Mile 345.3, left bank	Inactive	Unable to verify plant operation status. Security reported no marine activity within the last 25 years. Some dock structure apparent.	5

Main Inventory Table							
Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
34	23	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	Mile 354.7, right bank	Active	Two 10-inch pneumatic pipelines extend to wharf from 20 concrete silos with 8 interstices at cement plant in rear, total capacity 55,000 tons. A 60-foot long steel sheet pile bulkhead located upstream of wharf. Two surface tracks serve cement plant in rear. Facility can load outbound pneumatically (no barge service).	1
35	23	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	Mile 355.8, right bank	Active	Storage dome served from wharf has capacity for 9,000 tons of bulk fertilizer. Two A-frame bulk storage buildings at site, total capacity 8,000 tons are served only by rail and truck. Two surface tracks with total capacity for 25 cars serve undertrack pit at bulk storage buildings in rear. Facility in good condition for unloading cement products (no barge service).	1
36	23	BP Amoco Oil Co.	BP Amoco Oil Inc.	Mile 356.5, right bank	Inactive	Two 8-inch pipelines (not in use at time of survey) extend from wharf to 14 steel storage tanks at terminal in rear; total capacity 1,200,000 barrels. Trackage serving terminal at rear. Google Earth review.	4
37	23	AK Asset Management Co.	Sheffield Station Industrial Park	Mile 357.6, right bank	Inactive	Five acres of open storage area are located at rear. At time of last inventory (2000-2001) entire area was undergoing redevelopment. Ex ARMCO Steel facility. Access was denied. Unable to confirm ownership or status. Google review.	5
38	24	Holliday Sand and Gravel Co.	Holliday Sand and Gravel Co. - Randolph	Mile 360.0, left bank	Active	Open storage area at rear has capacity for 100,000 tons of material.	1

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
39	24	Conoco Phillips Inc.	Conoco Phillips - Asphalt Terminal	Mile 360.6, left bank	Active	One 10" pipeline extends from wharf to 5 steel, asphalt storage tanks, total capacity 170,000 barrels. Two 6" pipelines extend to 2 caustic soda storage tanks, total cap. 1,276,000 gallons. One 6-car capacity track serves terminal in rear.	1
40	24	Bartlett Grain Co.	Bartlett Grain - Kansas City	Mile 361.1, left bank	Inactive	Grain elevator at rear consisting of 16 concrete silos with 23 interstices and 126 bins has total capacity for 3,824,000 bushels. Four surface tracks with total capacity for 65 cars serve undertrack pit and loading spouts. Google indicates some structural work may be needed.	3
41	24	Cargill Inc.	Cargill Inc. - Chouteau	Mile 361.6, left bank	Inactive	Grain elevator at rear consisting of 6 concrete silos with 34 interstices and bins and one steel tank has total capacity for 900,000 bushels. Four surface tracks with total capacity for 45 cars serve undertrack pit and loading spouts. Reported to be in good condition. Some mechanical upgrades needed for marine structures.	2
42	25	American Compressed Steel, Inc.	American Compressed Steel, Inc.	Mile 366.8, right bank	Inactive	Scrap metal processing facility located in rear. One surface track serves facility in rear. No track tie-in. No activity witnessed. Google indicates an apparent dock structure, but nothing else.	4
43	25	City of Kansas City	Port of Kansas City	Mile 367.1, right bank	Inactive	Seven compartmented storage buildings and one storage dome in rear have total capacity for 60,000 tons of bulk materials. Facility is idle. Surface track serves facility in rear. No track tie-in. Several spot system upgrades could place bulk in service.	3

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
44	25	The Kansas City-Wyandotte County Joint Port Authority	Bartlett and Company	Mile 367.6, right bank	Inactive	Grain elevator on opposite side of Fairfax Trafficway in rear, consisting of 492 concrete silos and interstices and 7 steel tanks, has total capacity for 10,000,000 bushels. Trackage with capacity for 72 cars serves undertrack pits and loading spouts at grain elevator in rear. Overhead gallery to wharf through public levee industrial development.	2
45	25	Williams Energy Services Co. (reported)	Conoco Phillips	Mile 368.3, right bank	Inactive	Trackage at terminal in rear. One 8-inch pipeline on wharf was blanked at time of last infrastructure inventory (2000-2001). Access denied but marine structure identified. Condition unknown. Google indicates infrastructure is apparently intact.	3
46	26	Holliday Sand and Gravel Co.	Holliday Sand and Gravel-Kansas City	Left bank, mile 371.8	Active	Open storage area at rear has capacity for 100,000 tons of material.	1
47	26	Bartlett Grain Company	Bartlett Grain - Fairfax	Mile 373, right bank	Inactive	Grain elevator at rear, consisting of 220 concrete silos and interstices and 7 steel tanks, has total capacity for 10,000,000 bushels. Three surface tracks with total capacity for 62 cars serve 2 undertrack pits and 2 loading spouts. Reported as mechanical not operating.	2
48	27	Intercontinental Engineering-Manufacturing Corp.	Intercontinental Engineering-Manufacturing Corp.	Mile 375.7, left bank	Active	Fabrication plant for winch equipment and heavy machinery predominately for offshore oil industry located in rear. Five barges can be moored at shore moorings along bank at upper side of wharf. One surface track at rear of wharf joins additional plant trackage.	1

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
49	28	Massman Construction Co., Inc.	Massman Construction Co., Inc.	Mile 385.0, left bank	Inactive	One surface track serves storage yard in rear. Contractors equipment storage yard is located in rear. Could not find location & appears inactive. Google indicates no infrastructure.	6
50	28	Westway Terminal Co.	Westway Terminal Co.	Mile 386.4, right bank	Active	One 6-inch, calcium chloride pipeline extends from wharf to 2 steel storage tanks, total capacity 275,000 gallons; and one 8-inch asphalt pipeline extends to 7 steel storage tanks; total capacity 162,820 barrels. One 4-inch pipeline extends from wharf. Reported by Conoco Phillips as active. One surface track serving 2 loading spouts. Appears active and intact - reported by others and Google.	4
51	28	ADM/Growmark, subsidiary of Archer-Daniels-Midland Co.	ADM/Growmark, - Wolcott	Mile 386.6, right bank	Inactive	Grain elevator at rear consisting of 73 concrete silos and interstices and 2 steel tanks has total capacity for 2,300,000 bushels. Additional berthing space for 4 empty and 4 loaded barges is available at shore moorings located above and below wharf. Three surface tracks; total capacity 60 cars; serves 3 undertrack pits and loading spout. Google indicates marine structures intact.	3
52	29	Chemtronics, Inc.	Chemtronics, Inc.	Mile 395.9, right bank	Inactive	One 6-inch pipeline extends from work platform to 4 steel storage tanks at rear. One surface track; capacity 5 cars; serves terminal at rear. Track may not be serviceable.	6

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
53	30	Bartlett Grain Company	Bartlett Grain - Atchison	Mile 421.0, right bank,	Inactive	Grain elevator at rear consisting of 36 concrete silos and interstices has capacity for 950,000 bushels. Three surface tracks; total capacity 81 cars; serves undertrack pits and loading spouts. Structure appears sound. Facility review - Google Earth.	3
54	30	Unknown	Not operated	Mile 421.1, right bank	Inactive	Could not find location and no shoreside business. MapQuest and Google indicate shoreside facility is gone, but small dock shows on river. No moorings.	6
55	30	Maczuk, Industries, Inc.	Maczuk, Industries, Inc.	Mile 423.1, right bank	Inactive	One 8-inch pipeline extends from wharf to 5 steel storage tanks at rear, total capacity 1,965,000 gallons. No dock pipelines or marine structure identified. Reported closed.	5
56	31	Ag Processing, Inc.	Ag Processing, Inc.	Mile 446.0, left bank	Inactive	One 6-inch pipeline extends to wharf from 2 steel, soybean oil, storage tanks at processing plant in rear, total capacity 11,750 tons; in addition one 200-ton soybean meal storage tank is located at plant. Plant trackage in rear. Facility and moorings seem intact - Google & MapQuest	3
57	31	Bartlett Grain Company	Bartlett and Co. - St. Joseph	Mile 446.6, left bank	Inactive	Grain elevator at rear, consisting of 3 steel silos, has capacity for 963,000 bushels. Grain is received by truck for shipment by barge. Four surface tracks with capacity for 75 empty and 40 loaded cars serve undertrack pits and 3 loading spouts. Load out looks intact but long run may require larger investment - Google & MapQuest.	3

