Conceptual Engineering Cost Estimate

Detailed Cost Estimate Breakdown per FRA Categories

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Iowa DOT Bid Tabs

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Cat.	Description	Iowa Cost	Illinois Cost	Total Cost
10	**TRACK STRUCTURES & TRACK**			
10.01	Track Structure: Viaduct	$ -	$ -	$ -
10.02	Track Structure: Major/Movable Bridge	$ -	$ -	$ -
10.03	Track Structure: Undergrade Bridges	$ 790,500	$ -	$ 790,500
10.04	Track Structure: Culverts and Drainage Structures	$ 223,000	$ 121,000	$ 344,000
10.05	Track Structure: Cut and Fill (> 4' height/depth)	$ -	$ -	$ -
10.06	Track Structure: At-Grade (grading and subgrade stabilization)	$ 427,840	$ 2,153,060	$ 2,580,900
10.07	Track Structure: Tunnel	$ -	$ -	$ -
10.08	Track Structure: Retaining Walls and Systems	$ -	$ 150,000	$ 150,000
10.18	Other Linear Structures including Fencing, Sound Walls	$ 50,000	$ 50,000	$ 100,000
	Bridges, Tunnels, and Other Structures Subcategory Total	**$ 1,491,340**	**$ 2,474,060**	**$ 3,965,400**
10.09	Track New Construction: Conventional Ballasted	$ 4,920,160	$ 13,075,040	$ 17,995,200
10.10	Track New Construction: Non-ballasted	$ -	$ -	$ -
10.11	Track Rehabilitation: Ballast and surfacing	$ 2,755,000	$ 3,577,000	$ 6,332,000
10.12	Track Rehabilitation: Ditching and Drainage	$ 100,000	$ 10,000	$ 110,000
10.13	Track Rehabilitation: Component Replacement (rail, ties, etc)	$ 6,157,000	$ 6,010,000	$ 12,167,000
10.14	Track: Special Track Work (switches, turnouts, insulated joints)	$ 3,120,000	$ 9,525,000	$ 12,645,000
10.15	Track: Major Interlockings	$ -	$ 8,800,000	$ 8,800,000
10.16	Track: Switch Heaters (with power and control)	$ -	$ -	$ -
10.17	Track: Vibration and Noise Dampening	$ -	$ -	$ -
	Track Construction and Rehabilitation Subcategory Total	**$ 17,052,160**	**$ 40,997,040**	**$ 58,049,200**
	Category 10 Contingency	**$ 3,708,700**	**$ 8,694,300**	**$ 12,403,000**
Total for Category 10 TRACK STRUCTURES & TRACK		**$ 22,252,200**	**$ 52,165,400**	**$ 74,417,600**
20	**STATIONS, TERMINALS, INTERMODAL**			
20.01	Station Buildings: Intercity passenger rail only	$ -	$ 150,000	$ 150,000
20.02	Station Buildings: Joint use (commuter rail, intercity bus)	$ -	$ 185,000	$ 185,000
20.03	Platforms	$ 872,000	$ 1,384,000	$ 2,256,000
20.04	Elevators, escalators	$ -	$ -	$ -
20.05	Joint commercial development	$ -	$ -	$ -
20.06	Pedestrian / bike access and accomodation, landscaping, parking	$ 751,600	$ 461,000	$ 1,212,600
20.07	Automobile, bus, van accessways including roads	$ 245,000	$ 350,000	$ 595,000
20.08	Fare collection systems and equipment	$ 78,000	$ 104,000	$ 182,000
20.09	Station security	$ -	$ -	$ -
	Category 20 Contingency	**$ 584,000**	**$ 790,200**	**$ 1,374,200**
Total for Category 20 STATIONS, TERMINALS, INTERMODAL		**$ 2,530,600**	**$ 3,424,200**	**$ 5,954,800**

Cat.	Description	Iowa Cost	Illinois Cost	Total Cost
30	**SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS**			
30.01	Administration building: Office, sales, storage, revenue counting	$ -	$ -	$ -
30.02	Light Maintenance Facility	$ 2,550,000	$ -	$ 2,550,000
30.03	Heavy Maintenance Facility	$ -	$ -	$ -
30.04	Storage or Maintenance-of-Way building/bases	$ -	$ -	$ -
30.05	Yard and yard track	$ -	$ -	$ -
	Category 30 Contingency	**$ 765,000**	**$ -**	**$ 765,000**
Total for Category 30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		**$ 3,315,000**	**$ -**	**$ 3,315,000**
40	**SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS**			
40.07	Purchase or lease of real estate	$ 700,000	$ 1,470,000	$ 2,170,000
	Purchase or lease of real estate Subcategory Total	**$ 700,000**	**$ 1,470,000**	**$ 2,170,000**
40.01	Demolition, clearing, site preparation	$ 425,550	$ 625,425	$ 1,050,975
40.02	Site utilities, utility relocation	$ 225,000	$ 865,000	$ 1,090,000
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments	$ 125,000	$ 125,000	$ 250,000
40.04	Environmental mitigation: wetlands, historic/archeology, parks	$ 250,000	$ 2,950,000	$ 3,200,000
40.05	Site structures including retaining walls, sound walls	$ 400,000	$ -	$ 400,000
40.06	Temporary facilities and other indirect costs during construction	$ -	$ -	$ -
40.08	Highway/pedestrian overpass/grade separations	$ -	$ -	$ -
40.09	Relocation of existing households and businesses	$ -	$ -	$ -
	All other Sitework, ROW, Existing Improvements Subcategory Total	**$ 1,425,550**	**$ 4,565,425**	**$ 5,990,975**
	Category 40 Contingency	**$ 637,700**	**$ 1,810,700**	**$ 2,448,300**
Total for Category 40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS		**$ 2,763,250**	**$ 7,846,125**	**$ 10,609,275**
50	**COMMUNICATIONS & SIGNALING**			
50.01	Wayside signaling equipment	$ 13,583,000	$ 28,519,000	$ 42,102,000
50.02	Signal power access and distribution	$ -	$ -	$ -
50.03	On-board signaling equipment	$ -	$ -	$ -
50.04	Traffic control and dispatching systems	$ 3,150,000	$ 1,550,000	$ 4,700,000
50.05	Communications	$ 1,000,000	$ 1,000,000	$ 2,000,000
50.06	Grade crossing protection	$ 11,857,000	$ 11,028,000	$ 22,885,000
50.07	Hazard detectors (dragging equipment, slide, etc.)	$ -	$ -	$ -
50.08	Station train approach warning system	$ -	$ -	$ -
	Category 50 Contingency	**$ 5,918,000**	**$ 8,419,400**	**$ 14,337,400**
Total for Category 50 COMMUNICATIONS & SIGNALING		**$ 35,508,000**	**$ 50,516,400**	**$ 86,024,400**

Cat.	Description	Iowa Cost	Illinois Cost	Total Cost
60	**ELECTRIC TRACTION**			
60.01	Traction power transmission: High voltage	$ -	$ -	$ -
60.02	Traction power supply: Substations	$ -	$ -	$ -
60.03	Traction power distribution: Catenary and third rail	$ -	$ -	$ -
60.04	Traction power control	$ -	$ -	$ -
	Category 60 Contingency	**$ -**	**$ -**	**$ -**
Total for Category 60 ELECTRIC TRACTION		**$ -**	**$ -**	**$ -**
70	**VEHICLES**			
70.00	Vehicle acquisition: Electric locomotive	$ -	$ -	$ -
70.01	Vehicle acquisition: Non-electric locomotive	$ 4,050,000	$ 10,950,000	$ 15,000,000
70.02	Vehicle acquisition: Electric multiple unit	$ -	$ -	$ -
70.03	Vehicle acquisition: Diesel multiple unit	$ -	$ -	$ -
70.04	Veh acq: Loco-hauled passenger cars w/ ticketed space	$ 5,265,000	$ 14,235,000	$ 19,500,000
70.05	Veh acq: Loco-hauled passenger cars w/o ticketed space	$ 2,430,000	$ 6,570,000	$ 9,000,000
70.06	Vehicle acquisition: Maintenance of way vehicles	$ -	$ -	$ -
70.07	Vehicle acquisition: Non-railroad support vehicles	$ -	$ -	$ -
	Vehicle Acquisition Subcategory Total	**$ 11,745,000**	**$ 31,755,000**	**$ 43,500,000**
70.08	Vehicle refurbishment: Electric locomotive	$ -	$ -	$ -
70.09	Vehicle refurbishment: Non-electric locomotive	$ -	$ -	$ -
70.1	Vehicle refurbishment: Electric multiple unit	$ -	$ -	$ -
70.11	Vehicle refurbishment: Diesel multiple unit	$ -	$ -	$ -
70.12	Veh refurb: Loco-hauled passenger cars w/ ticketed space	$ -	$ -	$ -
70.13	Veh refurb: Loco-hauled passenger cars w/o ticketed space	$ -	$ -	$ -
70.14	Vehicle refurbishment: Maintenance of way vehicles	$ -	$ -	$ -
70.15	Spare parts	$ 1,174,500	$ 3,175,500	$ 4,350,000
	Vehicle Refurbishment Subcategory Total	**$ 1,174,500**	**$ 3,175,500**	**$ 4,350,000**
	Category 70 Contingency	**$ 3,875,900**	**$ 10,479,200**	**$ 14,355,000**
Total for Category 70 VEHICLES		**$ 16,795,400**	**$ 45,409,700**	**$ 62,205,000**

Cat.	Description	Iowa Cost	Illinois Cost	Total Cost
80	**PROFESSIONAL SERVICES**			
80.01	Service Development Plan/Service Environmental	$ -	$ -	$ -
	Service Development Plan/Service Environmental Subcategory Total	**$ -**	**$ -**	**$ -**
80.02	Preliminary Engineering/Project Environmental	$ 1,776,700	$ 3,186,100	$ 4,962,800
	Preliminary Engineering/Project Environmental Subcategory Total	**$ 1,776,700**	**$ 3,186,100**	**$ 4,962,800**
80.03	Final Design	$ 4,951,800	$ 7,245,100	$ 12,196,900
	Final Design Subcategory Total	**$ 4,951,800**	**$ 7,245,100**	**$ 12,196,900**
80.04	Project management for design and construction	$ 1,872,100	$ 3,897,500	$ 5,769,600
80.05	Construction administation & management	$ 1,309,800	$ 2,609,900	$ 3,919,700
80.06	Professional liability and other non-construction insurance	$ -	$ -	$ -
80.07	Legal; Permits; Review Fees by other agencies, cities, etc.	$ -	$ -	$ -
80.08	Surveys, testing, investigation	$ -	$ -	$ -
80.09	Engineering inspection	$ -	$ -	$ -
80.10	Start up	$ -	$ -	$ -
	All Other Professional Services Subcategory Total	**$ 3,181,900**	**$ 6,507,400**	**$ 9,689,300**
	Category 80 Contingency	**$ 495,600**	**$ 847,000**	**$ 1,342,500**
Total for Category 80 PROFESSIONAL SERVICES		**$ 10,406,000**	**$ 17,785,600**	**$ 28,191,500**
	Subtotal (10-80)	**$ 93,570,450**	**$ 177,147,425**	**$ 270,717,575**
90	**UNALLOCATED CONTINGENCY (5%)**	**$ 4,678,600**	**$ 8,857,400**	**$ 13,535,900**
	Subtotal (10-90)	**$ 98,249,050**	**$ 186,004,825**	**$ 284,253,475**
100	**FINANCE CHARGES**			**$ -**
	TOTAL CAPITAL COSTS (10-100)	**$ 98,249,050**	**$ 186,004,825**	**$ 284,253,475**

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
10	**TRACK STRUCTURES & TRACK**										
10.01	Track Structure: Viaduct						$ -	$ -	$ -		
10.02	Track Structure: Major/Movable Bridge						$ -	$ -	$ -		
10.03	Track Structure: Undergrade Bridges						$ 790,500	$ -	$ 790,500		
10.04	Track Structure: Culverts and Drainage Structures						$ 223,000	$ 121,000	$ 344,000		
10.05	Track Structure: Cut and Fill (> 4' height/depth)						$ -	$ -	$ -		
10.06	Track Structure: At-Grade (grading and subgrade stabilization)						$ 427,840	$ 2,153,060	$ 2,580,900		
10.07	Track Structure: Tunnel						$ -	$ -	$ -		
10.08	Track Structure: Retaining Walls and Systems						$ -	$ 150,000	$ 150,000		
10.18	Other Linear Structures including Fencing, Sound Walls						$ 50,000	$ 50,000	$ 100,000		
	Bridges, Tunnels, and Other Structures Subcategory Total						**$ 1,491,340**	**$ 2,474,060**	**$ 3,965,400**		
10.09	Track New Construction: Conventional Ballasted						$ 4,920,160	$ 13,075,040	$ 17,995,200	See detailed description below	
10.10	Track New Construction: Non-ballasted						$ -	$ -	$ -		
10.11	Track Rehabilitation: Ballast and surfacing						$ 2,755,000	$ 3,577,000	$ 6,332,000		
10.12	Track Rehabilitation: Ditching and Drainage						$ 100,000	$ 10,000	$ 110,000		
10.13	Track Rehabilitation: Component Replacement (rail, ties, etc)						$ 6,157,000	$ 6,010,000	$ 12,167,000		
10.14	Track: Special Track Work (switches, turnouts, insulated joints)						$ 3,120,000	$ 9,525,000	$ 12,645,000		
10.15	Track: Major Interlockings						$ -	$ 8,800,000	$ 8,800,000		
10.16	Track: Switch Heaters (with power and control)						$ -	$ -	$ -		
10.17	Track: Vibration and Noise Dampening						$ -	$ -	$ -		
	Track Construction and Rehabilitation Subcategory Total						**$ 17,052,160**	**$ 40,997,040**	**$ 58,049,200**		
	Category 10 Contingency					**20%**	**$ 3,708,700**	**$ 8,694,300**	**$ 12,403,000**		
Total for Category 10 TRACK STRUCTURES & TRACK							**$ 22,252,200**	**$ 52,165,400**	**$ 74,417,600**		
10.01	**Track Structure: Viaduct**										
	Not Applicable										
10.02	**Track Structure: Major/Movable Bridge**										
	Not Applicable										
10.03	**Track Structure: Undergrade Bridges**					**Total:**	**$ 790,500**	**$ -**	**$ 790,500**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Replace Rail Fasteners: MP 182.76 (Brady Street)	1		1	L Sum	$ 50,000	$ 50,000	$ -	$ 50,000	steel bridges with direct mounting; allowance for misc. replacement & improvements to accommodate HSR	prior experience
	Replace Rail Fasteners: MP 182.83 (Main Street)	1		1	L Sum	$ 50,000	$ 50,000	$ -	$ 50,000	steel bridges with direct mounting; allowance for misc. replacement & improvements to accommodate HSR	prior experience
	Replace Rail Fasteners: MP 182.91 (Harrison Street)	1		1	L Sum	$ 50,000	$ 50,000	$ -	$ 50,000	steel bridges with direct mounting; allowance for misc. replacement & improvements to accommodate HSR	prior experience
	Deck Replacement: Bridge 184.2	108		108	FT	$ 1,500	$ 162,000	$ -	$ 162,000	open deck bridges: replace bridge ties (10"x10"x12') and walkway/handrails. Replace bridge stringers (if necessary)	prior experience
	Deck Replacement: Bridge 184.5	47		47	FT	$ 1,500	$ 70,500	$ -	$ 70,500	open deck bridges: replace bridge ties (10"x10"x12') and walkway/handrails. Replace bridge stringers (if necessary)	prior experience
	Deck Replacement: Bridge 186.6	65		65	FT	$ 1,500	$ 97,500	$ -	$ 97,500	open deck bridges: replace bridge ties (10"x10"x12') and walkway/handrails. Replace bridge stringers (if necessary)	prior experience
	Deck Replacement: Bridge 203.2	44		44	FT	$ 1,500	$ 66,000	$ -	$ 66,000	open deck bridges: replace bridge ties (10"x10"x12') and walkway/handrails. Replace bridge stringers (if necessary)	prior experience
	Deck Replacement: Bridge 211.4	75		75	FT	$ 1,500	$ 112,500	$ -	$ 112,500	open deck bridges: replace bridge ties (10"x10"x12') and walkway/handrails. Replace bridge stringers (if necessary)	prior experience
	Deck Replacement: Bridge 225.9	88		88	FT	$ 1,500	$ 132,000	$ -	$ 132,000	open deck bridges: replace bridge ties (10"x10"x12') and walkway/handrails. Replace bridge stringers (if necessary)	prior experience
10.04	**Track Structure: Culverts and Drainage Structures**					**Total:**	**$ 223,000**	**$ 121,000**	**$ 344,000**		

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Replace 19' IBS with Pipe Culvert (MP 139.9)		1	1	L Sum	$ 43,500	$ -	$ 43,500	$ 43,500		IaDOT Bid Tab Reference # 2417-1040072 with 10% allowance for excavation, backfill, compaction and granular bedding
	Eola Yard Culvert Extension		1	1	L Sum	$ 2,500	$ -	$ 2,500	$ 2,500	Eola Yard Cost Estimate	Eola Yard Cost Estimate
	Replace 4'x4.5' RCB with Pipe Culvert (MP 197.3)	1		1	L Sum	$ 26,000	$ 26,000	$ -	$ 26,000		IaDOT Bid Tab Reference # 24152110404 with 10% allowance for excavation, backfill, compaction and granular bedding
	Replace 8'x8' RCB with Pipe Culvert (MP 233.8)	1		1	L Sum	$ 13,000	$ 13,000	$ -	$ 13,000		IaDOT Bid Tab Reference # 2415-2100000 with 10% allowance for excavation, backfill, compaction and granular bedding
	Concrete Repair Work (MP 203.2)	1		1	L Sum	$ 10,000	$ 10,000	$ -	$ 10,000	Allowance for Miscellaneous Concrete Repair	prior experience
	Extend 8'x6.5' RCB (MP 234.10)	1		1	L Sum	$ 13,000	$ 13,000	$ -	$ 13,000		IaDOT Bid Tab Reference # 2415-2100000 with 10% allowance for excavation, backfill, compaction and granular bedding
	Extend 36" Pipe Culvert (MP 233.90)	1		1	L Sum	$ 3,000	$ 3,000	$ -	$ 3,000		IaDOT Bid Tab Reference # 2416-1180036 with 10% allowance for excavation, backfill, compaction and granular bedding
	Extend 8'x8' RCB (MP 233.80)	1		1	L Sum	$ 13,000	$ 13,000	$ -	$ 13,000		IaDOT Bid Tab Reference # 2415-2100000 with 10% allowance for excavation, backfill, compaction and granular bedding
	Extend 8'x6' RCB (MP 231.70)	1		1	L Sum	$ 13,000	$ 13,000	$ -	$ 13,000		IaDOT Bid Tab Reference # 2415-2100000 with 10% allowance for excavation, backfill, compaction and granular bedding
	Extend 36" Pipe Culvert (MP 231.40)	1		1	L Sum	$ 3,000	$ 3,000	$ -	$ 3,000		IaDOT Bid Tab Reference # 2416-1180036 with 10% allowance for excavation, backfill, compaction and granular bedding
	Extend 6'x5.5' RCB (MP 231.10)	1		1	L Sum	$ 13,000	$ 13,000	$ -	$ 13,000		IaDOT Bid Tab Reference # 24152110404 with 10% allowance for excavation, backfill, compaction and granular bedding
	Extend 48" Pipe Culvert (MP 230.60)	1		1	L Sum	$ 13,000	$ 13,000	$ -	$ 13,000		IaDOT Bid Tab Reference # 24152110404
	Extend 36" Pipe Culvert (MP 230.60)	1		1	L Sum	$ 3,000	$ 3,000	$ -	$ 3,000		IaDOT Bid Tab Reference # 2416-1180036 with 10% allowance for excavation, backfill, compaction and granular bedding
	Extend 4'x4' RCB (MP 230.40)	1		1	L Sum	$ 25,000	$ 25,000	$ -	$ 25,000		IaDOT Bid Tab Reference # 24152110404 with 10% allowance for excavation, backfill, compaction and granular bedding
	Misc Other Drainage Work	0.5	0.5	1	L Sum	$ 150,000	$ 75,000	$ 75,000	$ 150,000	Allowance for Miscellaneous Grading for Culvert and Drainage Materials	prior experience
10.05	**Track Structure: Cut and Fill (> 4' height/depth)**										
	Not Applicable										
10.06	**Track Structure: At-Grade (grading and subgrade stabilization)**					**Total:**	**$ 427,840**	**$ 2,153,060**	**$ 2,580,900**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Iowa City Station Bypass	1,120		1,120	TF	$ 20	$ 22,400	$ -	$ 22,400		

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Iowa City 1st Street Connection	765		765	TF	$ 20	$ 15,300	$ -	$ 15,300		
	Iowa City Industrial Complex Siding Extension	5,777		5,777	TF	$ 20	$ 115,540	$ -	$ 115,540		
	American Siding	12,280		12,280	TF	$ 20	$ 245,600	$ -	$ 245,600		
	Walcott Siding Extension	1,450		1,450	TF	$ 20	$ 29,000	$ -	$ 29,000	clear & grub and site preparation to construct new tracks to	
	Rock Island Yard Bypass Mainline		4,220	4,220	TF	$ 20	$ -	$ 84,400	$ 84,400	existing embankment; cost to be refined on specific design	prior experience
	Rock Island Yard Replacement Track		3,770	3,770	TF	$ 20	$ -	$ 75,400	$ 75,400	and site conditions	
	Moline 2nd Main (MP 178.36 - 180.44)		10,858	10,858	TF	$ 20	$ -	$ 217,160	$ 217,160		
	Moline Main Track Realignment		3,381	3,381	TF	$ 20	$ -	$ 67,620	$ 67,620		
	Moline 2nd Main (MP 175.34-177.18)		11,702	11,702	TF	$ 20	$ -	$ 234,040	$ 234,040		
	Moline Siding Replacement Track at Sylvis Yard		7,147	7,147	TF	$ 20	$ -	$ 142,940	$ 142,940		
	Eola Yard Earthwork and Subballast		20,804	20,804	TF	$ 64	$ -	$ 1,331,500	$ 1,331,500	Eola Yard Cost Estimate	Eola Yard Cost Estimate
10.07	**Track Structure: Tunnel**										
	Not Applicable										
10.08	**Track Structure: Retaining Walls and Systems**					**Total:**	**$ -**	**$ 150,000**	**$ 150,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Crash Wall for IL-5/92 Overpass		1	1	L Sum	$ 150,000	$ -	$ 150,000	$ 150,000	State Highway 4 lane overpass; allowance for 80'x12' crash wall (12' or greater off track center)	prior experience
10.18	**Other Linear Structures including Fencing, Sound Walls**					**Total:**	**$ 50,000**	**$ 50,000**	**$ 100,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Fencing Allowance	0.5	0.5	1	L Sum	$ 100,000	$ 50,000	$ 50,000	$ 100,000	Primarily barbed wire with minimal chain link fencing; allowance to address potential costs	prior experience
10.09	**Track New Construction: Conventional Ballasted**					**Total:**	**$ 4,920,160**	**$ 13,075,040**	**$ 17,995,200**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Iowa City Station Bypass	1,120		1,120	TF	$ 230	$ 257,600	$ -	$ 257,600		
	Iowa City 1st Street Connection	765		765	TF	$ 230	$ 175,950	$ -	$ 175,950		
	Iowa City Industrial Complex Siding Extension	5,777		5,777	TF	$ 230	$ 1,328,710	$ -	$ 1,328,710		
	American Siding	12,280		12,280	TF	$ 230	$ 2,824,400	$ -	$ 2,824,400		
	Walcott Siding Extension	1,450		1,450	TF	$ 230	$ 333,500	$ -	$ 333,500		
	Rock Island Yard Runaround		4,220	4,220	TF	$ 230	$ -	$ 970,600	$ 970,600		12" Track Ballast ($31/TF); Wood RR Ties 24" OC ($60 each); Rail #115 RE (CWR) ($105/TF); OTM ($5/TF); 6" Subballast ($29/TF)
	Rock Island Yard Replacement Track		3,770	3,770	TF	$ 230	$ -	$ 867,100	$ 867,100		
	Moline 2nd Main (MP 178.36 - 180.44)		10,858	10,858	TF	$ 230	$ -	$ 2,497,340	$ 2,497,340		
	Moline Main Track Realignment		3,381	3,381	TF	$ 230	$ -	$ 777,630	$ 777,630		
	Midland Siding		461	461	TF	$ 230	$ -	$ 106,030	$ 106,030		
	Moline 2nd Main (MP 175.34-177.18)		11,702	11,702	TF	$ 230	$ -	$ 2,691,460	$ 2,691,460		
	Moline Siding Replacement Track at Sylvis Yard		7,147	7,147	TF	$ 230	$ -	$ 1,643,810	$ 1,643,810		
	Sylvis Siding Improvements		799	799	TF	$ 230	$ -	$ 183,770	$ 183,770		
	Eola Yard Improvements		14,510	14,510	TF	$ 230	$ -	$ 3,337,300	$ 3,337,300	Eola Yard Cost Estimate	Eola Yard Cost Estimate
10.10	**Track New Construction: Non-ballasted**										
	Not Applicable										
10.11	**Track Rehabilitation: Ballast and surfacing**					**Total:**	**$ 2,755,000**	**$ 3,577,000**	**$ 6,332,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Track Surfacing: MP 237.0 to MP 182.4	54.6		54.6	mile	$ 30,000	$ 1,638,000	$ -	$ 1,638,000		tamping and ballasting costs typical $5 / TF and up depending on specific site conditions
	Track Surfacing: MP 182.1 to MP 129.5		52.6	52.6	mile	$ 30,000	$ -	$ 1,578,000	$ 1,578,000		tamping and ballasting costs typical $5 / TF and up depending on specific site conditions
	Track Surfacing: Iowa City 2nd Main	1.9		1.9	mile	$ 30,000	$ 57,000	$ -	$ 57,000		tamping and ballasting costs typical $5 / TF and up depending on specific site conditions
	Track Surfacing: Moline Siding		1.3	1.3	mile	$ 30,000	$ -	$ 39,000	$ 39,000		tamping and ballasting costs typical $5 / TF and up depending on specific site conditions
	Track Undercutting: MP 236.2 to MP 235.2	1		1	mile	$ 300,000	$ 300,000	$ -	$ 300,000	includes specialized equipment for lifting track, clearing embankment and resurfacing track	typical costs start at $50/TF

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Track Undercutting: MP 180.5 to MP 178.5		2	2	mile	$ 300,000	$ -	$ 600,000	$ 600,000	includes specialized equipment for lifting track, clearing embankment and resurfacing track	typical costs start at $50/TF
	Track Undercutting: MP 153.3 to MP 151.3		2	2	mile	$ 300,000	$ -	$ 600,000	$ 600,000	includes specialized equipment for lifting track, clearing embankment and resurfacing track	typical costs start at $50/TF
	Track Undercutting: Spot Locations	2	2	4	each	$ 30,000	$ 60,000	$ 60,000	$ 120,000	allowance for specialized trackwork; site specific design required to refine costs	typical costs start at $50/TF; assumed approximately 500' each location and $60/TF due economies of scale for smaller areas
	Track Undercutting: Crossing Spot Locations	20	20	40	each	$ 20,000	$ 400,000	$ 400,000	$ 800,000	allowance for specialized trackwork; site specific design required to refine costs	typical costs start at $50/TF; assumed higher cost per TF based economies of scale for smaller areas
	Track Undercutting: Closed Crossings / Crossings to be Closed	15	15	30	each	$ 20,000	$ 300,000	$ 300,000	$ 600,000	allowance for specialized trackwork; site specific design required to refine costs	typical costs start at $50/TF; assumed higher cost per TF based economies of scale for smaller areas
10.12	**Track Rehabilitation: Ditching and Drainage**					**Total:**	**$ 100,000**	**$ 10,000**	**$ 110,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Ditching: MP 172.1 to MP 171.9		0.2	0.2	mile	$ 50,000	$ -	$ 10,000	$ 10,000	Typical 3' x 10' Ditch	$5/CY Plus Misc. expenses for Haul,Waste,Seeding, Etc.
	Ditching: MP 185.8 to MP 183.8	2.0		2.0	mile	$ 50,000	$ 100,000	$ -	$ 100,000	Typical 3' x 10' Ditch	$5/CY Plus Misc. expenses for Haul,Waste,Seeding, Etc.
10.13	**Track Rehabilitation: Component Replacement (rail, ties, etc)**					**Total:**	**$ 6,157,000**	**$ 6,010,000**	**$ 12,167,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Replace Jointed Rail with Continuously Welded Rail: MP 237.0 to MP 234.0	3.0		3.0	mile	$ 450,000	$ 1,350,000	$ -	$ 1,350,000	Rail removal, replacement and on-site installation & welding	IAIS historical typical cost; rail $1300 / net ton plus tie plates $13 ea.
	Replace Jointed Rail with Continuously Welded Rail: MP 183.0 to MP 182.3	0.7		0.7	mile	$ 450,000	$ 315,000	$ -	$ 315,000	Rail removal, replacement and on-site installation & welding	IAIS historical typical cost; rail $1300 / net ton plus tie plates $13 ea.
	Replace Jointed Rail with Continuously Welded Rail: MP 175.40 to MP 170.3		5.1	5.1	mile	$ 450,000	$ -	$ 2,295,000	$ 2,295,000	Rail removal, replacement and on-site installation & welding	IAIS historical typical cost; rail $1300 / net ton plus tie plates $13 ea.
	Replace Continuously Welded Rail on Curve: MP 185.2 to MP 185.7	0.5		0.5	mile	$ 450,000	$ 225,000	$ -	$ 225,000	Rail removal, replacement and on-site installation & welding	IAIS historical typical cost; rail $1300 / net ton plus tie plates $13 ea.
	Replace Continuously Welded Rail on Curve: MP 184.9 to MP 184.04	0.86		0.86	mile	$ 450,000	$ 387,000	$ -	$ 387,000	Rail removal, replacement and on-site installation & welding	IAIS historical typical cost; rail $1300 / net ton plus tie plates $13 ea.
	Continuously Welded Rail Joint Elimination		50	50	each	$ 1,500	$ -	$ 75,000	$ 75,000		IAIS historical typical cost
	Replace Crossties: MP 237.0 to MP 182.4	45,000		45,000	each	$ 80	$ 3,600,000	$ -	$ 3,600,000	Removal & disposal of existing tie; replace with wood ties and OTM	IAIS historical typical cost
	Replace Crossties: MP 175.4 to MP 180.5		4,000	4,000	each	$ 80	$ -	$ 320,000	$ 320,000	Removal & disposal of existing tie; replace with wood ties and OTM	IAIS historical typical cost
	Replace Crossties: MP 175.4 to MP 129.5		40,000	40,000	each	$ 80	$ -	$ 3,200,000	$ 3,200,000	Removal & disposal of existing tie; replace with wood ties and OTM	IAIS historical typical cost
	Replace Crossties: Iowa City 2nd Main	3,500		3,500	each	$ 80	$ 280,000	$ -	$ 280,000	Removal & disposal of existing tie; replace with wood ties and OTM	IAIS historical typical cost
	Replace Crossties: Moline Siding		1,500	1,500	each	$ 80	$ -	$ 120,000	$ 120,000	Removal & disposal of existing tie; replace with wood ties and OTM	IAIS historical typical cost
10.14	**Track: Special Track Work (switches, turnouts, insulated joints)**					**Total:**	**$ 3,120,000**	**$ 9,525,000**	**$ 12,645,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Iowa City Station Bypass: No. 15 Powered Turnout	1		1	each	$ 200,000	$ 200,000	$ -	$ 200,000		
	Iowa City Station Bypass: No. 11 Hand-Throw Turnout	2		2	each	$ 140,000	$ 280,000	$ -	$ 280,000		
	Iowa City Industrial Complex Siding Extension: No. 15 Powered Turnout	1		1	each	$ 200,000	$ 200,000	$ -	$ 200,000		
	Iowa City Industrial Complex Siding Extension: No. 11 Hand-Throw Turnout	6		6	each	$ 140,000	$ 840,000	$ -	$ 840,000		
	American Siding: No. 15 Powered Turnout	2		2	each	$ 200,000	$ 400,000	$ -	$ 400,000		