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
58	31	Holliday Sand and Gravel Co.	Holliday Sand and Gravel-St. Joseph	Mile 447.5, left bank	Active	Open storage area at rear has capacity for 75,000 tons of material.	1
59	32	White Cloud Grain Co., Inc.	White Cloud Grain Co., Inc.	Mile 488.0, right bank	Inactive	Grain elevator at rear consisting of 12 concrete silos with 16 interstices has total capacity for 800,000 bushels. One 6-inch pipeline extends from wharf to 5 steel, liquid-fertilizer storage tanks at rear, total capacity 9,600 tons. Looks like fertilizer receipt facility - Google dtd 6/22/09	6
60	33	Maczuk Industries, Inc.	Maczuk Industries-Craig Terminal	Mile 503.0, left bank	Inactive	One 6-inch pipeline on loading platform connects with four 6-inch pipelines extending to 5 steel storage tanks at terminal in rear, total capacity 2,529,800 gallons. Reported out of business by owner.	6
61	34	Brownville Development Corp.	Brownville Development Corp.	Mile 535.1, right bank	Unknown	MV "Spirit of Brownville" and MV "Belle of Brownville" operate summer river cruise schedule from wharf. Brownville Recreation Area at rear is administered by State of Nebraska Game and Parks Department. No freight development applicability.	6
62	34	Searcy Grain	Searcy Grain	Mile 535.2, right bank	Unknown	Grain elevator in rear consisting of a concrete storage building with 7 bins and 7 steel storage tanks has total capacity for 357,000 bushels. Structures shown Google 2009 but not validated.	6

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
63	34	Bunge Corp.	Bunge Corp. - Brownville, NE	Mile 535.4, right bank	Unknown	Grain elevator atop hill at rear consisting of 8 concrete silos with 10 interstices and 17 steel tanks has capacity for 842,000 bushels. No vehicles or trucks shown on property. Status unknown.	6
64	35	DeBruce Grain, Inc.	DeBruce Grain, Inc.	Mile 561.8, right bank	Active	Grain elevator at rear consisting of 42 concrete silos with 12 interstices has capacity for 956,000 bushels. Two surface tracks; total capacity 75 cars, serves undertrack pits and loading spouts. Structures shown on Google 2009 - terminal reported active by Mgmt. Outside of study area.	6
65	35	City of Nebraska City	DeBruce Ag Service, Inc.	Mile 562.3, right bank	Active	Three bulk fertilizer storage buildings at rear have total capacity for 102,000 tons. One surface track on apron and one at rear of storage building. Total capacity 8 cars. Structures shown Google 2009 - terminal reported active by Mgmt; IRG 2009 indicated. Outside of study area.	6
66	35	Bartlett and Co.	Bartlett and Co.- Nebraska City	Mile 562.3, right bank	Unknown	Grain elevator at rear consisting of 18 concrete bins and 2 steel tanks has capacity for 900,000 bushels. One 9-car capacity surface track serves undertrack pit and loading spout. Structures shown on Google 2009. Outside of study area.	6
67	35	City of Nebraska City	American Commercial Terminals, LLC	Mile 562.7, right bank	Unknown	Two 6-inch pipelines connect dolphins with 4 steel storage tanks, total capacity 15,000 tons. One 10-car capacity surface track serves terminal at rear. Outside of study area.	6

Main Inventory Table							
Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
68	36	Haveman Grain Co.	Haveman Grain Co.	Mile 584.5, right bank	Unknown	Grain elevator at rear consisting of 8 concrete silos with 4 interstices has capacity for 250,000 bushels. Google 2009 shows significant structures for mooring and grain facility. Outside of study area.	6
69	37	PCS Nitrogen Fertilizer LP	Not operated	Mile 595.3, right bank	Unknown	At time of last infrastructure survey (2000-2001), plant had ceased operation and the future of the plant and wharf facility was not known. One 8-inch pipeline extends to wharf from 6 steel storage tanks at plant in rear, total capacity 12,922,000 gallons. Trackage serving plant in rear. Outside of study area.	6
70	38	Westway Feed Products Co.	Not operated	Mile 612.1, right bank	Unknown	One 12-inch pipeline extends from pier to 9 steel storage tanks at terminal in rear, total capacity 25,000 tons. One 4-inch steam line serves pier. One surface track serves 6 loading stations at terminal in rear. Outside of study area.	6
71	39	AGRI Grain Marketing	AGRI Grain Marketing	Mile 614.3, left bank	Unknown	Grain elevator at rear, consisting of 24 concrete silos and interstices and 7 steel tanks, has capacity for 1,600,000 bushels. Nine surface tracks; total capacity 104 cars; serves undertrack pit and loading spout. Outside of study area.	6
72	39	Agriliance Co.	Agriliance Co.	Mile 614.5, left bank	Unknown	Timber-and-concrete storage building at rear has capacity for 25,000 tons. Two surface tracks; total capacity 10 cars; serves 2 undertrack pits at storage building in rear. Outside of study area.	6

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Hanson ID	Figure No	Owner	Operator	Location	Status	Comments	Condition No.
105	11	Capital Sand & Gravel	Capital Sand & Gravel	Mile 138.5, left bank	Unknown	Spud Barge (dredge) area – Equipment landing area. MapQuest review shows some barges on bank. Crane and equipment transfer and connector to CR 4038. Reported as having new crane and cell.	6
106	12	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 142.3, left bank	Active	Possibly mooring for cement barge fleet. Barge fleeting capacity estimated at 12 hoppers. All barges of same configuration. Secured to bank; fixed points.	1
107	13	Unknown	Unknown	Mile 146.8, left bank	Unknown	Inventory and conveyor on MapQuest 2010.	6
118	29	United States Government	U.S. Coast Guard - Leavenworth	Mile 397.3, right bank	Unknown	Unknown	6
123	31	St. Joseph Regional Port Authority	Kinder Morgan Terminals	Mile 448.0, left bank	Active	Facility 8 years old with good paved entry to terminal. Open storage only. Dock cell for loading and mooring cells. Single rail track alignment for terminal work.	1
134	15		Old site for #22 Capital Sand - Booneville	Mile 197.0, right bank	Unknown	Dock at foot of Isle Capi Casino across UP Track. May be suitable for tying off barges if permitted by owner. Not accessible.	6

2.7 Commodities by Facility Table

Commodities by Facility Table												
						Commodities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Coal	Petro & Petro Products	Chemicals	Crude Materials	Mfg Goods	Food & Farm	Mfg Equip
1	1	Central Stone Co.	Central Stone Co.	Mile 7.8, right bank	Active				X			
2	1	Central Stone Co.	Not operated	Mile 8.5, right bank	Inactive				X			
4	2	Leuke Hauling, Inc.	Joe Tori Dredging, Inc. (Fred Weber)	Mile 16.8, right bank	Active				X			
5	3	Lafarge Corp	Limited Leasing	Mile 27.8, right bank	Active				X			
6	3	Lafarge Corp	Limited Leasing	Mile 28.0, right bank	Active				X			
7	3	City of St. Charles	City of St. Charles	Mile 28.8, left bank	Unknown							
8	4	Lafarge Corp	Joe Tori Dredging, Inc.	Mile 31.5, left bank	Active				X			
9	4	Lafarge Corp	Joe Tori Dredging, Inc.	Mile 31.3, left bank	Active				X			
10	5	Lafarge Corp	Limited Leasing	Mile 43.8, right bank	Unknown				X			
11	6	Capital Sand Co.	Washington Sand Co., LLC	Mile 65.4, right bank	Active				X			
12	7	Maczuk Industries, Inc.	Maczuk Industries, Inc.	Mile 81.7, right bank	Inactive			X				
13	8	Hermann Sand & Gravel, Inc.	Hermann Sand & Gravel, Inc.	Mile 96.9, left bank	Active				X			

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Hanson ID	Figure No	Owner	Operator	Location	Status	Commodities						
						Coal	Petro & Petro Products	Chemicals	Crude Materials	Mfg Goods	Food & Farm	Mfg Equip
14	9	United States Government	U.S. Army Corps of Engineers	Mile 104.5, left bank	Active							
15	10	Central Electric Power Cooperative	Central Electric Power Cooperative - Chamois	Mile 117.1, right bank	Inactive	X						
16	12	Jefferson City River Terminal, Inc.	Jefferson City River Terminal, Inc.	Mile 143, left bank	Active				X		X	
17	12	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 143.4, left bank	Active				X			
18	12	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 143.8, left bank	Active							
19	13	Amoco Oil Co.	Not operated	Mile 148.6, left bank	Inactive		X					
20	14	Capital Sand Co, Inc.	Capital Sand Co., Inc.	Mile 186.4, left bank	Active				X			
21	15	Gavilon Fertilizer, LLC and Howard/Cooper Regional Port Authority	Not operated	Mile 196.4, left bank	Inactive			X	X			
22	15	Gavilon Fertilizer, LLC	Capital Sand Co., Inc.	Mile 196.4, left bank	Active				X			
23	16	Capital Sand Co., Inc.	Glasgow Sand Plant	Mile 226.2, left bank	Active				X			