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Wilton Siding Upgrade: No. 15 Powered Turnout	3		3	each	$ 200,000	$ 600,000	$ -	$ 600,000		IAIS historical typical cost. Material
	Walcott Siding Extension: No. 15 Powered Turnout	2		2	each	$ 200,000	$ 400,000	$ -	$ 400,000		Cost: no. 11 - $40,000, no. 15 -
	Missouri Division Junction: No. 15 Powered Turnout	1		1	each	$ 200,000	$ 200,000	$ -	$ 200,000		$54,000, no. 20 - $65,000. Plus
	Rock Island Yard Runaround: No. 15 Powered Turnout		1	1	each	$ 200,000	$ -	$ 200,000	$ 200,000		railroad freight, site preparation,
	Rock Island Yard Replacement Track: No. 9 Hand-Throw Turnout		6	6	each	$ 130,000	$ -	$ 780,000	$ 780,000		installation, power operation
	Moline West UXO: No. 15 Powered		1	1	L Sum	$ 820,000	$ -	$ 820,000	$ 820,000		equipment, contractors expenses
	Moline East UXO: No. 15 Powered		1	1	L Sum	$ 1,025,000	$ -	$ 1,025,000	$ 1,025,000		and railroad signaling and
	Midland Siding: No. 11 Powered Turnout		2	2	each	$ 160,000	$ -	$ 320,000	$ 320,000		commissioning costs.
	Silvis Siding Upgrade: No. 15 Powered Turnout		2	2	each	$ 200,000	$ -	$ 400,000	$ 400,000		
	Silvis Siding Upgrade: No. 11 Hand-Throw Turnout		1	1	each	$ 140,000	$ -	$ 140,000	$ 140,000		
	Moline Siding Replacement Track at Sylvis Yard: No. 10 Hand-Throw Turnouts		4	4	each	$ 140,000	$ -	$ 560,000	$ 560,000		
	Atkinson Siding Upgrade: No. 15 Powered Turnout		2	2	each	$ 200,000	$ -	$ 400,000	$ 400,000		
	Annawan Siding Upgrade: Power Existing No. 11 Turnout		2	2	each	$ 20,000	$ -	$ 40,000	$ 40,000		
	Eola Yard: No. 24 Powered Turnout		14	14	each	$ 300,000	$ -	$ 4,200,000	$ 4,200,000	Eola Yard Cost Estimate	Eola Yard Cost Estimate
	Eola Yard: No. 11 Powered Turnout		4	4	each	$ 160,000	$ -	$ 640,000	$ 640,000	Eola Yard Cost Estimate	Eola Yard Cost Estimate
10.15	**Track: Major Interlockings**					**Total:**	**$ -**	**$ 8,800,000**	**$ 8,800,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Wyanet Connection (BNSF / IAIS)		1	1	L Sum	$ 7,200,000	$ -	$ 7,200,000	$ 7,200,000	Wyanet Connection Cost Estimate	Wyanet Connection Cost Estimate
	Colona Junction (BNSF / IAIS)		1	1	L Sum	$ 1,600,000	$ -	$ 1,600,000	$ 1,600,000	Colona Junction Cost Estimate	Colona Junction Cost Estimate
10.16	**Track: Switch Heaters (with power and control)**										
	Included in Wayside Signaling Cost										
10.17	**Track: Vibration and Noise Dampening**										
	Not Applicable										

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
20	**STATIONS, TERMINALS, INTERMODAL**										
20.01	Station Buildings: Intercity passenger rail only						$ -	$ 150,000	$ 150,000		
20.02	Station Buildings: Joint use (commuter rail, intercity bus)						$ -	$ 185,000	$ 185,000		
20.03	Platforms						$ 872,000	$ 1,384,000	$ 2,256,000		
20.04	Elevators, escalators						$ -	$ -	$ -		
20.05	Joint commercial development						$ -	$ -	$ -		
20.06	Pedestrian / bike access and accomodation, landscaping, parking						$ 751,600	$ 461,000	$ 1,212,600		
20.07	Automobile, bus, van accessways including roads						$ 245,000	$ 350,000	$ 595,000		
20.08	Fare collection systems and equipment						$ 78,000	$ 104,000	$ 182,000		
20.09	Station security						$ -	$ -	$ -		
	Category 20 Contingency					**30%**	**$ 584,000**	**$ 790,200**	**$ 1,374,200**		
Total for Category 20 STATIONS, TERMINALS, INTERMODAL							**$ 2,530,600**	**$ 3,424,200**	**$ 5,954,800**		
20.01	**Station Buildings: Intercity passenger rail only**					**Total:**	**$ -**	**$ 150,000**	**$ 150,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Geneseo		1	1	L Sum	$ 150,000	$ -	$ 150,000	$ 150,000	Geneseo Station Cost Estimate	Geneseo Station Cost Estimate
20.02	**Station Buildings: Joint use (commuter rail, intercity bus)**					**Total:**	**$ -**	**$ 185,000**	**$ 185,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Moline		1	1	L Sum	$ 185,000	$ -	$ 185,000	$ 185,000	Moline Station Cost Estimate	Moline Station Cost Estimate
20.03	**Platforms**					**Total:**	**$ 872,000**	**$ 1,384,000**	**$ 2,256,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Geneseo		1	1	L Sum	$ 677,000	$ -	$ 677,000	$ 677,000	Geneseo Station Cost Estimate	Geneseo Station Cost Estimate
	Moline		1	1	L Sum	$ 707,000	$ -	$ 707,000	$ 707,000	Moline Station Cost Estimate	Moline Station Cost Estimate
	Iowa City	1		1	L Sum	$ 872,000	$ 872,000	$ -	$ 872,000	Iowa City Station Cost Estimate	Iowa City Station Cost Estimate
20.04	**Elevators, escalators**										
	Not Applicable										
20.05	**Joint commercial development**										
	Not Applicable										
20.06	**Pedestrian / bike access and accomodation, landscaping, parking**					**Total:**	**$ 751,600**	**$ 461,000**	**$ 1,212,600**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Geneseo		1	1	L Sum	$ 196,000	$ -	$ 196,000	$ 196,000	Geneseo Station Cost Estimate	Geneseo Station Cost Estimate
	Moline		1	1	L Sum	$ 265,000	$ -	$ 265,000	$ 265,000	Moline Station Cost Estimate	Moline Station Cost Estimate
	Iowa City	1		1	L Sum	$ 751,600	$ 751,600	$ -	$ 751,600	Iowa City Station Cost Estimate	Iowa City Station Cost Estimate
20.07	**Automobile, bus, van accessways including roads**					**Total:**	**$ 245,000**	**$ 350,000**	**$ 595,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Geneseo		1	1	L Sum	$ 20,000	$ -	$ 20,000	$ 20,000	Geneseo Station Cost Estimate	Geneseo Station Cost Estimate
	Moline		1	1	L Sum	$ 330,000	$ -	$ 330,000	$ 330,000	Moline Station Cost Estimate	Moline Station Cost Estimate
	Iowa City	1		1	L Sum	$ 245,000	$ 245,000	$ -	$ 245,000	Iowa City Station Cost Estimate	Iowa City Station Cost Estimate
20.08	**Fare collection systems and equipment**					**Total:**	**$ 78,000**	**$ 104,000**	**$ 182,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Geneseo		1	1	L Sum	$ 26,000	$ -	$ 26,000	$ 26,000	Geneseo Station Cost Estimate	Geneseo Station Cost Estimate
	Moline		1	1	L Sum	$ 78,000	$ -	$ 78,000	$ 78,000	Moline Station Cost Estimate	Moline Station Cost Estimate
	Iowa City	1		1	L Sum	$ 78,000	$ 78,000	$ -	$ 78,000	Iowa City Station Cost Estimate	Iowa City Station Cost Estimate
20.09	**Station security**										
	Not Applicable										

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
30	**SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS**										
30.01	Administration building: Office, sales, storage, revenue counting						$ -	$ -	$ -		
30.02	Light Maintenance Facility						$ 2,550,000	$ -	$ 2,550,000		
30.03	Heavy Maintenance Facility						$ -	$ -	$ -	See detailed description below	
30.04	Storage or Maintenance-of-Way building/bases						$ -	$ -	$ -		
30.05	Yard and yard track						$ -	$ -	$ -		
	Category 30 Contingency					**30%**	**$ 765,000**	**$ -**	**$ 765,000**		
Total for Category 30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS							**$ 3,315,000**	**$ -**	**$ 3,315,000**		
30.01	**Administration building: Office, sales, storage, revenue counting**										
	Not Applicable										
30.02	**Light Maintenance Facility**					**Total:**	**$ 2,550,000**	**$ -**	**$ 2,550,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Iowa City Layover Facilities	1		1	L Sum	$ 750,000	$ 750,000	$ -	$ 750,000	Iowa City Layover Facility Estimate	Iowa City Layover Facility Estimate
	Iowa City Layover Trackage	1		1	L Sum	$ 900,000	$ 900,000	$ -	$ 900,000	Iowa City Layover Facility Estimate	Iowa City Layover Facility Estimate
	Iowa City Layover Civil Site	1		1	L Sum	$ 900,000	$ 900,000	$ -	$ 900,000	Iowa City Layover Facility Estimate	Iowa City Layover Facility Estimate
30.03	**Heavy Maintenance Facility**										
	Not Applicable										
30.04	**Storage or Maintenance-of-Way building/bases**										
	Not Applicable										
30.05	**Yard and yard track**										
	Not Applicable										

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
40	**SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS**										
40.07	Purchase or lease of real estate						$ 700,000	$ 1,470,000	$ 2,170,000		
	Purchase or lease of real estate Subcategory Total						**$ 700,000**	**$ 1,470,000**	**$ 2,170,000**		
40.01	Demolition, clearing, site preparation						$ 425,550	$ 625,425	$ 1,050,975		
40.02	Site utilities, utility relocation						$ 225,000	$ 865,000	$ 1,090,000		
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments						$ 125,000	$ 125,000	$ 250,000		
40.04	Environmental mitigation: wetlands, historic/archeology, parks						$ 250,000	$ 2,950,000	$ 3,200,000		
40.05	Site structures including retaining walls, sound walls						$ 400,000	$ -	$ 400,000	See detailed description below	
40.06	Temporary facilities and other indirect costs during construction						$ -	$ -	$ -		
40.08	Highway/pedestrian overpass/grade separations						$ -	$ -	$ -		
40.09	Relocation of existing households and businesses						$ -	$ -	$ -		
	All other Sitework, ROW, Existing Improvements Subcategory Total						**$ 1,425,550**	**$ 4,565,425**	**$ 5,990,975**		
	Category 40 Contingency					**30%**	**$ 637,700**	**$ 1,810,700**	**$ 2,448,300**		
Total for Category 40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS							**$ 2,763,250**	**$ 7,846,125**	**$ 10,609,275**		
40.07	**Purchase or lease of real estate**					**Total:**	**$ 700,000**	**$ 1,470,000**	**$ 2,170,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Wyanette Connection		7	7	Acre	$ 10,000	$ -	$ 70,000	$ 70,000	Wyanet Connection Cost Estimate	Wyanet Connection Cost Estimate
	Geneseo Station		1	1	L Sum	$ 500,000	$ -	$ 500,000	$ 500,000	Geneseo Station Cost Estimate	Geneseo Station Cost Estimate
	Moline Station		1	1	L Sum	$ 900,000	$ -	$ 900,000	$ 900,000	Moline Station Cost Estimate	Moline Station Cost Estimate
	Iowa City Station	1		1	L Sum	$ 700,000	$ 700,000	$ -	$ 700,000	Iowa City Station Cost Estimate	Iowa City Station Cost Estimate
40.01	**Demolition, clearing, site preparation**					**Total:**	**$ 425,550**	**$ 625,425**	**$ 1,050,975**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Heavy Clearing	5	5	10	Acre	$ 25,000	$ 125,000	$ 125,000	$ 250,000		prior experience
	Light Clearing	25	25	50	Acre	$ 5,000	$ 125,000	$ 125,000	$ 250,000		prior experience
	Iowa City Station Bypass: Turnout Removal	2		2	EA	$ 10,000	$ 20,000	$ -	$ 20,000		prior experience
	Iowa City 1st Street Connection: Track Removal	190		190	TF	$ 25	$ 4,750	$ -	$ 4,750		prior experience
	Iowa City 1st Street Connection: Turnout Removal	2		2	EA	$ 10,000	$ 20,000	$ -	$ 20,000		prior experience
	Iowa City Industrial Complex Siding Extension: Track Removal	2,032		2,032	TF	$ 25	$ 50,800	$ -	$ 50,800		prior experience
	Iowa City Industrial Complex Siding Extension: Turnout Removal	6		6	EA	$ 10,000	$ 60,000	$ -	$ 60,000		prior experience
	Wilton Siding: Turnout Removal	3		3							prior experience
	Walcott Siding Extension: Turnout Removal	2		2	EA	$ 10,000	$ 20,000	$ -	$ 20,000		prior experience
	Missouri Division: Turnout Removal		1	1	EA	$ 10,000	$ -	$ 10,000	$ 10,000		prior experience
	Rock Island Yard: Track Removal		1,918	1,918	TF	$ 25	$ -	$ 47,950	$ 47,950		prior experience
	Rock Island Yard: Turnout Removal		5	5	EA	$ 10,000	$ -	$ 50,000	$ 50,000		prior experience
	Moline Main Track Realignment/2nd Main (MP 178.36-180.44): Track Removal		2,957	2,957	TF	$ 25	$ -	$ 73,925	$ 73,925		prior experience
	Moline Main Track Realignment/2nd Main (MP 178.36-180.44): Turnout Removal		2	2	EA	$ 10,000	$ -	$ 20,000	$ 20,000		prior experience
	Midland Siding: Track Removal		552	552	TF	$ 25	$ -	$ 13,800	$ 13,800		prior experience
	Midland Siding: Turnout Removal		2	2	EA	$ 10,000	$ -	$ 20,000	$ 20,000		prior experience
	Moline 2nd Main (MP 175.34-177.18): Track Removal		1,810	1,810	TF	$ 25	$ -	$ 45,250	$ 45,250		prior experience
	Moline 2nd Main (MP 175.34-177.18): Turnout Removal		2	2	EA	$ 10,000	$ -	$ 20,000	$ 20,000		prior experience
	Sylvis Siding Improvements: Track Removal		980	980	TF	$ 25	$ -	$ 24,500	$ 24,500		prior experience
	Sylvis Siding Improvements: Turnout Removal		3	3	EA	$ 10,000	$ -	$ 30,000	$ 30,000		prior experience
	Atkinson Siding Upgrade: Turnout Removal		2	2	EA	$ 10,000	$ -	$ 20,000	$ 20,000		prior experience
40.02	**Site utilities, utility relocation**					**Total:**	**$ 225,000**	**$ 865,000**	**$ 1,090,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Project Utility Allowance	0.5	0.5	1.0	L Sum	$ 250,000	$ 125,000	$ 125,000	$ 250,000	miscellaneous utility relocations not responsibility of owner.	prior experience
	Geneseo Station Utility Allowance		1.0	1.0	L Sum	$ 125,000	$ -	$ 125,000	$ 125,000	Geneseo Station Cost Estimate	Geneseo Station Cost Estimate
	Moline Station Utility Allowance		1.0	1.0	L Sum	$ 115,000	$ -	$ 115,000	$ 115,000	Moline Station Cost Estimate	Moline Station Cost Estimate
	Iowa City Station Utility Allowance	1.0		1.0	L Sum	$ 100,000	$ 100,000	$ -	$ 100,000	Iowa City Station Cost Estimate	Iowa City Station Cost Estimate
	Eola Yard Utility Allowance		1.0	1.0	L Sum	$ 500,000	$ -	$ 500,000	$ 500,000	Eola Yard Cost Estimate	Eola Yard Cost Estimate
40.03	**Hazardous material, contaminated soil removal/mitigation, ground water treatments**					**Total:**	**$ 125,000**	**$ 125,000**	**$ 250,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Project Hazardous Material Allowance	0.5	0.5	1.0	L Sum	$ 250,000	$ 125,000	$ 125,000	$ 250,000	allowance for work to be determined	prior experience
40.04	**Environmental mitigation: wetlands, historic/archeology, parks**					**Total:**	**$ 250,000**	**$ 2,950,000**	**$ 3,200,000**		

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Project Environmental Mitigation Allowance	0.5	0.5	1.0	L Sum	$ 500,000	$ 250,000	$ 250,000	$ 500,000	allowance for work to be determined	prior experience
	Wyanet Connection Permitting / Mitigation Allowance		1.0	1.0	L Sum	$ 900,000	$ -	$ 900,000	$ 900,000	NEPA-Environmental	NEPA-Environmental
	Eola Yard Permitting / Mitigation Allowance		1.0	1.0	L Sum	$ 1,800,000	$ -	$ 1,800,000	$ 1,800,000	NEPA-Environmental	NEPA-Environmental
40.05	**Site structures including retaining walls, sound walls**					**Total:**	**$ 400,000**	**$ -**	**$ 400,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Iowa City Station Retaining Wall	1.0		1.0	L Sum	$ 400,000	$ 400,000	$ -	$ 400,000	Iowa City Station Cost Estimate	Iowa City Station Cost Estimate
40.06	**Temporary facilities and other indirect costs during construction**										
	Not Applicable										
40.08	**Highway/pedestrian overpass/grade separations**										
	Not Applicable										
40.09	**Relocation of existing households and businesses**										
	Not Applicable										

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
50	**COMMUNICATIONS & SIGNALING**										
50.01	Wayside signaling equipment						$ 13,583,000	$ 28,519,000	$ 42,102,000		
50.02	Signal power access and distribution						$ -	$ -	$ -		
50.03	On-board signaling equipment						$ -	$ -	$ -		
50.04	Traffic control and dispatching systems						$ 3,150,000	$ 1,550,000	$ 4,700,000		
50.05	Communications						$ 1,000,000	$ 1,000,000	$ 2,000,000	See detailed description below	
50.06	Grade crossing protection						$ 11,857,000	$ 11,028,000	$ 22,885,000		
50.07	Hazard detectors (dragging equipment, slide, etc.)						$ -	$ -	$ -		
50.08	Station train approach warning system						$ -	$ -	$ -		
	Category 50 Contingency					**20%**	**$ 5,918,000**	**$ 8,419,400**	**$ 14,337,400**		
Total for Category 50 COMMUNICATIONS & SIGNALING							**$ 35,508,000**	**$ 50,516,400**	**$ 86,024,400**		
50.01	**Wayside signaling equipment**					**Total:**	**$ 13,583,000**	**$ 28,519,000**	**$ 42,102,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Illinois Wayside Signalling		1	1	L Sum	$ 15,359,000	$ -	$ 15,359,000	$ 15,359,000	Signal Cost Estimate	Signal Cost Estimate
	Eola Yard Signalling Improvements		1	1	L Sum	$ 13,160,000	$ -	$ 13,160,000	$ 13,160,000	Eola Yard Cost Estimate	Eola Yard Cost Estimate
	Iowa Wayside Signalling	1		1	L Sum	$ 13,583,000	$ 13,583,000	$ -	$ 13,583,000	Signal Cost Estimate	Signal Cost Estimate
50.02	**Signal power access and distribution**										
	Included in Wayside Signaling Cost										
50.03	**On-board signaling equipment**										
	Not Applicable										
50.04	**Traffic control and dispatching systems**					**Total:**	**$ 3,150,000**	**$ 1,550,000**	**$ 4,700,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Traffic control and dispatching with PTC: Iowa Portion	1		1	L Sum	$ 3,150,000	$ 3,150,000	$ -	$ 3,150,000	Signal Cost Estimate	Signal Cost Estimate
	Traffic control and dispatching with PTC: Illinois Portion		1	1	L Sum	$1,550,000	$ -	$ 1,550,000	$ 1,550,000	Signal Cost Estimate	Signal Cost Estimate
50.05	**Communications**					**Total:**	**$ 1,000,000**	**$ 1,000,000**	**$ 2,000,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Communications: Iowa Portion	1		1	L Sum	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000	Signal Cost Estimate	Signal Cost Estimate
	Communications: Illinois Portion		1	1	L Sum	$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	Signal Cost Estimate	Signal Cost Estimate
50.06	**Grade crossing protection**					**Total:**	**$ 11,857,000**	**$ 11,028,000**	**$ 22,885,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Iowa: Private Residential Crossing Improvement	1		1	each	$ 15,000	$ 15,000	$ -	$ 15,000	Crossing Improvements	prior experience
	Iowa: Private Farm / Industrial Crossing Improvement	22		22	each	$ 20,000	$ 440,000	$ -	$ 440,000	Crossing Improvements	prior experience
	Iowa: Private Farm / Industrial Crossing Improvement - Major Profile Change	1		1	each	$ 30,000	$ 30,000	$ -	$ 30,000	Crossing Improvements	prior experience
	Iowa: Private Farm / Industrial Crossing Improvement - Additional Track	3		3	each	$ 10,000	$ 30,000	$ -	$ 30,000	Crossing Improvements	prior experience
	Iowa: Private Farm / Industrial Crossing Improvement - Add New Track	4		4	each	$ 5,000	$ 20,000	$ -	$ 20,000	Crossing Improvements	prior experience
	Iowa: Local Public Road Improvement	26		26	each	$ 25,000	$ 650,000	$ -	$ 650,000	Crossing Improvements	prior experience
	Iowa: Local Public Road Improvement - Major Profile Change	2		2	each	$ 40,000	$ 80,000	$ -	$ 80,000	Crossing Improvements	prior experience
	Iowa: Local Public Road Improvement - Additional Track	4		4	each	$ 20,000	$ 80,000	$ -	$ 80,000	Crossing Improvements	prior experience
	Iowa: Urban Public Road Improvement	1		1	each	$ 50,000	$ 50,000	$ -	$ 50,000	Crossing Improvements	prior experience
	Iowa: Urban Public Road Improvement - Add New Track	4		4	each	$ 25,000	$ 100,000	$ -	$ 100,000	Crossing Improvements	prior experience
	Iowa: Urban Public Road Improvement - Crossing Surface Replacement Only	3		3	each	$ 25,000	$ 75,000	$ -	$ 75,000	Crossing Improvements	prior experience
	Illinois: Private Residential Crossing Improvement		1	1	each	$ 15,000	$ -	$ 15,000	$ 15,000	Crossing Improvements	prior experience
	Illinois: Private Residential Crossing Improvement - Additional Track		1	1	each	$ 10,000	$ -	$ 10,000	$ 10,000	Crossing Improvements	prior experience
	Illinois: Private Farm / Industrial Crossing Improvement		3	3	each	$ 20,000	$ -	$ 60,000	$ 60,000	Crossing Improvements	prior experience
	Illinois: Private Farm / Industrial Crossing Improvement - Major Profile Change		6	6	each	$ 30,000	$ -	$ 180,000	$ 180,000	Crossing Improvements	prior experience
	Illinois: Local Public Road Improvement		11	11	each	$ 25,000	$ -	$ 275,000	$ 275,000	Crossing Improvements	prior experience
	Illinois: Local Public Road Improvement - Major Profile Change		4	4	each	$ 40,000	$ -	$ 160,000	$ 160,000	Crossing Improvements	prior experience
	Illinois: Local Public Road Improvement - Additional Track		3	3	each	$ 20,000	$ -	$ 60,000	$ 60,000	Crossing Improvements	prior experience
	Illinois: Local Public Road Improvement - Crossing Surface Replacement Only		3	3	each	$ 20,000	$ -	$ 60,000	$ 60,000	Crossing Improvements	prior experience
	Illinois: Local Public Road Improvement - Remove Track from Crossing		1	1	each	$ 5,000	$ -	$ 5,000	$ 5,000	Crossing Improvements	prior experience
	Illinois: Urban Public Road Improvement - Crossing Surface Replacement Only		15	15	each	$ 25,000	$ -	$ 375,000	$ 375,000	Crossing Improvements	prior experience
	Illinois: Urban Public Road Improvement - Remove Track from Crossing		1	1	each	$ 10,000	$ -	$ 10,000	$ 10,000	Crossing Improvements	prior experience
	Illinois: Colona Roadway Improvements		1	1	L Sum	$ 200,000	$ -	$ 200,000	$ 200,000	Crossing Improvements	prior experience
	Illinois: East Moline 7th Street Improvements		1	1	L Sum	$ 100,000	$ -	$ 100,000	$ 100,000	Crossing Improvements	prior experience
	Illinois Grade Crossing Signalization		1	1	L Sum	$ 9,518,000	$ -	$ 9,518,000	$ 9,518,000	Signal Cost Estimate	Signal Cost Estimate

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Iowa Grade Crossing Signalization	1		1	L Sum	$ 10,287,000	$ 10,287,000	$ -	$ 10,287,000	Signal Cost Estimate	Signal Cost Estimate
50.07	**Hazard detectors (dragging equipment, slide, etc.)**										
	Included in Wayside Signaling Cost										
50.08	**Station train approach warning system**										
	Included in Wayside Signaling Cost										

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
60	**ELECTRIC TRACTION**										
60.01	Traction power transmission: High voltage						$ -	$ -	$ -		
60.02	Traction power supply: Substations						$ -	$ -	$ -		
60.03	Traction power distribution: Catenary and third rail						$ -	$ -	$ -	See detailed description below	
60.04	Traction power control						$ -	$ -	$ -		
	Category 60 Contingency					**0%**	**$ -**	**$ -**	**$ -**		
Total for Category 60 ELECTRIC TRACTION							**$ -**	**$ -**	**$ -**		
60.01	**Traction power transmission: High voltage**										
	Not Applicable										
60.02	**Traction power supply: Substations**										
	Not Applicable										
60.03	**Traction power distribution: Catenary and third rail**										
	Not Applicable										
60.04	**Traction power control**										
	Not Applicable										