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						Coal	Petro & Petro Products	Chemicals	Crude Materials	Mfg Goods	Food & Farm	Mfg Equip
24	16	MFA Agri Services	MFA Agri Services - Glasgow	Mile 226.4, left bank	Inactive						X	
25	16	United States Government	U.S. Army Corps of Engineers	Mile 226.5, left bank	Active							
26	17	Brunswick River Terminal, Inc.	AgriServices of Brunswick LLC	Mile 256.2, left bank	Active			X			X	
27	18	Cooperative #1	Central Missouri AGRIService	Mile 262.8, right bank	Inactive						X	
28	19	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 286.9, left bank	Active				X			
29	20	Bartlett and Co.	Bartlett and Co. - Waverly	Mile 293.2, right bank	Inactive			X			X	
30	20	Central Missouri AGRIService	Central Missouri AGRIService	Mile 293.4, right bank	Inactive						X	
31	21	Division of Capital Sand Co., Inc.	Lexington Sand Co.	Mile 317.2, left bank	Active				X			
32	21	MFA Agri Services	MFA Agri Services - Lexington	Mile 318.2, right bank	Inactive			X			X	
33	22	Independence Power Corp.	Independence Power - Missouri City	Mile 345.3, left bank	Inactive	X						
34	23	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	Mile 354.7, right bank	Active				X			

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						Commodities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Coal	Petro & Petro Products	Chemicals	Crude Materials	Mfg Goods	Food & Farm	Mfg Equip
35	23	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	Mile 355.8, right bank	Active			X				
36	23	BP Amoco Oil Co.	BP Amoco Oil Inc.	Mile 356.5, right bank	Inactive		X					
37	23	AK Asset Management Co.	Sheffield Station Industrial Park	Mile 357.6, right bank	Inactive							
38	24	Holliday Sand and Gravel Co.	Holliday Sand and Gravel Co. -Randolph	Mile 360.0, left bank	Active				X			
39	24	Conoco Phillips Inc.	Conoco Phillips - Asphalt Terminal	Mile 360.6, left bank	Active		X	X				
40	24	Bartlett Grain Co.	Bartlett Grain - Kansas City	Mile 361.1, left bank	Inactive						X	
41	24	Cargill Inc.	Cargill Inc. - Chouteau	Mile 361.6, left bank	Inactive						X	
42	25	American Compressed Steel, Inc.	American Compressed Steel, Inc.	Mile 366.8, right bank	Inactive				X			
43	25	City of Kansas City	Port of Kansas City	Mile 367.1, right bank	Inactive			X	X			
44	25	The Kansas City-Wyandotte County Joint Port Authority	Bartlett and Company	Mile 367.6, right bank	Inactive						X	

Commodities by Facility Table												
Hanson ID	Figure No	Owner	Operator	Location	Status	Commodities						
						Coal	Petro & Petro Products	Chemicals	Crude Materials	Mfg Goods	Food & Farm	Mfg Equip
45	25	Williams Energy Services Co. (reported)	Conoco Phillips	Mile 368.3, right bank	Inactive		X					
46	26	Holliday Sand and Gravel Co.	Holliday Sand and Gravel-Kansas City	Left bank, mile 371.8	Active				X			
47	26	Bartlett Grain Company	Bartlett Grain - Fairfax	Mile 373, right bank	Inactive						X	
48	27	Intercontinental Engineering-Manufacturing Corp.	Intercontinental Engineering-Manufacturing Corp.	Mile 375.7, left bank	Active							X
49	28	Massman Construction Co., Inc.	Massman Construction Co., Inc.	Mile 385.0, left bank	Inactive					X		X
50	28	Westway Terminal Co.	Westway Terminal Co.	Mile 386.4, right bank	Active		X	X				
51	28	ADM/Growmark, subsidiary of Archer-Daniels-Midland Co.	ADM/Growmark, - Wolcott	Mile 386.6, right bank	Inactive						X	
52	29	Chemtronics, Inc.	Chemtronics, Inc.	Mile 395.9, right bank	Inactive			X				
53	30	Bartlett Grain Company	Bartlett Grain - Atchison	Mile 421.0, right bank	Inactive						X	
54	30	Unknown	Not operated	Mile 421.1, right bank	Inactive							

Commodities by Facility Table												
Hanson ID	Figure No	Owner	Operator	Location	Status	Commodities						
						Coal	Petro & Petro Products	Chemicals	Crude Materials	Mfg Goods	Food & Farm	Mfg Equip
55	30	Maczuk, Industries, Inc.	Maczuk, Industries, Inc.	Mile 423.1, right bank	Inactive			X				
56	31	Ag Processing, Inc.	Ag Processing, Inc.	Mile 446.0, left bank	Inactive						X	
57	31	Bartlett Grain Company	Bartlett and Co. - St. Joseph	Mile 446.6, left bank	Inactive						X	
58	31	Holliday Sand and Gravel Co.	Holliday Sand and Gravel-St. Joseph	Mile 447.5, left bank	Active				X			
59	32	White Cloud Grain Co., Inc.	White Cloud Grain Co., Inc.	Mile 488.0, right bank	Inactive			X			X	
60	33	Maczuk Industries, Inc.	Maczuk Industries-Craig Terminal	Mile 503.0, left bank	Inactive			X				
61	34	Brownville Development Corp.	Brownville Development Corp.	Mile 535.1, right bank	Unknown							
62	34	Searcy Grain	Searcy Grain	Mile 535.2, right bank	Unknown						X	
63	34	Bunge Corp.	Bunge Corp. - Brownville, NE	Mile 535.4, right bank	Unknown						X	
64	35	DeBruce Grain, Inc.	DeBruce Grain, Inc.	Mile 561.8, right bank	Active						X	
65	35	City of Nebraska City	DeBruce Ag Service, Inc.	Mile 562.3, right bank	Active			X	X	X		
66	35	Bartlett and Co.	Bartlett and Co.-Nebraska City	Mile 562.3, right bank	Unknown						X	

Commodities by Facility Table												
						Commodities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Coal	Petro & Petro Products	Chemicals	Crude Materials	Mfg Goods	Food & Farm	Mfg Equip
67	35	City of Nebraska City	American Commercial Terminals, LLC	Mile 562.7, right bank	Unknown						X	
68	36	Haveman Grain Co.	Haveman Grain Co.	Mile 584.5, right bank	Unknown						X	
69	37	PCS Nitrogen Fertilizer LP	Not operated	Mile 595.3, right bank	Unknown							
70	38	Westway Feed Products Co.	Not operated	Mile 612.1, right bank	Unknown							
71	39	AGRI Grain Marketing	AGRI Grain Marketing	Mile 614.3, left bank	Unknown						X	
72	39	Agriliance Co.	Agriliance Co.	Mile 614.5, left bank	Unknown			X				
105	11	Capital Sand & Gravel	Capital Sand & Gravel	Mile 138.5, left bank	Unknown							
106	12	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 142.3, left bank	Active							
107	13	Unknown	Unknown	Mile 146.8, left bank	Unknown				X			
118	29	United States Government	U.S. Coast Guard - Leavenworth	Mile 397.3, right bank	Unknown							
123	31	St. Joseph Regional Port Authority	Kinder Morgan Terminals	Mile 448.0, left bank	Active				X			
134	15		Old site for #22 Capital Sand - Booneville	Mile 197.0, right bank	Unknown							

Coal Facilities

Coal Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Coal
15	10	Central Electric Power Cooperative	Central Electric Power Cooperative - Chamois	Mile 117.1, right bank	Inactive	X
33	22	Independence Power Corp.	Independence Power – Missouri City	Mile 345.3, left bank	Inactive	X

Petroleum & Petroleum Products Facilities

Petroleum & Petroleum Products Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Petro & Petro Products
19	13	Amoco Oil Co.	Not operated	Mile 148.6, left bank	Inactive	X
36	23	BP Amoco Oil Co.	BP Amoco Oil Inc.	Mile 356.5, right bank	Inactive	X
39	24	Conoco Phillips Inc.	Conoco Phillips - Asphalt Terminal	Mile 360.6, left bank	Active	X
45	25	Williams Energy Services Co. (reported)	Conoco Phillips	Mile 368.3, right bank	Inactive	X
50	28	Westway Terminal Co.	Westway Terminal Co.	Mile 386.4, right bank	Active	X