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
70	**VEHICLES**										
70.00	Vehicle acquisition: Electric locomotive						$ -	$ -	$ -		
70.01	Vehicle acquisition: Non-electric locomotive						$ 4,050,000	$ 10,950,000	$ 15,000,000		
70.02	Vehicle acquisition: Electric multiple unit						$ -	$ -	$ -		
70.03	Vehicle acquisition: Diesel multiple unit						$ -	$ -	$ -		
70.04	Veh acq: Loco-hauled passenger cars w/ ticketed space						$ 5,265,000	$ 14,235,000	$ 19,500,000		
70.05	Veh acq: Loco-hauled passenger cars w/o ticketed space						$ 2,430,000	$ 6,570,000	$ 9,000,000		
70.06	Vehicle acquisition: Maintenance of way vehicles						$ -	$ -	$ -		
70.07	Vehicle acquisition: Non-railroad support vehicles						$ -	$ -	$ -		
	Vehicle Acquisition Subcategory Total						**$ 11,745,000**	**$ 31,755,000**	**$ 43,500,000**		
70.08	Vehicle refurbishment: Electric locomotive						$ -	$ -	$ -	See detailed description below	
70.09	Vehicle refurbishment: Non-electric locomotive						$ -	$ -	$ -		
70.10	Vehicle refurbishment: Electric multiple unit						$ -	$ -	$ -		
70.11	Vehicle refurbishment: Diesel multiple unit						$ -	$ -	$ -		
70.12	Veh refurb: Loco-hauled passenger cars w/ ticketed space						$ -	$ -	$ -		
70.13	Veh refurb: Loco-hauled passenger cars w/o ticketed space						$ -	$ -	$ -		
70.14	Vehicle refurbishment: Maintenance of way vehicles						$ -	$ -	$ -		
70.15	Spare parts						$ 1,174,500	$ 3,175,500	$ 4,350,000		
	Vehicle Refurbishment Subcategory Total						**$ 1,174,500**	**$ 3,175,500**	**$ 4,350,000**		
	Category 70 Contingency					**30%**	**$ 3,875,900**	**$ 10,479,200**	**$ 14,355,000**		
Total for Category 70 VEHICLES							**$ 16,795,400**	**$ 45,409,700**	**$ 62,205,000**		
70	**Vehicle acquisition: Electric locomotive**									**Per MOU - IL 73%, IA 27% split of costs for Rolling Stock**	
	Not Applicable										
70.01	**Vehicle acquisition: Non-electric locomotive**					**Total:**	**$ 4,050,000**	**$ 10,950,000**	**$ 15,000,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Passenger Locomotive	27%	73%	3	each	$ 5,000,000	$ 4,050,000	$ 10,950,000	$ 15,000,000		experience with Metra North Railroad, Amtrak, and CSX
70.02	**Vehicle acquisition: Electric multiple unit**										
	Not Applicable										
70.03	**Vehicle acquisition: Diesel multiple unit**										
	Not Applicable										
70.04	**Veh acq: Loco-hauled passenger cars w/ ticketed space**					**Total:**	**$ 5,265,000**	**$ 14,235,000**	**$ 19,500,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Coach Car	27%	73%	6	each	$ 2,000,000	$ 3,240,000	$ 8,760,000	$ 12,000,000		experience with Metra North Railroad, Amtrak, and CSX
	Coach/Cab Car	27%	73%	3	each	$ 2,500,000	$ 2,025,000	$ 5,475,000	$ 7,500,000		experience with Metra North Railroad, Amtrak, and CSX
70.05	**Veh acq: Loco-hauled passenger cars w/o ticketed space**					**Total:**	**$ 2,430,000**	**$ 6,570,000**	**$ 9,000,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Snack Car	27%	73%	3	each	$ 3,000,000	$ 2,430,000	$ 6,570,000	$ 9,000,000		experience with Metra North Railroad, Amtrak, and CSX
70.06	**Vehicle acquisition: Maintenance of way vehicles**										
	Not Applicable										
70.07	**Vehicle acquisition: Non-railroad support vehicles**										
	Not Applicable										
70.08	**Vehicle refurbishment: Electric locomotive**										
	Not Applicable										
70.09	**Vehicle refurbishment: Non-electric locomotive**										
	Not Applicable										
70.1	**Vehicle refurbishment: Electric multiple unit**										

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Not Applicable										
70.11	**Vehicle refurbishment: Diesel multiple unit**										
	Not Applicable										
70.12	**Veh refurb: Loco-hauled passenger cars w/ ticketed space**										
	Not Applicable										
70.13	**Veh refurb: Loco-hauled passenger cars w/o ticketed space**										
	Not Applicable										
70.14	**Vehicle refurbishment: Maintenance of way vehicles**										
	Not Applicable										
70.15	**Spare parts**					**Total:**	**$ 1,174,500**	**$ 3,175,500**	**$ 4,350,000**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Spare Parts Allowance	27%	73%	1	LS	$ 4,350,000	$ 1,174,500	$ 3,175,500	$ 4,350,000		experience with Metra North Railroad, Amtrak, and CSX

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
80	**PROFESSIONAL SERVICES**										
80.01	Service Development Plan/Service Environmental						$ -	$ -	$ -		
	Service Development Plan/Service Environmental Subcategory Total						**$ -**	**$ -**	**$ -**		
80.02	Preliminary Engineering/Project Environmental						$ 1,776,700	$ 3,186,100	$ 4,962,800		
	Preliminary Engineering/Project Environmental Subcategory Total						**$ 1,776,700**	**$ 3,186,100**	**$ 4,962,800**		
80.03	Final Design						$ 4,951,800	$ 7,245,100	$ 12,196,900		
	Final Design Subcategory Total						**$ 4,951,800**	**$ 7,245,100**	**$ 12,196,900**		
80.04	Project management for design and construction						$ 1,872,100	$ 3,897,500	$ 5,769,600		
80.05	Construction administation & management						$ 1,309,800	$ 2,609,900	$ 3,919,700	See detailed description below	
80.06	Professional liability and other non-construction insurance						$ -	$ -	$ -		
80.07	Legal; Permits; Review Fees by other agencies, cities, etc.						$ -	$ -	$ -		
80.08	Surveys, testing, investigation						$ -	$ -	$ -		
80.09	Engineering inspection						$ -	$ -	$ -		
80.10	Start up						$ -	$ -	$ -		
	All Other Professional Services Subcategory Total						**$ 3,181,900**	**$ 6,507,400**	**$ 9,689,300**		
	Category 80 Contingency					**5%**	**$ 495,600**	**$ 847,000**	**$ 1,342,500**		
Total for Category 80 PROFESSIONAL SERVICES							**$ 10,406,000**	**$ 17,785,600**	**$ 28,191,500**		
80.01	**Service Development Plan/Service Environmental**										
	Not Applicable										
80.02	**Preliminary Engineering/Project Environmental**					**Total:**	**$ 1,776,700**	**$ 3,186,100**	**$ 4,962,800**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Preliminary Engineering (Rail)	2%	2%	2%	L Sum	$ 1,766,900	$ 573,100	$ 1,193,800	$ 1,766,900		typical industry averages based on a percentage of total construction costs
	Preliminary Engineering (Stations)	4%	4%	4%	L Sum	$ 385,900	$ 163,600	$ 222,300	$ 385,900		typical industry averages based on a percentage of total construction costs
	Operations Planning	0.5	0.5	1	L Sum	$ 1,000,000	$ 500,000	$ 500,000	$ 1,000,000		typical industry averages based on a percentage of total construction costs
	Tier 2 NEPA: Illinois Track		1	1	L Sum	$ 140,000	$ -	$ 140,000	$ 140,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Iowa Track	1		1	L Sum	$ 160,000	$ 160,000	$ -	$ 160,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Geneseo Station		1	1	L Sum	$ 150,000	$ -	$ 150,000	$ 150,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Iowa City Station	1		1	L Sum	$ 200,000	$ 200,000	$ -	$ 200,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Moline Station		1	1	L Sum	$ 100,000	$ -	$ 100,000	$ 100,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Iowa City Layover	1		1	L Sum	$ 180,000	$ 180,000	$ -	$ 180,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Colona Junction		1	1	L Sum	$ 30,000	$ -	$ 30,000	$ 30,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Rock Island Yard		1	1	L Sum	$ 150,000	$ -	$ 150,000	$ 150,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Wyanet Connection		1	1	L Sum	$ 200,000	$ -	$ 200,000	$ 200,000	NEPA-Environmental	NEPA-Environmental
	Tier 2 NEPA: Eola Yard		1	1	L Sum	$ 500,000	$ -	$ 500,000	$ 500,000	NEPA-Environmental	NEPA-Environmental
80.03	**Final Design**					**Total:**	**$ 4,951,800**	**$ 7,245,100**	**$ 12,196,900**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Final Design (Rail)	4%	4%	4%	L Sum	$ 3,533,900	$ 1,146,200	$ 2,387,700	$ 3,533,900		typical industry averages based on a percentage of total construction costs
	Final Design (Stations)	6%	6%	6%	L Sum	$ 578,800	$ 245,400	$ 333,400	$ 578,800		typical industry averages based on a percentage of total construction costs
	Iowa Wayside Signal Design	1		1	L Sum	$ 781,000	$ 781,000	$ -	$ 781,000	Signal Cost Estimate	Signal Cost Estimate
	Illinois Wayside Signal Design		1	1	L Sum	$ 954,000	$ -	$ 954,000	$ 954,000	Signal Cost Estimate	Signal Cost Estimate
	Eola Yard Signal Improvements Design		1	1	L Sum	$ 840,000	$ -	$ 840,000	$ 840,000	Signal Cost Estimate	Signal Cost Estimate
	Iowa Crossing Signal Design	1		1	L Sum	$ 479,200	$ 479,200	$ -	$ 479,200	Signal Cost Estimate	Signal Cost Estimate
	Illinois Crossing Signal Design		1	1	L Sum	$ 430,000	$ -	$ 430,000	$ 430,000	Signal Cost Estimate	Signal Cost Estimate
	PTC / Traffic Control Design	0.5	0.5	1	L Sum	$ 4,000,000	$ 2,000,000	$ 2,000,000	$ 4,000,000	Signal Cost Estimate	Signal Cost Estimate
	Communications System Design	0.5	0.5	1	L Sum	$ 600,000	$ 300,000	$ 300,000	$ 600,000	Signal Cost Estimate	Signal Cost Estimate
80.04	**Project management for design and construction**					**Total:**	**$ 1,872,100**	**$ 3,897,500**	**$ 5,769,600**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		

Cat.	Description	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost	Detailed Description	Unit Cost Documentation
	Project Management (Rail)	5%	5%	5%	L Sum	$ 4,417,300	$ 1,432,700	$ 2,984,600	$ 4,417,300		typical industry averages based on a percentage of total construction costs
	Project Management (Stations)	5%	5%	5%	L Sum	$ 482,300	$ 204,500	$ 277,800	$ 482,300		typical industry averages based on a percentage of total construction costs
	Project Management (Vehicles)	2%	2%	2%	L Sum	$ 870,000	$ 234,900	$ 635,100	$ 870,000	27% Iowa, 73% Illinois - 2% of Vehicle Acquisition Subtotal	27% Iowa, 73% Illinois - 2% of Vehicle Acquisition Subtotal
80.05	**Construction administation & management**					**Total:**	**$ 1,309,800**	**$ 2,609,900**	**$ 3,919,700**		
	Item	IA QTY	IL QTY	Total QTY	UOM	Unit Cost	IA Cost	IL Cost	Total Cost		
	Construction Management (Rail)	4%	4%	4%	L Sum	$ 3,533,900	$ 1,146,200	$ 2,387,700	$ 3,533,900		typical industry averages based on a percentage of total construction costs
	Construction Management (Stations)	4%	4%	4%	L Sum	$ 385,800	$ 163,600	$ 222,200	$ 385,800		typical industry averages based on a percentage of total construction costs
80.06	**Professional liability and other non-construction insurance**										
	Included in other items										
80.07	**Legal; Permits; Review Fees by other agencies, cities, etc.**										
	Included in other items										
80.08	**Surveys, testing, investigation**										
	Included in other items										
80.09	**Engineering inspection**										
	Included in other items										
80.10	**Start up**										
	Included in other items										

Total NEPA Tier 2 Projects (2011$)	Train Sets	Construction	NEPA	Prelim Design	Final Design	PM/CM	5% Contigency	Total	Ia DOT	Ill DOT	Iowa City Station	Moline Station	Geneseo Station	Total
Illinois Track Improvements	$ -	$ 41,212,140	$ 146,680	$ 1,149,880	$ 1,702,780	$ 2,817,890	$ 2,475,230	$ 49,504,600		$ 49,504,600				$ 49,504,600
Iowa Track Improvements	$ -	$ 37,589,600	$ 167,580	$ 1,054,500	$ 1,563,510	$ 2,388,585	$ 2,250,725	$ 45,014,500	$ 45,014,500					$ 45,014,500
Illinois Train Control & Comms	$ -	$ 21,437,035	$ -	$ -	$ 3,408,125	$ -	$ 1,307,640	$ 26,152,800		$ 26,152,800				$ 26,152,800
Iowa Train Control & Comms	$ -	$ 21,226,420	$ -	$ -	$ 3,227,055	$ -	$ 1,287,025	$ 25,740,500	$ 25,740,500					$ 25,740,500
Geneseo, Illinois, Station	$ -	$ 2,196,685	$ 157,130	$ 92,245	$ 138,415	$ 207,575	$ 146,950	$ 2,939,000					$ 2,939,000	$ 2,939,000
Iowa City, Iowa, Station	$ -	$ 4,080,345	$ 209,475	$ 171,380	$ 257,070	$ 385,605	$ 268,625	$ 5,372,500			$ 5,372,500			$ 5,372,500
Moline, Illinois, Station	$ -	$ 3,345,615	$ 104,785	$ 140,505	$ 210,710	$ 316,160	$ 216,725	$ 4,334,500				$ 4,334,500		$ 4,334,500
Iowa City, Iowa, Layover Facility	$ -	$ 3,306,760	$ 188,575	$ 69,445	$ 138,890	$ 312,455	$ 211,375	$ 4,227,500	$ 4,227,500					$ 4,227,500
Colona, Illinois, Improvements	$ -	$ 1,915,200	$ 31,445	$ 40,185	$ 80,465	$ 181,070	$ 118,335	$ 2,366,700		$ 2,366,700				$ 2,366,700
Rock Island, Illinois, Yard Bypass	$ -	$ 3,564,115	$ 157,130	$ 74,765	$ 149,720	$ 336,870	$ 225,400	$ 4,508,000		$ 4,508,000				$ 4,508,000
Wyanet Connection	$ -	$ 9,876,295	$ 209,475	$ 207,385	$ 414,770	$ 933,280	$ 612,695	$ 12,253,900		$ 12,253,900				$ 12,253,900
Eola Yard Improvements	$ -	$ 30,120,130	$ 523,735	$ 301,720	$ 1,483,235	$ 1,357,645	$ 1,778,235	$ 35,564,700		$ 35,564,700				$ 35,564,700
Train Sets	$ 62,049,535	$ -	$ -	$ -	$ -	$ 911,216	$ 3,313,724	$ 66,274,475	$ 17,894,108	$ 48,380,367				$ 66,274,475
Total (2011 $): (rounded)	$ 62,049,535	$ 179,870,340	$ 1,896,010	$ 3,302,010	$ 12,774,745	$ 10,148,351	$ 14,212,684	$ 284,253,675	**$ 92,880,000**	**$ 178,730,000**	**$ 5,370,000**	**$ 4,330,000**	**$ 2,940,000**	**$ 284,250,000**
20% Cost Share (2011$) (rounded)									**$ 18,576,000**	**$ 35,746,000**	**$ 1,074,000**	**$ 866,000**	**$ 588,000**	**$ 56,850,000**
80% Funded (2011$) (rounded)									**$ 74,304,000**	**$ 142,984,000**	**$ 4,296,000**	**$ 3,464,000**	**$ 2,352,000**	**$ 227,400,000**
Total NEPA Tier 2 Projects (YOE)														
Illinois Track Improvements	$ -	$ 47,029,898	$ 146,680	$ 1,149,880	$ 1,859,478	$ 3,215,681	$ 2,810,611	$ 56,212,228		$ 56,210,000				$ 56,210,000
Iowa Track Improvements	$ -	$ 42,895,978	$ 167,580	$ 1,054,500	$ 1,707,392	$ 2,725,772	$ 2,555,327	$ 51,106,550	$ 51,110,000					$ 51,110,000
Illinois Train Control & Comms	$ -	$ 24,463,218	$ -	$ -	$ 3,721,758	$ -	$ 1,483,420	$ 29,668,396		$ 29,670,000				$ 29,670,000
Iowa Train Control & Comms	$ -	$ 24,222,871	$ -	$ -	$ 3,524,025	$ -	$ 1,460,363	$ 29,207,259	$ 29,210,000					$ 29,210,000
Geneseo, Illinois, Station	$ -	$ 2,398,835	$ 157,130	$ 92,245	$ 144,644	$ 226,677	$ 158,923	$ 3,178,453					$ 3,180,000	$ 3,180,000
Iowa City, Iowa, Station	$ -	$ 4,455,839	$ 209,475	$ 171,380	$ 268,638	$ 421,090	$ 290,864	$ 5,817,287			$ 5,820,000			$ 5,820,000
Moline, Illinois, Station	$ -	$ 3,653,495	$ 104,785	$ 140,505	$ 220,192	$ 345,255	$ 234,960	$ 4,699,191				$ 4,700,000		$ 4,700,000
Iowa City, Iowa, Layover Facility	$ -	$ 3,611,065	$ 188,575	$ 69,445	$ 145,140	$ 341,209	$ 229,233	$ 4,584,667	$ 4,580,000					$ 4,580,000
Colona, Illinois, Improvements	$ -	$ 2,091,446	$ 31,445	$ 40,185	$ 84,086	$ 197,733	$ 128,679	$ 2,573,574		$ 2,570,000				$ 2,570,000
Rock Island, Illinois, Yard Bypass	$ -	$ 3,892,103	$ 157,130	$ 74,765	$ 156,457	$ 367,870	$ 244,649	$ 4,892,974		$ 4,890,000				$ 4,890,000
Wyanet Connection	$ -	$ 10,785,161	$ 209,475	$ 207,385	$ 433,435	$ 1,019,165	$ 666,033	$ 13,320,653		$ 13,320,000				$ 13,320,000
Eola Yard Improvements	$ -	$ 32,891,935	$ 523,735	$ 301,720	$ 1,549,981	$ 1,482,582	$ 1,934,208	$ 38,684,161		$ 38,680,000				$ 38,680,000
Train Sets	$ 62,049,535	$ -	$ -	$ -	$ -	$ 974,589	$ 3,544,186	$ 66,568,310	$ 17,970,000	$ 48,590,000				$ 66,560,000
Total (YOE $): (Rounded)	$ 62,049,535	$ 202,391,844	$ 1,896,010	$ 3,302,010	$ 13,815,225	$ 11,317,624	$ 15,741,456	$ 310,513,704	**$ 102,870,000**	**$ 193,930,000**	**$ 5,820,000**	**$ 4,700,000**	**$ 3,180,000**	**$ 310,500,000**
20% Cost Share (YOE$) (rounded)									**$ 20,574,000**	**$ 38,786,000**	**$ 1,164,000**	**$ 940,000**	**$ 636,000**	**$ 62,100,000**
80% Funded (YOE$) (rounded)									**$ 82,296,000**	**$ 155,144,000**	**$ 4,656,000**	**$ 3,760,000**	**$ 2,544,000**	**$ 248,400,000**

IOWA DOT Bid Tabs

ENGLISH Units of Measurement

August 2009 thru July 2010

Total Cost	Item Code	Bid Item Description	Unit Price in Dollars Low	High	Avg.	Total Quantity	
-DOLLARS-							
1,027,966.78	2101-0850001	CLEARING AND GRUBBING	200.00	100,000.00	2,311.20	444.777	ACRE
936,932.80	2101-0850002	CLEARING AND GRUBBING	2.50	750.00	12.05	77,723.590	UNIT
4,400.00	2101-1001000	REMOVAL OF FLOOD DEBRIS	1,900.00	2,500.00	2,200.00	2.000	LS
33,692.56	2102-0425046	SELECTED BACKFILL	2.70	35.00	8.12	4,148.000	CY
6,714,582.00	2102-0425070	SPECIAL BACKFILL	7.50	60.00	11.97	560,903.470	TON
289,218.34	2102-0425071	SPECIAL BACKFILL	22.50	100.00	36.86	7,846.900	CY
350.00	2102-0425220	SPECIAL BACKFILL MATERIAL, PLACE ONLY	25.00	25.00	25.00	14.000	CY
1,127,798.67	2102-2625000	EMBANKMENT-IN-PLACE	2.99	66.34	8.35	134,987.440	CY
11,938,562.68	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	1.25	500.00	4.04	2957052.070	CY
36,527.30	2102-2710080	EXCAVATION, CLASS 10, UNSUITABLE OR UNSTABLE MATERIAL	2.25	33.00	7.31	4,998.000	CY
333,684.85	2102-2710090	EXCAVATION, CLASS 10, WASTE	2.00	15.80	7.26	45,941.000	CY
101,502.80	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	3.00	350.00	30.38	3,341.000	CY
138,485.00	2102-2712070	EXCAVATION, CLASS 12, ROADWAY AND BORROW	2.25	50.00	3.48	39,750.000	CY
1,834,122.80	2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW	1.49	38.33	5.85	313,445.910	CY
1,693,334.87	2102-2713090	EXCAVATION, CLASS 13, WASTE	4.00	123.00	7.08	239,118.220	CY
140,272.00	2102-4560000	LOCATING TILE LINES	50.00	1,000.00	114.11	1,229.300	STA

2102-6336000 PRESPLITTING OF ROCK CUTS 1,789.600 SY
19,685.60 11.00 11.00 11.00

2104-2710020 EXCAVATION, CLASS 10, CHANNEL 159,344.480 CY
699,935.76 1.49 52.80 4.39

2104-2712020 EXCAVATION, CLASS 12, CHANNEL 289.000 CY
4,267.00 5.50 16.00 14.76

2104-2713020 EXCAVATION, CLASS 13, CHANNEL 6,874.200 CY
62,873.33 2.25 12.48 9.15

2105-8425005 TOPSOIL, FURNISH AND SPREAD 57,275.900 CY
881,254.68 6.00 200.00 15.39

2105-8425011 TOPSOIL, SPREAD 10,613.200 CY
40,408.40 3.00 27.00 3.81

2105-8425015 TOPSOIL, STRIP, SALVAGE AND SPREAD 441,287.200 CY
1,804,740.42 2.20 76.50 4.09

2105-8425020 TOPSOIL, STRIP AND STOCKPILE 28,405.000 CY
82,152.75 2.00 7.10 2.89

2107-0425020 COMPACTING BACKFILL ADJACENT TO BRIDGES, 2,878.300 CY
20,587.40 4.20 38.00 7.15
CULVERTS OR STRUCTURES

2107-0875000 COMPACTION WITH MOISTURE AND DENSITY 83,386.000 CY
125,381.62 0.01 22.00 1.50
CONTROL

2107-0875100 COMPACTION WITH MOISTURE CONTROL 444,593.000 CY
334,078.88 0.25 3.00 0.75

2107-3825025 GRANULAR MATERIAL FOR BLANKET AND 2,585.700 CY
71,636.28 18.85 45.00 27.70
SUBDRAIN

2108-5025000 OVERHAUL 5045969.140 ST-Y
123,599.87 0.01 0.15 0.02

2109-8225100 SPECIAL COMPACTION OF SUBGRADE 790.120 STA
322,843.45 80.00 1,535.00 408.60

2110-3825010 GRANULAR MATERIAL 1,000.590 TON
20,466.06 7.00 35.00 20.45

2110-8200000 CONSTRUCTION OF SOIL AGGREGATE SUBBASE 11.310 MILE
67,170.00 5,000.00 7,000.00 5,938.99

2111-8174100 GRANULAR SUBBASE 670,319.700 SY
3,879,134.41 1.90 28.00 5.79

2111-8174200 GRANULAR SUBBASE, PLACE ONLY 92,153.000 SY
80,220.88 0.61 3.00 0.87

2112-0000100 WICK DRAIN 14,192.000 LF
31,932.00 2.25 2.25 2.25

2113-0001000 SUBGRADE STABILIZATION MATERIAL, 35.000 SY
350.00 10.00 10.00 10.00

2113-0001100 SUBGRADE STABILIZATION MATERIAL, POLYMER 394,146.950 SY
698,738.77 1.42 15.00 1.77
GRID

2115-0100000 MODIFIED SUBBASE 315,315.783 CY
8,017,349.79 17.00 283.00 25.43

2115-0100200 MODIFIED SUBBASE, PLACE ONLY 26,313.880 CY
92,668.74 1.50 6.02 3.52

2116-0000210 ASPHALT STABILIZING AGENT 242.840 TON
149,346.60 615.00 615.00 615.00

2121-7425010 GRANULAR SHOULDERS, TYPE A 168,425.900 TON
2,804,008.35 7.00 52.00 16.65

2121-7425020 GRANULAR SHOULDERS, TYPE B 464,686.880 TON
8,925,503.44 8.06 93.50 19.21

2121-7425021 GRANULAR SHOULDERS, TYPE B, AS PER PLAN 16.400 STA
7,568.20 228.00 775.00 461.48

2121-8450810 TRENCHING AND RESHAPING 445.560 STA
50,813.61 100.00 1,000.00 114.04

2122-5190007 PAVED SHOULDER, P.C. CONCRETE, 7 IN. 3,594.000 SY
277,898.85 40.00 175.00 77.32

2122-5190008 PAVED SHOULDER, P.C. CONCRETE, 8 IN. 28,455.500 SY
637,464.49 20.75 63.00 22.40

2122-5190009 PAVED SHOULDER, P.C. CONCRETE, 9 IN. 351.400 SY
14,758.80 42.00 42.00 42.00

2122-5190010 PAVED SHOULDER, P.C. CONCRETE, 10 IN. 66.600 SY
4,781.88 71.80 71.80 71.80

2122-5190012 PAVED SHOULDER, P.C. CONCRETE, 12 IN. 976.000 SY
102,814.00 60.00 123.22 105.34

2122-5190110 PAVED SHOULDER, P.C. CONCRETE, 11 IN. 1,242.000 SY
64,584.00 52.00 52.00 52.00

2122-5190501 PAVED SHOULDER, PORTLAND CEMENT CONCRETE 2,804.090 SY
297,655.46 46.37 370.00 106.15
(PAVED SHOULDER PANEL FOR BRIDGE END DR
AIN)

2122-5191003 REINFORCED PAVED SHOULDER (RE-44J) 8,535.000 SY
663,030.00 75.00 90.00 77.68

2122-5191004 REINFORCED PAVED SHOULDER 57.900 SY
16,291.20 191.00 298.00 281.37

2122-5500060 PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 324,565.350 SY
7,840,206.96 9.70 150.00 24.16
6 IN.

2122-5500080 PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 82,202.510 SY
2,662,390.11 26.43 100.00 32.39
8 IN.

2122-5500090 PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 100.000 SY

13,490.00 134.90 134.90 134.90
9 IN.

2122-5500100 PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 550.000 SY
23,375.00 42.50 42.50 42.50
10 IN.

2122-5500120 PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 4,897.600 SY
251,421.45 45.00 68.25 51.34
12 IN.

2122-7450080 SHOULDER STRENGTHENING, OPTIONAL HOT MIX 5,118.920 SY
269,587.72 45.00 80.00 52.66
ASPHALT MIXTURE OR PORTLAND CEMENT CONC
RETE, 8 IN.

2123-7450000 SHOULDER CONSTRUCTION, EARTH 10,425.280 STA
1,435,325.03 39.03 892.50 137.68

2123-7450020 SHOULDER FINISHING, EARTH 7,701.970 STA
1,009,034.98 24.00 825.00 131.01

2125-2225050 RESHAPING DITCHES 158.900 STA
43,170.00 150.00 900.00 271.68

2126-8275058 RECLAIMING PRESENT SURFACING MATERIAL 1,810.000 CY
9,596.00 3.60 6.50 5.30

2126-8300200 RECLAIM AND STOCKPILE PRESENT SURFACING 3,043.000 CY
80,943.80 26.60 26.60 26.60
MATERIAL

2127-6725020 RECONSTRUCTION OF ROADBED 264.000 STA
41,210.40 156.10 156.10 156.10

2128-0000200 CONTRACTOR STOCKPILED SHOULDER MATERIAL 18,880.000 TON
143,557.00 1.83 16.00 7.60

2201-0505050 BASE, STANDARD OR SLIP FORM P.C. 287.000 SY
7,031.50 24.50 24.50 24.50
CONCRETE, 5 IN.

2201-0505060 BASE, STANDARD OR SLIP FORM P.C. 358.500 SY
14,293.40 39.87 39.87 39.87
CONCRETE, 6 IN.

2201-0505090 BASE, STANDARD OR SLIP FORM P.C. 7,503.000 SY
325,045.50 40.50 43.50 43.32
CONCRETE, 9 IN.