Manufactured Goods Facilities

Manufactured Goods Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Mfg Goods
49	28	Massman Construction Co., Inc.	Massman Construction Co., Inc.	Mile 385.0, left bank	Inactive	X
65	35	City of Nebraska City	DeBruce Ag Service, Inc.	Mile 562.3, right bank	Active	X

Chemical Facilities

Chemical Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Chemicals
12	7	Maczuk Industries, Inc.	Maczuk Industries, Inc.	Mile 81.7, right bank	Inactive	X
21	15	Gavilon Fertilizer, LLC and Howard/Cooper Regional Port Authority	Not operated	Mile 196.4, left bank	Inactive	X
26	17	Brunswick River Terminal, Inc.	AgriServices of Brunswick LLC	Mile 256.2, left bank	Active	X
29	20	Bartlett and Co.	Bartlett and Co. - Waverly	Mile 293.2, right bank	Inactive	X
32	21	MFA Agri Services	MFA Agri Services - Lexington	Mile 318.2, right bank	Inactive	X
35	23	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	Mile 355.8, right bank	Active	X
39	24	Conoco Phillips Inc.	Conoco Phillips - Asphalt Terminal	Mile 360.6, left bank	Active	X
43	25	City of Kansas City	Port of Kansas City	Mile 367.1, right bank	Inactive	X
50	28	Westway Terminal Co.	Westway Terminal Co.	Mile 386.4, right bank	Active	X
52	29	Chemtronics, Inc.	Chemtronics, Inc.	Mile 395.9, right bank	Inactive	X
55	30	Maczuk, Industries, Inc.	Maczuk, Industries, Inc.	Mile 423.1, right bank	Inactive	X
59	32	White Cloud Grain Co., Inc.	White Cloud Grain Co., Inc.	Mile 488.0, right bank	Inactive	X
60	33	Maczuk Industries, Inc.	Maczuk Industries-Craig Terminal	Mile 503.0, left bank	Inactive	X
65	35	City of Nebraska City	DeBruce Ag Service, Inc.	Mile 562.3, right bank	Active	X
72	39	Agriliance Co.	Agriliance Co.	Mile 614.5, left bank	Unknown	X

Crude Materials Facilities

Crude Materials Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Crude Materials
1	1	Central Stone Co.	Central Stone Co.	Mile 7.8, right bank	Active	X
2	1	Central Stone Co.	Not operated	Mile 8.5, right bank	Inactive	X
4	2	Leuke Hauling, Inc.	Joe Tori Dredging, Inc. (Fred Weber)	Mile 16.8, right bank	Active	X
5	3	Lafarge Corp	Limited Leasing	Mile 27.8, right bank	Active	X
6	3	Lafarge Corp	Limited Leasing	Mile 28.0, right bank	Active	X
8	4	Lafarge Corp	Joe Tori Dredging, Inc.	Mile 31.5, left bank	Active	X
9	4	Lafarge Corp	Joe Tori Dredging, Inc.	Mile 31.3, left bank	Active	X
10	5	Lafarge Corp	Limited Leasing	Mile 43.8, right bank	Unknown	X
11	6	Capital Sand Co.	Washington Sand Co., LLC	Mile 65.4, right bank	Active	X
13	8	Hermann Sand & Gravel, Inc.	Hermann Sand & Gravel, Inc.	Mile 96.9, left bank	Active	X
16	12	Jefferson City River Terminal, Inc.	Jefferson City River Terminal, Inc.	Mile 143, left bank	Active	X
17	12	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 143.4, left bank	Active	X
20	14	Capital Sand Co, Inc.	Capital Sand Co., Inc.	Mile 186.4, left bank	Active	X
21	15	Gavilon Fertilizer, LLC and Howard/Cooper Regional Port Authority	Not operated	Mile 196.4, left bank	Inactive	X
22	15	Gavilon Fertilizer, LLC	Capital Sand Co., Inc.	Mile 196.4, left bank	Active	X
23	16	Capital Sand Co., Inc.	Glasgow Sand Plant	Mile 226.2, left bank	Active	X
28	19	Capital Sand Co., Inc.	Capital Sand Co., Inc.	Mile 286.9, left bank	Active	X
31	21	Division of Capital Sand Co., Inc.	Lexington Sand Co.	Mile 317.2, left bank	Active	X

Crude Materials Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Crude Materials
34	23	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	Mile 354.7, right bank	Active	X
38	24	Holliday Sand and Gravel Co.	Holliday Sand and Gravel Co. - Randolph	Mile 360.0, left bank	Active	X
42	25	American Compressed Steel, Inc.	American Compressed Steel, Inc.	Mile 366.8, right bank	Inactive	X
43	25	City of Kansas City	Port of Kansas City	Mile 367.1, right bank	Inactive	X
46	26	Holliday Sand and Gravel Co.	Holliday Sand and Gravel- Kansas City	Left bank, mile 371.8	Active	X
58	31	Holliday Sand and Gravel Co.	Holliday Sand and Gravel-St. Joseph	Mile 447.5, left bank	Active	X
65	35	City of Nebraska City	DeBruce Ag Service, Inc.	Mile 562.3, right bank	Active	X
107	13	Unknown	Unknown	Mile 146.8, left bank	Unknown	X
123	31	St. Joseph Regional Port Authority	Kinder Morgan Terminals	Mile 448.0, left bank	Active	X

Food & Farm Facilities

Food & Farm Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Food & Farm
16	12	Jefferson City River Terminal, Inc.	Jefferson City River Terminal, Inc.	Mile 143, left bank	Active	X
24	16	MFA Agri Services	MFA Agri Services - Glasgow	Mile 226.4, left bank	Inactive	X
26	17	Brunswick River Terminal, Inc.	AgriServices of Brunswick LLC	Mile 256.2, left bank	Active	X
27	18	Cooperative #1	Central Missouri AGRIService	Mile 262.8, right bank	Inactive	X
29	20	Bartlett and Co.	Bartlett and Co. - Waverly	Mile 293.2, right bank	Inactive	X
30	20	Central Missouri AGRIService	Central Missouri AGRIService	Mile 293.4, right bank	Inactive	X
32	21	MFA Agri Services	MFA Agri Services - Lexington	Mile 318.2, right bank	Inactive	X
40	24	Bartlett Grain Co.	Bartlett Grain - Kansas City	Mile 361.1, left bank	Inactive	X
41	24	Cargill Inc.	Cargill Inc. - Chouteau	Mile 361.6, left bank	Inactive	X
44	25	The Kansas City-Wyandotte County Joint Port Authority	Bartlett and Company	Mile 367.6, right bank	Inactive	X
47	26	Bartlett Grain Company	Bartlett Grain - Fairfax	Mile 373.0, right bank	Inactive	X
51	28	ADM/Growmark, subsidiary of Archer-Daniels-Midland Co.	ADM/Growmark, - Wolcott	Mile 386.6, right bank	Inactive	X
53	30	Bartlett Grain Company	Bartlett Grain - Atchison	Mile 421.0, right bank	Inactive	X
56	31	Ag Processing, Inc.	Ag Processing, Inc.	Mile 446.0, left bank	Inactive	X
57	31	Bartlett Grain Company	Bartlett and Co. - St. Joseph	Mile 446.6, left bank	Inactive	X
59	32	White Cloud Grain Co., Inc.	White Cloud Grain Co., Inc.	Mile 488.0, right bank	Inactive	X
62	34	Searcy Grain	Searcy Grain	Mile 535.2, right bank	Unknown	X
63	34	Bunge Corp.	Bunge Corp. - Brownville, NE	Mile 535.4, right bank	Unknown	X
64	35	DeBruce Grain, Inc.	DeBruce Grain, Inc.	Mile 561.8, right bank	Active	X

Food & Farm Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Food & Farm
66	35	Bartlett and Co.	Bartlett and Co.-Nebraska City	Mile 562.3, right bank	Unknown	X
67	35	City of Nebraska City	American Commercial Terminals, LLC	Mile 562.7, right bank	Unknown	X
68	36	Haveman Grain Co.	Haveman Grain Co.	Mile 584.5, right bank	Unknown	X
71	39	AGRI Grain Marketing	AGRI Grain Marketing	Mile 614.3, left bank	Unknown	X

Manufactured Equipment Facilities

Manufactured Equipment Facilities						
Hanson ID	Figure No	Owner	Operator	Location	Status	Mfg Equip
48	27	Intercontinental Engineering-Manufacturing Corp.	Intercontinental Engineering-Manufacturing Corp.	Mile 375.7, left bank	Active	X
49	28	Massman Construction Co., Inc.	Massman Construction Co., Inc.	Mile 385.0, left bank	Inactive	X