2210-0475105 CHOKE STONE BASE 9,816.000 TON
156,091.07 7.07 17.87 15.90

2210-0475115 GRADED STONE BASE 1,370.000 TON
13,700.00 10.00 10.00 10.00

2210-0475290 MACADAM STONE BASE 10,625.180 TON
192,803.03 7.95 32.00 18.15

2212-0475095 CLEANING AND PREPARATION OF BASE 357.483 MILE
396,815.54 100.00 58,586.30 1,110.03

2212-5070310 PATCHES, FULL-DEPTH REPAIR 73,463.860 SY

5,978,165.53 34.00 320.00 81.38

2212-5070320 PATCHES, PARTIAL-DEPTH REPAIR 24,801.400 SY
791,523.84 7.75 236.25 31.91

2212-5070330 PATCHES BY COUNT (REPAIR) 3,734.000 EACH
538,041.13 32.55 1,700.00 144.09

2212-5075000 SURFACE PATCHES 100.000 TON
33,510.00 170.00 434.50 335.10

2212-5075001 HOT MIX ASPHALT SURFACE PATCHES 1,474.550 TON
311,985.19 50.00 1,000.00 211.58

2213-2713300 EXCAVATION, CLASS 13, FOR WIDENING 109,793.130 CY
1,434,346.90 3.25 105.00 13.06

2213-6745500 REMOVAL OF CURB 875.096 STA
219,119.31 8.40 12,000.00 250.39

2213-6745700 REMOVAL OF FLUMES 5.000 EACH
5,010.00 997.50 1,020.00 1,002.00

2213-7100400 RELOCATION OF MAIL BOXES 346.000 EACH
38,394.30 50.00 365.00 110.97

2213-8200000 BASE WIDENING, HOT MIX ASPHALT MIXTURE 66,839.940 TON
1,995,355.23 20.25 130.00 29.85

2213-8201030 BASE WIDENING, 3 IN. HOT MIX ASPHALT 112.700 SY
1,771.64 15.72 15.72 15.72
MIXTURE

2213-8201040 BASE WIDENING, 4 IN. HOT MIX ASPHALT 613.000 SY
16,252.00 24.40 40.00 26.51
MIXTURE

2213-8201045 BASE WIDENING, 4.5 IN. HOT MIX ASPHALT 647.700 SY
15,285.72 23.60 23.60 23.60
MIXTURE

2213-8201055 BASE WIDENING, 5.5 IN. HOT MIX ASPHALT 960.000 SY
38,400.00 40.00 40.00 40.00
MIXTURE

2213-8201060 BASE WIDENING, 6 IN. HOT MIX ASPHALT 3,161.210 SY
130,068.70 33.20 42.00 41.15
MIXTURE

2213-8201080 BASE WIDENING, 8 IN. HOT MIX ASPHALT 14,697.000 SY
632,660.00 41.00 54.00 43.05
MIXTURE

2213-8202080 BASE WIDENING, 8 IN. PORTLAND CEMENT 979.000 SY
41,251.00 40.00 43.00 42.14
CONCRETE

2213-8202090 BASE WIDENING, 9 IN. PORTLAND CEMENT 9,225.000 SY
415,789.20 43.60 50.80 45.07
CONCRETE

2214-5145150 PAVEMENT SCARIFICATION 1414852.552 SY
3,083,651.19 0.31 119.00 2.18

2214-5145160 PAVEMENT SCARIFICATION 109,256.520 TON
750,925.14 5.43 262.50 6.87

2214-7450050 BLADING AND SHAPING SHOULDER MATERIAL 5,011.980 STA
184,870.16 5.00 840.50 36.89

2216-0994000 CRACKING AND SEATING OF P.C.C. PAVEMENT 113,265.770 SY
35,856.00 0.16 2.42 0.32

2217-1000000 RUBBLIZED PAVEMENT 104,325.000 SY
106,243.25 0.90 1.15 1.02

2301-0685550 BRIDGE APPROACH PAVEMENT, AS PER PLAN 7,620.260 SY
1,095,798.55 46.00 300.00 143.80

2301-0690180 BRIDGE APPROACH, RK-18 1,387.260 SY
154,307.00 69.70 130.00 111.23

2301-0690190 BRIDGE APPROACH, RK-19 6,645.940 SY
834,192.63 60.00 154.50 125.52

2301-0690200 BRIDGE APPROACH, RK-20 26,150.120 SY
3,815,341.96 110.00 200.00 145.90

2301-0690250 BRIDGE APPROACH, RK-25 4,230.600 SY
590,592.76 85.00 325.00 139.60

2301-0690260 BRIDGE APPROACH, RK-26 2,813.540 SY
412,706.60 110.00 210.00 146.69

2301-1003080 STANDARD OR SLIP-FORM PORTLAND CEMENT 5,473.000 SY
194,838.80 35.60 35.60 35.60
CONCRETE PAVEMENT, QM-C, CLASS 3
DURABILY, 8 IN.

2301-1003100 STANDARD OR SLIP-FORM PORTLAND CEMENT 520,379.000 SY
13,265,121.50 25.00 26.50 25.49
CONCRETE PAVEMENT, QM-C, CLASS 3
DURABILY, 10 IN.

2301-1004110 STANDARD OR SLIP-FORM PORTLAND CEMENT 78,858.000 SY
2,838,888.00 36.00 36.00 36.00
CONCRETE PAVEMENT, QM-C, CLASS 3I
DURABITY, 11 IN.

2301-1004120 STANDARD OR SLIP-FORM PORTLAND CEMENT 265,530.500 SY
8,754,540.59 32.97 32.97 32.97
CONCRETE PAVEMENT, QM-C, CLASS 3I
DURABITY, 12 IN.

2301-1012090 STANDARD OR SLIP FORM PORTLAND CEMENT 571.300 SY
38,848.40 68.00 68.00 68.00
CONCRETE PAVEMENT, CLASS A, CLASS 2
DURALITY, 9 IN.

2301-1013080 STANDARD OR SLIP FORM PORTLAND CEMENT 3,041.700 SY
129,424.34 42.55 42.55 42.55
CONCRETE PAVEMENT, CLASS A, CLASS 3
DURALITY, 8 IN.

2301-1032000 STANDARD OR SLIP FORM PORTLAND CEMENT 16,879.000 SY
426,363.54 25.26 25.26 25.26

CONCRETE PAVEMENT, CLASS C, CLASS 2
DURALITY, VARIABLE THICKNESS

2301-1032060 STANDARD OR SLIP FORM PORTLAND CEMENT 1,742.000 SY
51,389.00 29.50 29.50 29.50
CONCRETE PAVEMENT, CLASS C, CLASS 2
DURALITY, 6 IN.

2301-1032070 STANDARD OR SLIP FORM PORTLAND CEMENT 4,865.000 SY
179,657.10 34.00 40.50 36.93
CONCRETE PAVEMENT, CLASS C, CLASS 2
DURALITY, 7 IN.

2301-1032080 STANDARD OR SLIP FORM PORTLAND CEMENT 36,153.400 SY
1,440,408.77 23.79 89.00 39.84
CONCRETE PAVEMENT, CLASS C, CLASS 2
DURALITY, 8 IN.

2301-1032090 STANDARD OR SLIP FORM PORTLAND CEMENT 92,411.530 SY
2,207,841.98 22.79 64.00 23.89
CONCRETE PAVEMENT, CLASS C, CLASS 2
DURALITY, 9 IN.

2301-1032100 STANDARD OR SLIP FORM PORTLAND CEMENT 13,455.300 SY
499,828.83 25.47 114.00 37.15
CONCRETE PAVEMENT, CLASS C, CLASS 2
DURALITY, 10 IN.

2301-1033000 STANDARD OR SLIP FORM PORTLAND CEMENT 46,730.660 SY
1,026,599.17 20.80 22.54 21.97
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, VARIABLE THICKNESS

2301-1033060 STANDARD OR SLIP FORM PORTLAND CEMENT 15,665.000 SY
509,987.24 27.87 35.00 32.56
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 6 IN.

2301-1033070 STANDARD OR SLIP FORM PORTLAND CEMENT 34,810.440 SY
1,134,348.44 20.00 60.00 32.59
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 7 IN.

2301-1033080 STANDARD OR SLIP FORM PORTLAND CEMENT 165,634.450 SY
6,002,341.24 27.33 80.00 36.24
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 8 IN.

2301-1033085 STANDARD OR SLIP FORM PORTLAND CEMENT 13,997.150 SY
509,762.78 28.50 45.00 36.42
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 8.5 IN.

2301-1033090 STANDARD OR SLIP FORM PORTLAND CEMENT 92,211.020 SY
3,631,281.57 26.90 75.00 39.38
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 9 IN.

2301-1033095 STANDARD OR SLIP FORM PORTLAND CEMENT 53,623.900 SY
2,218,158.34 36.79 58.00 41.37
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 9.5 IN.

2301-1033100 STANDARD OR SLIP FORM PORTLAND CEMENT 147,339.200 SY
6,486,226.70 35.00 90.00 44.02
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 10 IN.

2301-1033110 STANDARD OR SLIP FORM PORTLAND CEMENT 3,058.200 SY
140,677.20 46.00 46.00 46.00
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 11 IN.

2301-1033120 STANDARD OR SLIP FORM PORTLAND CEMENT 42,970.920 SY
2,096,005.70 39.00 80.00 48.78
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 12 IN.

2301-1033125 STANDARD OR SLIP FORM PORTLAND CEMENT 328.200 SY
26,001.86 54.57 128.00 79.23
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 12.5 IN.

2301-1033130 STANDARD OR SLIP FORM PORTLAND CEMENT 34,612.000 SY
1,367,174.00 39.50 39.50 39.50
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 13 IN.

2301-1033140 STANDARD OR SLIP FORM PORTLAND CEMENT 37.000 SY
2,479.00 67.00 67.00 67.00
CONCRETE PAVEMENT, CLASS C, CLASS 3
DURALITY, 14 IN.

2301-1034080 STANDARD OR SLIP FORM PORTLAND CEMENT 77,917.490 SY
1,840,384.32 22.09 67.00 23.62
CONCRETE PAVEMENT, CLASS C, CLASS 3I
DURILITY, 8 IN.

2301-1034100 STANDARD OR SLIP FORM PORTLAND CEMENT 190.670 SY
11,487.87 60.25 60.25 60.25
CONCRETE PAVEMENT, CLASS C, CLASS 3I
DURILITY, 10 IN.

2301-1034110 STANDARD OR SLIP FORM PORTLAND CEMENT 4,534.000 SY
252,037.00 55.00 56.00 55.59
CONCRETE PAVEMENT, CLASS C, CLASS 3I
DURILITY, 11 IN.

2301-1034120 STANDARD OR SLIP FORM PORTLAND CEMENT 7,803.900 SY
501,892.47 53.71 117.36 64.31
CONCRETE PAVEMENT, CLASS C, CLASS 3I
DURILITY, 12 IN.

2301-1082080 STANDARD OR SLIP FORM PORTLAND CEMENT 349.220 SY
28,985.26 83.00 83.00 83.00
CONCRETE PAVEMENT, CLASS M, CLASS 2
DURALITY, 8 IN.

2301-1083070 STANDARD OR SLIP FORM PORTLAND CEMENT 1,030.000 SY
47,380.00 46.00 46.00 46.00
CONCRETE PAVEMENT, CLASS M, CLASS 3
DURALITY, 7 IN.

2301-1083080 STANDARD OR SLIP FORM PORTLAND CEMENT 25.000 SY
1,337.50 53.50 53.50 53.50
CONCRETE PAVEMENT, CLASS M, CLASS 3

DURALITY, 8 IN.

2301-1083085 STANDARD OR SLIP FORM PORTLAND CEMENT 665.000 SY
36,242.50 54.50 54.50 54.50
CONCRETE PAVEMENT, CLASS M, CLASS 3
DURALITY, 8.5 IN.

2301-1083095 STANDARD OR SLIP FORM PORTLAND CEMENT 2,095.000 SY
111,790.00 44.94 56.00 53.36
CONCRETE PAVEMENT, CLASS M, CLASS 3
DURALITY, 9.5 IN.

2301-1083100 STANDARD OR SLIP FORM PORTLAND CEMENT 52.000 SY
3,218.80 61.90 61.90 61.90
CONCRETE PAVEMENT, CLASS M, CLASS 3
DURALITY, 10 IN.

2301-4874006 MEDIAN, DOWELLED P.C. CONCRETE, AS PER 5,682.000 SY
464,446.00 39.00 275.00 81.74
PLAN

2301-4874106 MEDIAN, DOWELLED P.C. CONCRETE, 6 INCH 4,322.400 SY
203,481.93 38.00 98.73 47.08

2301-4874500 MEDIAN, P.C. CONCRETE, AS PER PLAN 68.000 SY
4,665.00 60.50 75.00 68.60

2301-4875004 MEDIAN, P.C. CONCRETE, 4 IN. 512.000 SY
22,161.00 40.50 48.00 43.28

2301-4875006 MEDIAN, P.C. CONCRETE, 6 IN. 4,733.210 SY
219,602.24 32.50 121.70 46.40

2301-4877020 2 INCH CONDUIT, PAVED ISLAND 188.000 LF
5,300.00 25.00 30.00 28.19

2301-6911722 PORTLAND CEMENT CONCRETE PAVEMENT 75.000 LS
139,782.00 250.00 10,000.00 1,863.76
SAMPLES

2301-7000110 PAYMENT ADJUSTMENT 936,500.000 EACH
936,500.00 1.00 1.00 1.00
INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT
E)

2301-7000120 PAYMENT ADJUSTMENT 694,000.000 EACH
694,000.00 1.00 1.00 1.00
INCENTIVE/DISINCENTIVE FOR QM-C PCC
PAVEORKABILITY FACTORS

2301-9090000 QUALITY MANAGEMENT - CONCRETE (QM-C) 259,507.200 CY
259,507.20 1.00 1.00 1.00

2301-9091000 RUMBLE STRIP PANEL (PCC SURFACE) 57.000 EACH
10,430.00 50.00 1,165.00 182.98

2302-1200070 PORTLAND CEMENT CONCRETE PAVEMENT 103.400 SY
4,363.48 42.20 42.20 42.20
WIDENING, 7 IN.

2302-1200080 PORTLAND CEMENT CONCRETE PAVEMENT 4,477.000 SY
189,092.98 38.75 43.56 42.24
WIDENING, 8 IN.

2302-1200095 PORTLAND CEMENT CONCRETE PAVEMENT 4,612.000 SY
267,496.00 58.00 58.00 58.00
WIDENING, 9.5 IN.

2302-1200100 PORTLAND CEMENT CONCRETE PAVEMENT 2,188.000 SY
113,968.00 47.50 59.00 52.09
WIDENING, 10 IN.

2302-7430100 SHOULDERS, TYPE A 6.000 STA
6,000.00 1,000.00 1,000.00 1,000.00

2302-7430200 SHOULDERS, TYPE B 1,292.700 STA
51,708.00 40.00 40.00 40.00

2303-0000100 HOT MIX ASPHALT MIXTURE, COMMERCIAL MIX 3,474.600 TON
373,003.50 83.00 285.00 107.35
(INCLUDES ASPHALT BINDER), AS PER PLAN

2303-0001000 HOT MIX ASPHALT MIXTURE, WEDGE, LEVELING 20,156.420 TON
936,079.34 19.52 175.85 46.44
OR STRENGTHENING COURSE

2303-0013380 HOT MIX ASPHALT MIXTURE (100,000 ESAL), 1,184.000 TON
62,752.00 53.00 53.00 53.00
BASE, INTERMEDIATE, OR SURFACE COURSE, 3
/8 IN. MIX, NO SPCL FRIC REQ

2303-0013500 HOT MIX ASPHALT MIXTURE (100,000 ESAL), 4,018.000 TON
243,527.00 60.00 175.00 60.61
BASE, INTERMEDIATE, OR SURFACE COURSE, 1
/2 IN. MIX, NO SPCL FRIC REQ

2303-0021500 HOT MIX ASPHALT MIXTURE (300,000 ESAL), 13,636.430 TON
501,277.01 29.54 87.90 36.76
BASE COURSE, 1/2 IN. MIX

2303-0021750 HOT MIX ASPHALT MIXTURE (300,000 ESAL), 20,068.500 TON
662,261.25 32.25 145.00 33.00
BASE COURSE, 3/4 IN. MIX

2303-0023380 HOT MIX ASPHALT MIXTURE (300,000 ESAL), 3,110.000 TON
258,907.50 83.25 83.25 83.25
INTERMEDIATE OR SURFACE COURSE, 3/8 IN.
MIX, NO SPCL FRIC REQ

2303-0023500 HOT MIX ASPHALT MIXTURE (300,000 ESAL), 196,587.229 TON
6,563,325.93 23.16 177.54 33.39
INTERMEDIATE OR SURFACE COURSE, 1/2 IN.
MIX, NO SPCL FRIC REQ

2303-0031500 HOT MIX ASPHALT MIXTURE (1,000,000 78,421.870 TON
2,313,302.47 23.88 70.00 29.50
ESAL), BASE COURSE, 1/2 IN. MIX

2303-0031750 HOT MIX ASPHALT MIXTURE (1,000,000 38,898.910 TON
1,233,554.11 28.06 82.00 31.71
ESAL), BASE COURSE, 3/4 IN. MIX