2.8 Road and Rail Connections Table

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
1	1	0.1	5.0	0.1	Concrete	Good	Tight Ramp Radii but truck navigable	Y - 0.2	N	N - Other side of US 67		Right at Access controlled US67/US367 Rail is inactive
2	1	0.1	5.0	0.1	Concrete	Good	Tight Ramp Radii but truck navigable	Adjacent	N	Y		Right at Access controlled US67/US367
4	1	0.1	7.5	10.0	Asphalt	Good	None	N	N	N - Other side of US 67		
5	3	0.2	2.5	2.5	Asphalt	Good	None	Y - 0.2	N	N - Missouri Bottom Road lies between - but road is dead end and not used		2 Miles form Access controlled MO 370
6	3	0.2	2.5	2.5	Asphalt	Good	None	Y - 0.5	N	N - Missouri Bottom Road lies between - but road is dead end and not used		2 Miles form Access controlled MO 370

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
7	0	0.6	0.9	1.5	Asphalt	Good	Historic area, old roadways	N	N	N - Katy Trail		Historic area, owned by City into Frontier Park, freight use highly unlikely
8	1	0.0	1.5	2.0	Concrete	Good	None	N	N	N - Katy Trail		Equidistant to two river crossings, I-70 and MO364
9	1	0.0	1.5	2.0	Concrete	Good	None	N	N	N - Katy Trail		Equidistant to two river crossings, I-70 and MO364
10	1	0.0	1.1	3.0	Asphalt	Good	Must Navigate Roundabout	N	N	N		
11	1	1.1	9.5	2.8	Asphalt	Good	Tight turns on road along with RR Crossing	Y - 0.5	N	Y - River Slough separates		Winds for short distance through residential area
12	1	1.5	24.0	15.0	Unknown	Fair	Tight curves in old downtown area with track crossing	Y - On Site	Y - On Site	Y		Narrow one-way loop streets in the downtown area. Rail is inactive.
13	1	1.2	16.0	1.5	Gravel	Fair-Poor	Windy Gravel Road	N	N	N	Geometry and pavement possibly needed	

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
14	1	0.5	26.0	11.0	Appears to be Gravel	Unknown	None	Y - 0.5	N	N	Pavement	
15	1	0.2	38.0	22.5	Gravel	Unknown	None	Y - On site	Y - On Site	Y		Rail Terminal onsite
16	3	0.5	1.1	30.0	Unknown	Good	None	N	N	N		Right at Access controlled MO 54 and MO 63
17	3	0.5	1.1	30.0	Unknown	Good	None	N	N	N		Right at Access controlled MO 54 and MO 63
18	3	0.5	1.1	30.0	Unknown	Good	None	N	N	N		Right at Access controlled MO 54 and MO 63
19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
20	1	0.4	2.5	3.0	Asphalt	Unknown	None	N	N	N	Road goes through Rural Residential Area	Goes across slough or inland pool
21	1	0.3	4.0	0.6	Appears to be Gravel	Unknown	None	N	N	N		
22	0	0.3	3.5	0.4	N/A	N/A	N/A	Adjacent	N	Y - But no current facilities	No Access	

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
23	1	0.2	23.0	0.4	Asphalt	Unknown	None	Adjacent	Y - Nearby	Y		New Glasgow bridge 10-16-2009
24	1	0.0	23.0	0.4	Asphalt	Fair	None	Y - On site	Y - On Site	Y		New Glasgow bridge 10-16-2009
25	1	0.0	23.0	0.4	Asphalt	Fair	None	N	N	Y		New Glasgow bridge 10-16-2010
26	1	0.0	34.0	7.0	Concrete	Good	None	Y - On Site	Y - On Site	Y		Rail Crossing to get to main Road.
27	1	0.1	27.0	0.3	Unknown	Unknown	None	N	N	N		
28	1	1.0	23.0	6.0	Gravel	Unknown	None	N	N	N		
29	1	0.8	17.0	2.5	Asphalt	Unknown	None	Y - On Site	Y - On Site	Y		New Bridge 8-25-2004
30	1	0.5	17.0	2.0	Asphalt	Unknown	None	Y - On Site	Y - On Site	Y		New Bridge 8-25-2004

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
31	1	0.0	21.0	6.0	Concrete	Good	None	N	N	N		Was at old river crossing (Lexington Bridge) New Ike Skelton Bridge opened in 2005 2.3 miles down river
32	1	0.0	14.0	5.0	Asphalt	Good	Tight Turns once you cross RR tracks	Adjacent	N	Y		
33	1	0.0	12.0	7.0	Asphalt	Fair	None	Adjacent	N	Y		Rail Crossing to get to main Road, possible room for siding to access rail
34	1	1.7	10.0	2.5	Asphalt	Good	None	Y - On Site	Y - On Site	Y		
35	2	3.0	11.0	3.5	Asphalt	Good	None	Adjacent	Y - 1.0	Y		
36	2	4.0	12.0	4.5	Asphalt	Good	None	Y - On Site	Y - On Site	Y		
37	1	2.2	4.0	5.5	Appears to be Gravel - or Dirt	Unknown	Windy Road to get to terminal	Y - On Site	Y - On Site	Y		Apparently connected to huge intermodal yard and industry needs to cross Blue River

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
38	1	0.0	0.6	1.2	Asphalt	Unknown	None	Adjacent	N	Y - Across Birmingham Road		
39	1	0.0	1.6	2.2	Asphalt	Unknown	None	Y - On site	Y - On Site	Y		
40	4	0.0	1.3	1.8	Asphalt	Unknown	None	Y - On site	Y - On Site	Y		
41	2	0.0	1.5	2.0	Asphalt	Unknown	None	Y - On site	Y - On Site	Y		
42	1	0.0	1.0	1.3	Asphalt	Unknown	None	Y - On site	Y - On Site	Y		Appears that rail is inactive.
43	1	0.0	1.2	1.5	Asphalt	Unknown	None	Y - On site	Y - On Site	Y		Appears that rail is inactive.
44	Multiple	0.0	0.4	0.5	Asphalt	Good	None	Y - On site	Y - On Site	Y		
45	Multiple	0.0	1.2	1.4	Asphalt	Good	None	Y - On site	Y - On Site	Y		
46	1	0.0	0.5	2.0	Asphalt	Good	None	Adjacent	N	Y		
47	1	0.5	2.1	1.6	Asphalt	Fair	None	Y - On Site	Y - On Site	Y		
48	2	0.3	2.2	3.3	Gravel	Unknown	Some tight turns to get to river	Y - On site	Y - On Site	Y		
49	1	0.4	4.4	7.0	Appears to be Gravel	Unknown	None	Y - 0.4	N	N		Close Rail Crossing off of River Road

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
50	1	0.2	2.4	4.2	Gravel	Unknown	None	Y - On Site	Y - On Site	Y		Shares Access with Site 51
51	1	0.2	2.4	4.2	Gravel	Unknown	None	Y - On Site	Y - On Site	Y		Shares Access with Site 50
52	1	0.0	12.0	2.5	Concrete	Good	None	Adjacent	N	Y		
53	1	1.3	23.0	3.5	Asphalt	Good	None	Y - On site	Y - On Site	Y		
54	1	1.2	23.0	3.4	Asphalt	Good	None	Adjacent	N	Y		
55	Multiple	0.0	21.0	1.0	Asphalt	Unknown	None	N	N	N		
56	1	0.3	2.3	2.4	Unknown	Unknown	Some tight turns to get to river	Y - On site	Y - On Site	Y		Multiple rail crossings to get to river
57	1	0.0	1.1	1.2	Concrete	Unknown	None	Y - On site	Y - On Site	Y		
58	2	0.1	0.5	0.7	Concrete	Unknown	None	Adjacent	N	Y		
59	1	0.0	25.0	11.0	Asphalt	Unknown	None	N	N	N		
60	Multiple	0.0	9.0	9.0	Unknown	Unknown	None	N	N	N		

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
61	1	0.0	5.7	0.4	Concrete	Good	None	N	N	N		
62	1	0.1	5.7	0.4	Gravel	Unknown	None	N	N	N		
63	1	0.0	5.6	0.4	Asphalt	Good	None	N	N	N		
64	2	0.0	4.0	0.9	Asphalt	Fair	None	Adjacent	Y - 0.1	Y		
65	1	0.1	4.6	1.4	Gravel	Unknown	None	Y - On site	Y - On Site	Y		Inactive Rail lines on site and in disrepair
66	1	0.1	4.6	1.5	Gravel	Unknown	None	Y - On site	Y - On Site	Y		Inactive Rail lines on site and in disrepair
67	1	0.5	5.0	1.8	Gravel	Unknown	None	Y - On site	Y - On Site	Y		Inactive Rail lines on site and in disrepair
68	1	1.5	15.0	12.0	Unknown	Unknown	Some tight turns to get to river	N	N	N		Plattsmouth Bridge is Toll Bridge
69	1	1.6	14.0	11.0	Appears to be Gravel - or Dirt	Unknown	None	N	N	N		Long Drive to site from roadway network
70	1	0.0	1.3	0.8	Asphalt	Unknown	None	Y - .25	Y - .75	Y		

Road and Rail Connections Table												
Hanson ID	Number of truck access points	Distance to Major Roadway (Miles)	Distance to Interstate System (Miles)	Distance to River Crossing (Miles)	Roadway Material	General Roadway Condition	Roadway Geometry Comments	Rail Line (Y/N) Distance ? (Miles)	Rail Terminal (Y/N)	Apparent Adjacent Rail (Y/N)	Potential Access Improvements	Additional Comments
71	1	0.0	0.3	2.4	Unknown	Unknown	None	Y - On Site	Y - On Site	Y		
72	1	0.0	0.2	2.3	Unknown	Unknown	Driveway is very close to Casino Drive intersection	Adjacent	Y - 0.1	Y		
105	1	0.4	34.0	8.1	Unknown	Unknown	None	N	N	N		6.5 Miles form Access controlled US 54
106	1	0.6	31.0	2.8	Unknown	Unknown	None	N	N	N		2.2 Miles form Access controlled US 54
107	1	0.7	27.0	3.6	Appears to be Gravel	Unknown	None	N	N	N		
118	1	0.1	9.3	0.5	Appears to be Concrete	Unknown	None	Adjacent	N	Y		
123	2	0.2	0.6	0.8	Appears to be Concrete	Unknown	None	Y - On Site	Y - On Site	Y		
134	0	0.3	3.5	0.4	N/A	N/A	N/A	Adjacent	N	Y - But no current facilities	No Access	

2.8.1 Comments on Needs to Improve Infrastructure

Waterside infrastructure needs can be divided into two distinct groups; 1) facilities infrastructure and 2) vessel operational support services infrastructure.

1. Facilities infrastructure requirements and needs were captured during the Task 2 site visits and are more fully identified in the following Water Facilities Needs Table. The Table more fully describes in estimated investment dollars the upgrades and improvements required at individual locations. Preliminary indications suggest that privately held facilities are generally in a better position to upgrade than public facilities, because of the investment required, the ability to make improvements in a timely fashion, and the time it takes to recognize economic benefits.

Public sector facilities on the other hand, require a significantly different approach to enhance infrastructure that includes securing funds through public or grant sources, potential market/feasibility studies for justification, and substantially more dollars required to complete the process of making improvements.

2. Vessel operational services (stevedoring, fuel service, etc.) are not purely related to infrastructure but are mainly related to developing a service business opportunity at an appropriate location. To some extent this business will develop based on demand driven by the successful implementation of future freight growth strategies. However, it is probably likely that staged growth in services will occur around existing underutilized mooring structures in locations where public property holdings and temporary moderate investment can meet near term needs. Additional vessel operational services will be required as long term freight growth occurs. Some of these requirements will include commitment (public or private) to other non-infrastructure elements such as; switch boats, topside and cleaning support equipment.

2.8.2 Water Facilities Needs

During the inventory development, each facility was categorized regarding the capability and condition of its existing infrastructure to support growth in freight. The six categories and their definitions are given in Section 2.1.2 above. Of the six categories, two of them include preliminary assumptions about investment needed to support growth in freight. Assessment Classification #2 and Assessment Classification #3 are the two for which preliminary investment numbers are given in the Water Facilities Needs Table under 2.8.3 below and discussed in 2.8. Assessment Classification #1 includes those facilities where existing infrastructure and equipment is or appears functional and does not appear to require initial investment. Assessment Classifications 4, 5, and 6 include those for which some information was obtained, but access to the site was limited and no evaluation could be made; equipment or infrastructure appeared or was reported to be missing but no evaluation could be made; and those for which no information was available.

At this point in the overall study it should be understood that the preliminary assumptions about cost given for Assessment Classifications 2 and 3 below may not include all of the costs necessary to support freight growth on the Missouri River. Additionally, the numbers presented are a mix of reported costs from stakeholders at the facilities and assumptions by Hanson based on similar facilities. The review and assumptions included do not constitute an inspection or formal evaluation of the condition or capabilities of the infrastructure or equipment. The actual investment necessary may be substantially more or less depending on cost of mobilization fluctuation in construction costs in general, availability of materials and contractors, additional identified deficiencies or needs, etc. As this study continues into the market assessment and development of Concepts of Operations, it will likely become more clear where additional infrastructure investment is required to support the identified markets and associated freight movements. Additionally, the presumably private investment required to create and sustain the operational support elements discussed in Section 2.8.4 below are not included as infrastructure investment and are not quantified at this time.

Water Facilities Needs Table

Water Facilities Needs Table						
Hanson ID	MILE	BANK	Owner	Operator	Condition Category	Approximate Preliminary Needs Cost
1	8	Right	Central Stone Co.	Central Stone Co.	1	\$0
2	9	Right	Central Stone Co.	Not operated	5	Equipment not Present
4	17	Right	Leuke Hauling, Inc.	Joe Tori Dredging, Inc. (Fred Weber)	6	No Information Obtained
5	28	Right	Lafarge Corp	Limited Leasing	1	\$0
6	28	Right	Lafarge Corp	Limited Leasing	1	\$0
8	32	Left	Lafarge Corp	Joe Tori Dredging, Inc.	1	\$0
9	32	Left	Lafarge Corp	Joe Tori Dredging, Inc.	1	\$0
10	44	Right	Lafarge Corp	Limited Leasing	1	\$0
11	65	Right	Capital Sand Co.	Washington Sand Co., LLC	1	\$0
12	82	Right	Maczuk Industries, Inc.	Maczuk Industries, Inc.	3	\$200,000
13	97	Left	Hermann Sand & Gravel, Inc.	Hermann Sand & Gravel, Inc.	1	\$0
14	104	Left	United States Government	U.S. Army Corps of Engineers	6	No Information Obtained
15	117	Right	Central Electric Power Cooperative	Central Electric Power Cooperative-Chamois	3	\$300,000
16	143	Left	Jefferson City River Terminal, Inc.	Jefferson City River Terminal, Inc.	1	\$0
17	143	Left	Capital Sand Co., Inc.	Capital Sand Co., Inc.	1	\$0
18	144	Left	Capital Sand Co., Inc.	Capital Sand Co., Inc.	1	\$0
19	149	Left	Amoco Oil Co.	Not operated	6	No Information Obtained
20	186	Left	Capital Sand Co, Inc.	Capital Sand Co., Inc.	1	\$0
21	196	Left	Gavilon Fertilizer, LLC and Howard/Cooper Regional Port Authority	Not operated	3	\$800,000
22	197	Right	Gavilon Fertilizer, LLC	Capital Sand Co., Inc.	1	\$0

Water Facilities Needs Table						
Hanson ID	MILE	BANK	Owner	Operator	Condition Category	Approximate Preliminary Needs Cost
23	226	Left	Capital Sand Co., Inc.	Glasgow Sand Plant.	1	\$0
24	226	Left	MFA Agri Services	MFA Agri Services - Glasgow	2	\$40,000
25	226	Left	United States Government	U.S. Army Corps of Engineers	1	\$0
26	256	Left	Brunswick River Terminal, Inc.	AgriServices of Brunswick LLC	1	\$0
27	263	Right	Cooperative #1	Central Missouri AGRIService	4	No Assessment Made
28	287	Left	Capital Sand Co., Inc.	Capital Sand Co., Inc.	1	\$0
29	293	Right	Bartlett and Co.	Bartlett and Co. - Waverly	2	\$30,000
30	293	Right	Central Missouri Agriculture	Central Missouri Agriculture	2	\$75,000
31	317	Left	Division of Capital Sand Co., Inc.	Lexington Sand Co.	1	\$0
32	318	Right	MFA Agri Services	MFA Agri Services - Lexington	2	\$90,000
33	345	Left	Independence Power Corp.	Independence Power.- Missouri City	5	Equipment not Present
34	355	Right	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	1	\$0
35	356	Right	Lafarge Corp., Cement Group	Lafarge Corp., Cement Group	1	\$0
36	357	Right	BP Amoco Oil Co.	BP Amoco Oil Inc.	4	No Assessment Made
37	358	Right	AK Asset Management Co.	Sheffield Station Industrial Park.	5	Equipment not Present
38	360	Left	Holliday Sand and Gravel Co.	Holliday Sand and Gravel Co. - Randolph	1	\$0
39	361	Left	Conoco Phillips Inc.	Conoco Phillips - Asphalt Terminal	1	\$0
40	361	Left	Bartlett Grain Co.	Bartlett Grain - Kansas City	3	\$150,000
41	362	Left	Cargill Inc.	Cargill Inc. - Chouteau	2	\$60,000
42	367	Right	American Compressed Steel, Inc.	American Compressed Steel, Inc.	4	No Assessment Made
43	367	Right	City of Kansas City	Port of Kansas City	3	\$500,000
44	368	Right	The Kansas City-Wyandotte County Joint Port Authority	Bartlett and Company	2	\$90,000
45	368	Right	Williams Energy Services Co. (reported)	Conoco Phillips	3	\$400,000

Water Facilities Needs Table						
Hanson ID	MILE	BANK	Owner	Operator	Condition Category	Approximate Preliminary Needs Cost
46	372	Left	Holliday Sand and Gravel Co.	Holliday Sand and Gravel-Kansas City	1	\$0
47	373	Right	Bartlett Grain Company	Bartlett Grain - Fairfax	2	\$95,000
48	376	Left	Intercontinental Engineering-Manufacturing Corp.	Intercontinental Engineering-Manufacturing Corp.	1	\$0
49	385	Left	Massman Construction Co., Inc.	Massman Construction Co., Inc.	6	No Information Obtained
50	386	Right	Westway Terminal Co.	Westway Terminal Co.	4	No Assessment Made
51	387	Right	ADM/Growmark, subsidiary of Archer-Daniels-Midland Co.	ADM/Growmark, - Wolcott	3	\$200,000
52	396	Right	Chemtronics, Inc.	Chemtronics, Inc.	6	No Information Obtained
53	421	Right	Bartlett Grain Company	Bartlett Grain - Atchison	3	\$150,000
54	421	Right	Unknown	Not operated	6	No Information Obtained
55	423	Right	Maczuk, Industries, Inc.	Maczuk, Industries, Inc.	5	Equipment not Present
56	446	Left	Ag Processing, Inc.	Ag Processing, Inc.	3	\$200,000
57	447	Left	Bartlett Grain Company	Bartlett and Co. - St. Joseph	3	\$150,000
58	448	Left	Holliday Sand and Gravel Co.	Holliday Sand and Gravel-St. Joseph	1	\$0
59	488	Right	White Cloud Grain Co., Inc.	White Cloud Grain Co., Inc.	6	No Information Obtained
60	503	Left	Maczuk, Industries	Maczuk, Industries-Craig Terminal	6	No Information Obtained
61	535	Right	Brownville Development Corp.	Brownville Development Corp.	6	No Information Obtained
62	535	Right	Searcy Grain	Searcy Grain	6	No Information Obtained
63	535	Right	Bunge Corp.	Bunge Corp. - Brownville, NE	6	No Information Obtained
64	562	Right	DeBruce Grain, Inc.	DeBruce Grain, Inc.	6	No Information Obtained
65	562	Right	City of Nebraska City	DeBruce Ag Service, Inc.	6	No Information Obtained
66	562	Right	Bartlett and Co.	Bartlett and Co.-Nebraska City	6	No Information Obtained
67	563	Right	City of Nebraska City	American Commercial Terminals, LLC	6	No Information Obtained

Water Facilities Needs Table						
Hanson ID	MILE	BANK	Owner	Operator	Condition Category	Approximate Preliminary Needs Cost
68	584	Right	Haveman Grain Co.	Haveman Grain Co.	6	No Information Obtained
69	595	Right	PCS Nitrogen Fertilizer LP	Not operated	6	No Information Obtained
70	612	Right	Westway Feed Products Co.	Not operated	6	No Information Obtained
71	614	Left	AGRI Grain Marketing	AGRI Grain Marketing	6	No Information Obtained
72	614	Left	Agriliance Co.	Agriliance Co.	6	No Information Obtained
105	139	Left	Capital Sand & Gravel	Capital Sand & Gravel	6	No Information Obtained
106	142	Left	Capital Sand Co., Inc.	Capital Sand Co., Inc.	1	\$0
107	147	Left	Unknown	Unknown Sand & Gravel	6	No Information Obtained
123	448	Left	St. Joseph Regional Port Authority	Kinder Morgan Terminals	1	\$0
Preliminary TOTAL						\$3,530,000

2.8.2.2 Assessment Classification #2

ID 24 MFA Agri Services – Glasgow; \$40,000

Waterside infrastructure review indicates the basic mooring structures for securing barges alongside are intact and appear in acceptable condition and sufficient to stage multiple barges for loading. The elevator appears to have substantial grain capacity and a long elevated conveyor gallery extends from the elevator to the barge loading area. Structurally, it appears in good condition. A load spout is at the waterside end and has good outreach. Investment would have to be made in the material handling system equipment to upgrade conveyor motors, cables, and moving parts which have had no maintenance in some time.

ID 29 Bartlett and Company – Waverly; \$30,000

It was reported barge loading last occurred in 2006. The facility has assessed the elements necessary for reactivation if it appears economically viable to do so. The facility sits close to the riverside; therefore a long conveyor gallery is not required. The short gallery length and recent use of the facility just four years ago indicates only a modest investment is needed to reactivate. There are about six mooring cells and they appear to be in generally in good condition.

ID 30 Central Missouri Agriculture – Waverly \$75,000

It was reported the marine facility is generally in good condition, but the mechanical components of the conveyor system are in need of upgrade and repair. Access was not permitted to view the infrastructure. Visual long range observation and Google Earth/MapQuest review confirms some investment is required and the cost would be more than nearby facilities because the gallery run is much longer. Moorings were not observable from any position available at the time.

ID 32 MFI Agri Services – Lexington \$90,000

The General Manager and Regional Manager provided a very valuable status update of the facility. The facility's marine infrastructure is sound, but all cables, belts, moving parts and drag conveyor require extensive refurbishment to bring production to near acceptable levels. The facility is near waterside and the moorings and gallery look good. It was suggested that longer term improvements should include a productivity upgrade, as that has been identified in the past as a needed permanent improvement.

ID 41 Cargill Grain – Chouteau \$60,000

The local manager indicated the marine structures are apparently in good condition, however, some mechanical upgrades to conveyor portions of the system are required to become operational again. A recent review was done to estimate the cost to get the

facility back in service. The marine facility appears to be sturdy and in good condition. Moorings were not observed but were reported as in good condition.

ID 44 Bartlett & Company – Kansas City, KS \$90,000

No one responded to the inquiry to gain access to the marine facilities. The marine infrastructure and conveyor gallery was observable from a business park nearby. Observations included a very long conveyor gallery that was probably in excess of 100 yards from the elevator to the river. It crossed above railroad tracks, a major highway, and an industrial warehouse complex. The marine facilities observed appeared to be in good condition, but how long they have been idle is unknown. The grain elevator appears to be one of the largest with marine access. The gallery has been painted and the exterior looked good. The waterside configuration of load out spouts indicates good capacity and productivity potential, but they look as if some mechanical maintenance is needed. Moorings appear in good condition.

ID 47 Bartlett and Company – Fairfax \$95,000

A local supervisor contributed that he felt the marine infrastructure was in good condition but was not operable mechanically and would require additional work. Access to the waterside area was denied. Observation from a distance indicated a long run from the elevator to the river of the elevated gallery. The gallery was rusted and looked worn and in need of maintenance. It is presumed a large amount of mechanical work would be required to place the elevator into marine service.

2.8.2.3 Assessment Classification #3

ID 12 Maczuk Industries – New Haven \$200,000

The owner of the business indicated the commercial viability may be questionable given existing river management practices. Observation showed the transfer pipelines were apparently intact from waterside to the tank containment area. However, the tank connections appear not connected, and tank placements may have been altered or possibly removed within the former terminal layout. The internal tank farm system and integrity are in question and presumed to require additional work and inspection to bring to operating condition.

ID 15 Central Electric Power Coop – Chamois \$300,000

The Plant Manager discussed the existing situation and condition. Coal has been received via rail and some truck for over 20 years. Although the dock was reported intact, the material handling system is suspect and likely requiring significant investment. The material handling system was reported in “poor condition” with minimal available system components or structure.

ID 22 Gavilon Fertilizer, LLC (Howard/Cooper Regional Port Authority) \$800,000

The Port Director indicates the existing sheet pile structure observed has no structural integrity left and no suitable mooring is available. The dock adjoins a land area of less than 1 acre and is only 50% owned by the Port Authority with the remainder in the hands of a third party. This ownership may complicate actual improvement strategies for the facility. Gavilon's contiguous waterside land is unimproved.

ID 40 Bartlett and Company – North Kansas City \$150,000

No management was available to provide insight into the condition of the marine infrastructure at this facility. Based on other Bartlett facility condition opinions and considering the external observation taken, primary investment will probably have to be made in mechanical upgrades and the internal material handling system. The gallery condition appears satisfactory but waterside observation was not allowed. The estimate is based on similar improvements, but considers a much longer length of gallery mechanical improvements.

ID 43 City of Kansas City (Port of Kansas City Authority) \$500,000

A tour was provided of the facility; however the technical response to the existing condition was minimal. Some bulk handling capability is assumed to be the most obvious direction of funding needed to get the facility back in operation after being idle for a reported three years. Investment and maintenance was likely deferred for some period before suspension of operations. Conveyors will need some mechanical upgrade and an overall condition inspection. Notable are the following: 1) apparent bank erosion that will probably have to be partially mitigated, 2) dock cell structures capable for operations need to be inspected, certified and repaired 3) crane inspection and upgrades for cycle work to discharge bulk material via bucket. The crane was reported as having previously been in service before shutdown. Because of the risk of stevedore operations in this setting as well as the change to public ownership role, investment and upgrade required is likely to be substantial.

ID 45 Conoco Phillips – Kansas City KS \$400,000

An inability to access this facility or to review the infrastructure has necessitated a Google Earth review of infrastructure at the facility. It appears some infrastructure is intact however no record of actual liquid petroleum (probable refined products) transfer is known. The risk and regulatory requirements for placing this facility into marine operations would be extensive and probably included pipelines, fire protection systems, security updates or other substantial investment requirements.

2.8.3 Preliminary evaluation of existing infrastructure as it relates to its apparent suitability and sufficiency to facilitate and support the successful implementation of freight growth strategies

The review of existing infrastructure based on the widespread site visit assessments, anecdotal comments, and review of imagery available through various sources reveals the fundamental general condition to support freight growth is acceptable. It is important to recognize these fundamentals vary based on commodity classification, freight recovery adaptation and interest of public and private ownership commercial vitality.

For the greatest density of facilities such as sand and gravel operations, freight activity has been sustained and the multitude of facilities in this market are very active and not requiring infrastructure investment or enhancement. Infrastructure to support freight growth is adequate and commercial interests are apparently very adaptable to location adjustments or increased market opportunity.

Facilities and infrastructure supporting agricultural related dry bulk, such as fertilizers and grain, are resilient. The commodity lends itself to modal adaptability created by transportation rate differentials and origin/destination change mainly driven by world market opportunities. The evaluation indicates many of these facilities are well suited to adjust to freight growth opportunity with minimal, if any, investment. Several facilities handling dry bulk fertilizers have maintained continuing operations. As a consequence, infrastructure, including those for handling grain, has been maintained or is in active service. Dedicated grain facilities' marine infrastructure is in a different position. Although implementation of necessary improvements to accommodate freight growth strategy is required, the threshold of investment is generally limited to mechanical material handling components and not relatively high cost structural needs. Surprisingly, many firms were already evaluating or discussing the requirements to accommodate marine transportation activity should inland barge service recover.

Liquids infrastructure varies significantly based on specific commodity characteristics. The transportation risk of liquid products limits the number of transportation firms engaged in this service. Likewise, terminal infrastructure required makes entry and continuing operations more challenging to these liquid commercial ventures. Asphalt terminals are generally operated or used by major refiners for distribution and have continued to operate and maintain marine facilities. Liquid fertilizer terminals, particularly a number which relied heavily on marine transportation, are in a significant state of disrepair. Those which have maintained multi-modal options of rail, truck and/or marine have done well and maintained the infrastructure to continue service to support freight growth strategies. The number of viable liquid terminals positioned to take advantage of freight growth opportunities is modest.

An infrastructure weakness is found in the capability to handle general cargo which may include steel, containers, palletized or other loose cargo which may require unitized type handling requirements. Few of the existing facilities have marine infrastructure suitable

to accommodate large capacity lift machines or to support the weight and footprint associated with cranes, truck turn around space, cargo staging area, or large material handling rolling stock. The typical configuration required usually includes dock infrastructure paralleling the river in order to securely hold a barge to its face or a large dimension sheet pile cell of open design for this cargo type. Appropriate structures in good condition are available in the Jefferson City and St. Joseph areas. Other facilities that may develop into having such capability are in or near Kansas City, MO. Another facility that may be used for general cargo service is being planned in the Kansas City area. It is presently moving to public port control but substantial investment would be required to upgrade the facility to serve the general cargo market.

2.8.4 Operational Support

Although the Missouri River has a substantial number of waterside facilities in varied condition and suitability; the existing infrastructure related to towing operational support is minimal. The securing of barges and support services required to conduct towing operations under a line haul model is an important element toward improved economics. These services also reduce risk and downtime related to vessel breakdown and cargo operations.

Operational services are and could be any of the following:

- Fleeting & cleaning
- Fuel services
- Topside & auxiliary repairs
- Shipyard services

2.8.4.1 Fleeting and Cleaning

A review of the infrastructure inventory revealed no dedicated fleets in business at this time which formally advertise or conduct third party fleeting or barge cleaning services. A review of the *Inland River Guide 2009*, a publication of the Waterways Journal and recognized directory of inland waterways services, confirms this capability does not exist for third party service. Fleeting does exist in varied locations but is developed for and apparently operated as private fleet facilities associated with support of a particular facility. This situation does not imply third party requirements to tie off barges may be denied or excluded. It does suggest limited capacity designed for special purpose requirements would likely take priority over other needs and may make towing operations challenging for certain operators serving many discreet market demands.

Fleeting facilities generally provide cleaning services to barges and assist with meeting the demand to clean prior cargo residue from barges so other cargoes can be loaded back into them. This is an important service to enhance backhaul cargo capability for barge operators. No facilities of this nature for third party use were identified.

Most private facilities had limited berth capacity designed into the cargo transfer areas and likely had towboats stand by while transferring cargo.

Existing Apparent Fleeting:

- Above Hermann Sand, Hermann, MO LDB Mile 98 (reported not confirmed)
- Capital Sand & Gravel, near Jefferson City, Hanson Inventory ID #18 and #106, Mile 142, 143 LDB
- AgriServices Brunswick, MO LDB Mile 256 local capacity only
- St. Joseph Regional Port Authority, St. Joseph, MO LDB Mile 448, Hanson Inventory ID #123, local capacity only

Potential Fleeting Areas:

- Former Washington Sand Co. location, approximate MO RDB Mile 68. Reported good water and unused facility.
- Amoco Moorings MO LDB Mile 149, Hanson Inventory ID #19 – suitability and ownership question, distance approximately five miles from regional terminal demand
- Mile 197 RDB former berth of Capital Sand in front of the Isle of Capri Casino location at Mo RDB Mile 197, Hanson Inventory ID #134
- Port of Kansas City (Mid-West Terminal) – Mo RDB Mile 367, Hanson Inventory ID #43. Possible addition as a general services regional fleet as facility gets redeveloped, bank stabilized and crane operational.

2.8.4.2 Fuel Services

A review of the *Inland River Guide 2009* confirms this capability does exist on a limited basis. It appears service demand is probably minimal and delivery is made by truck which will have higher price thresholds compared to typical midstream or waterway fuel suppliers.

- Borchers Oil, Inc. Independence, MO (unable to obtain confirmation)
- Sapp Brothers Petroleum Omaha, NE (confirmed regional service offering)

2.8.4.3 Top Side, Auxiliary Repair and Shipyard Services

No facilities or organized entities exist to provide these services to the industry along the Missouri River. Most operators indicated ample services are available in the St. Louis area on the Mississippi River. As operation in the recent past has created the need for operators to bring barges to the Mississippi River, the operators have scheduled repair or dry docking during their visits to the St. Louis area. Marine transportation levels are apparently insufficient for private industry to undertake development of infrastructure to support these occasional needs on the Missouri.

Electronic and technical diesel needs can be met through call out services from St. Louis that are within driving range for this demand and railroad diesel and auxiliary power suppliers servicing other large transportation equipment regionally.