2303-0032500 HOT MIX ASPHALT MIXTURE (1,000,000 129,683.660 TON
4,128,974.94 18.48 135.00 31.84
ESAL), INTERMEDIATE COURSE, 1/2 IN. MIX

2303-0032750 HOT MIX ASPHALT MIXTURE (1,000,000 7,538.000 TON
241,735.30 29.74 95.00 32.07
ESAL), INTERMEDIATE COURSE, 3/4 IN. MIX

2303-0033380 HOT MIX ASPHALT MIXTURE (1,000,000 13.660 TON
1,570.90 115.00 115.00 115.00
ESAL), SURFACE COURSE, 3/8 IN. MIX, NO
SL FRICTION REQUIREMENT

2303-0033500 HOT MIX ASPHALT MIXTURE (1,000,000 143,502.350 TON
4,884,599.28 17.61 175.00 34.04
ESAL), SURFACE COURSE, 1/2 IN. MIX, NO
SL FRICTION REQUIREMENT

2303-0033504 HOT MIX ASPHALT MIXTURE (1,000,000 62,645.000 TON
2,112,243.30 28.10 180.00 33.72
ESAL), SURFACE COURSE, 1/2 IN. MIX,
FRICL-4

2303-0041500 HOT MIX ASPHALT MIXTURE (3,000,000 30,625.240 TON
896,020.69 27.75 47.82 29.26
ESAL), BASE COURSE, 1/2 IN. MIX

2303-0041750 HOT MIX ASPHALT MIXTURE (3,000,000 14,547.000 TON
599,077.68 25.96 85.00 41.18
ESAL), BASE COURSE, 3/4 IN. MIX

2303-0042500 HOT MIX ASPHALT MIXTURE (3,000,000 148,065.880 TON
4,640,624.68 21.60 72.00 31.34
ESAL), INTERMEDIATE COURSE, 1/2 IN. MIX

2303-0042750 HOT MIX ASPHALT MIXTURE (3,000,000 4,098.000 TON
199,367.70 48.65 48.65 48.65
ESAL), INTERMEDIATE COURSE, 3/4 IN. MIX

2303-0043500 HOT MIX ASPHALT MIXTURE (3,000,000 16,106.400 TON
715,592.82 32.65 77.00 44.43
ESAL), SURFACE COURSE, 1/2 IN. MIX, NO
SL FRICTION REQUIREMENT

2303-0043502 HOT MIX ASPHALT MIXTURE (3,000,000 69.700 TON
18,933.19 209.58 706.76 271.64
ESAL), SURFACE COURSE, 1/2 IN. MIX,
FRICL-2

2303-0043503 HOT MIX ASPHALT MIXTURE (3,000,000 92,768.850 TON
3,561,092.88 26.63 64.75 38.39
ESAL), SURFACE COURSE, 1/2 IN. MIX,
FRICL-3

2303-0043504 HOT MIX ASPHALT MIXTURE (3,000,000 112,055.620 TON
3,466,535.04 22.06 147.21 30.94
ESAL), SURFACE COURSE, 1/2 IN. MIX,
FRICL-4

2303-0052500 HOT MIX ASPHALT MIXTURE (10,000,000 20,941.500 TON
1,103,466.39 42.30 138.16 52.69
ESAL), INTERMEDIATE COURSE, 1/2 IN. MIX

2303-0053500 HOT MIX ASPHALT MIXTURE (10,000,000 4,918.300 TON
321,334.05 58.75 96.29 65.33
ESAL), SURFACE COURSE, 1/2 IN. MIX, NO
SFRIC REQ

2303-0053502	HOT MIX ASPHALT MIXTURE (10,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRIC L-2	42.80	77.29	48.78	620,665.53	12,724.400	TON
2303-0053503	HOT MIX ASPHALT MIXTURE (10,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRIC L-3	50.80	185.46	69.57	234,441.54	3,370.100	TON
2303-0061500	HOT MIX ASPHALT MIXTURE (30,000,000 ESAL), BASE COURSE, 1/2 IN. MIX	46.97	52.52	48.95	44,938.86	918.000	TON
2303-0061990	HOT MIX ASPHALT MIXTURE (30,000,000 ESAL), BASE COURSE, 1 IN. MIX	40.00	40.00	40.00	89,200.00	2,230.000	TON
2303-0062500	HOT MIX ASPHALT MIXTURE (30,000,000 ESAL), INTERMEDIATE COURSE, 1/2 IN. MIX	28.79	71.50	34.95	3,162,519.12	90,496.200	TON
2303-0063502	HOT MIX ASPHALT MIXTURE (30,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRIC L-2	31.83	73.70	38.94	2,399,173.31	61,612.100	TON
2303-0063503	HOT MIX ASPHALT MIXTURE (30,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRIC L-3	38.63	38.63	38.63	207,956.88	5,383.300	TON
2303-0063752	HOT MIX ASPHALT MIXTURE (30,000,000 ESAL), SURFACE COURSE, 3/4 IN. MIX, FRIC L-2	57.00	57.00	57.00	60,990.00	1,070.000	TON
2303-0101000	HOT MIX ASPHALT MIXTURE, WEDGE, LEVELING OR STRENGTHENING COURSE	6.50	45.80	7.95	440,481.38	55,422.700	SY
2303-0113500	HOT MIX ASPHALT MIXTURE (100,000 ESAL), BASE, INTERMEDIATE, OR SURFACE COURSE, 1/2 IN. MIX, NO SPCL FRIC REQ	28.00	75.00	60.82	7,838.92	128.890	SY
2303-0131750	HOT MIX ASPHALT MIXTURE (1,000,000 ESAL), BASE COURSE, 3/4 IN. MIX	19.00	77.66	19.99	1,580,252.00	79,053.000	SY
2303-0133500	HOT MIX ASPHALT MIXTURE (1,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, NO SL FRICTION REQUIREMENT	11.00	90.00	15.61	65,349.00	4,187.000	SY
2303-0245000	ASPHALT BINDER, PG	700.00	700.00	700.00	49,000.00	70.000	TON
2303-0245828	ASPHALT BINDER, PG 58-28	450.00	700.00	512.46	18,421,160.37	35,946.453	TON
2303-0246422	ASPHALT BINDER, PG 64-22					32,943.690	TON

16,829,717.33 430.21 650.00 510.86

2303-0246428 ASPHALT BINDER, PG 64-28 10,312.770 TON
5,811,501.92 534.00 667.00 563.52

2303-0247022 ASPHALT BINDER, PG 70-22 4,140.140 TON
2,283,937.77 530.00 780.00 551.66

2303-0247028 ASPHALT BINDER, PG 70-28 1,665.400 TON
1,016,058.76 600.00 700.00 610.10

2303-3250000 FABRIC REINFORCEMENT WITH ADHESIVE 1,546.300 SY
7,978.91 5.16 5.16 5.16

2303-3250011 FABRIC REINFORCEMENT 1,030.900 SY
587.61 0.57 0.57 0.57

2303-3400000 ADJUSTMENT OF FIXTURES 538.000 EACH
320,003.50 100.00 1,600.00 594.80

2303-6911000 HOT MIX ASPHALT PAVEMENT SAMPLES 131.000 LS
363,086.00 1.00 22,000.00 2,771.65

2303-7000550 INTELLIGENT COMPACTION-HMA 3.000 LS
125,000.00 35,000.00 50,000.00 41,666.67

2303-9091010 RUMBLE STRIP PANEL (HMA SURFACE) 32.000 EACH
13,775.00 225.00 770.00 430.47

2303-9091021 MILLED SHOULDER RUMBLE STRIPS, HMA 2,073.000 STA
18,657.00 9.00 9.00 9.00
SURFACE

2303-9093010 HOT MIX ASPHALT, DRIVEWAY 1,904.570 SY
99,890.55 23.46 160.00 52.45

2304-0100000 DETOUR PAVEMENT 128,036.480 SY
5,252,911.33 19.79 75.00 41.03

2304-0101000 TEMPORARY PAVEMENT 15,764.300 SY
450,972.75 15.00 61.00 28.61

2306-1000000 ASPHALT EMULSION FOR FOG SEAL (PAVEMENT) 937.600 GAL
9,173.68 9.63 100.00 9.78

2307-0025003 AGGREGATE, ROADWAY COVER, 3/8 IN. 1,893.530 TON
46,053.72 24.00 45.00 24.32

2307-0025005 AGGREGATE, ROADWAY COVER, 1/2 IN. 3,691.830 TON
95,554.62 25.28 65.00 25.88

2307-0600000 BINDER BITUMEN 16,938.000 GAL
47,595.78 2.81 2.81 2.81

2307-0600451 BINDER BITUMEN, MC-3000 90,222.000 GAL
246,897.66 2.73 3.60 2.74

2307-0600456 BINDER BITUMEN, CRS-2P 38,655.930 GAL
111,709.77 2.70 20.00 2.89

2307-1400000 ASPHALT EMULSION FOR DUST CONTROL 1,864.540 GAL
11,187.24 6.00 6.00 6.00

2308-1000000 ASPHALT EMULSION FOR FOG SEAL 146,584.580 GAL
514,878.79 2.55 140.00 3.51
(SHOULDERS)

2310-5151040 PORTLAND CEMENT CONCRETE OVERLAY, 102,476.970 CY
6,626,491.34 53.00 150.00 64.66
FURNISH ONLY

2310-5151051 PORTLAND CEMENT CONCRETE OVERLAY, 131,871.940 SY
509,656.68 2.25 130.00 3.86
PLACEMENT ONLY (BONDED)

2310-5151251 PORTLAND CEMENT CONCRETE OVERLAY, 207,044.140 SY
977,122.69 3.43 9.80 4.72
PLACEMENT ONLY (UNBONDED)

2310-5151551 PORTLAND CEMENT CONCRETE OVERLAY, 311,747.700 SY
874,878.48 2.40 4.45 2.81
PLACEMENT ONLY (WHITE TOPPING)

2310-8255550 SURFACE PREPARATION 177,547.600 SY
158,594.91 0.18 15.00 0.89

2310-8300530 HOT MIX ASPHALT STRESS RELIEF COURSE 42,745.000 SY
252,580.75 4.35 10.30 5.91

2310-8300540 HOT MIX ASPHALT STRESS RELIEF COURSE 6,349.200 TON
315,018.64 39.00 59.50 49.62

2312-8260050 GRANULAR SURFACING ON ROAD, CLASS A 7.000 CY
324.94 46.42 46.42 46.42
CRUSHED STONE

2312-8260051 GRANULAR SURFACING ON ROAD, CLASS A 60,702.130 TON
924,051.94 7.95 60.00 15.22
CRUSHED STONE

2312-8260061 GRANULAR SURFACING ON ROAD, CLASS B 2,000.000 TON
26,200.00 13.10 13.10 13.10
CRUSHED STONE

2312-8260081 GRANULAR SURFACING ON ROAD, CLASS D 18,183.000 TON
276,825.45 12.00 21.50 15.22
CRUSHED STONE

2312-8260201 GRANULAR SURFACING ON ROAD, CLASS C 1,010.810 TON
17,022.33 12.00 30.00 16.84
GRAVEL

2312-8260250 GRANULAR SURFACING ON ROAD, CRUSHED 3,151.000 TON
70,939.92 10.80 40.00 22.51
STONE

2314-0775010 CALCIUM CHLORIDE APPLIED 43.000 TON
19,298.80 300.00 656.00 448.81

2314-0775015 WATER FOR SURFACE APPLICATION OF CALCIUM 71.300 MGAL
6,986.50 55.00 150.00 97.99
CHLORIDE

2315-8275025 SURFACING, DRIVEWAY, CLASS A CRUSHED 17,762.840 TON
283,624.82 8.40 197.50 15.97
STONE

2315-8275030 SURFACING, DRIVEWAY, CLASS C GRAVEL 836.000 TON
12,655.20 14.00 17.00 15.14

2315-8275036 SURFACING, DRIVEWAY, CLASS D CRUSHED 1,923.150 TON
28,366.46 14.75 14.75 14.75
STONE

2315-8275055 SURFACING, DRIVEWAY 3,984.290 TON
79,430.66 5.50 50.00 19.94

2317-7000110 PAYMENT ADJUSTMENT 523,000.000 EACH
523,000.00 1.00 1.00 1.00
INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT
LE)

2317-7000120 PAYMENT ADJUSTMENT 864,000.000 EACH
864,000.00 1.00 1.00 1.00
INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT
LE)

2318-1001100 COLD IN-PLACE RECYCLED ASPHALT PAVEMENT 1166844.430 SY
1,811,883.55 1.35 1.93 1.55

2318-1001220 ASPHALT STABILIZING AGENT (FOAMED 2,840.400 TON
1,723,702.00 580.00 625.00 606.85
ASPHALT)

2318-1001224 ASPHALT STABILIZING AGENT (STANDARD 399,614.700 GAL
779,975.18 1.75 2.21 1.95
ASPHALT EMULSION)

2319-1000000 SLURRY LEVELING 32.930 MILE
99,294.70 1,799.00 5,000.00 3,015.33

2319-2000102 SLURRY WEDGE FINE AGGREGATE 543.000 TON
52,635.75 50.00 110.25 96.94

2319-3000102 STRIP SLURRY TREATMENT FINE AGGREGATE 1,142.300 TON
104,538.10 35.00 101.90 91.52

2319-3000200 SURFACE PREPARATION FOR STRIP SLURRY 144.500 MILE
117,592.50 25.00 5,500.00 813.79
TREATMENT

2319-4000000 ASPHALT EMULSION FOR SLURRY LEVELING, 78,680.700 GAL
181,842.60 2.00 3.75 2.31
SLURRY WEDGE, AND SLURRY TREATMENT

2319-9990104 AGGREGATE FOR MICROSURFACING 1,131.500 TON
56,575.00 50.00 50.00 50.00

2319-9990105 PREPARATION OF SURFACE FOR 8.040 MILE
40,200.00 5,000.00 5,000.00 5,000.00
MICROSURFACING

2319-9990106 EMULSIFIED ASPHALT FOR MICROSURFACING 41,745.000 GAL
125,235.00 3.00 3.00 3.00

2401-6745065 REMOVAL OF BRIDGE END DRAINS 2.000 EACH
2,000.00 1,000.00 1,000.00 1,000.00

2401-6745354 REMOVAL OF CONCRETE FOOTINGS, AS PER 70.000 EACH

23,690.00		200.00	650.00	338.43		
	PLAN					
2401-6745355	REMOVAL OF CONCRETE FOOTINGS OF HIGHWAY				146.000	EACH
43,012.08		175.00	768.00	294.60		
	SIGNS					
2401-6745356	REMOVAL OF CONCRETE FOOTINGS OF LIGHT				120.000	EACH
47,247.64		130.00	1,500.00	393.73		
	POLES					
2401-6745625	REMOVAL OF EXISTING BRIDGE				123.000	LS
4,468,932.25		1,500.00	770,000.00	36,332.78		
2401-6745635	REMOVAL OF EXISTING HANDRAIL				4.000	LS
18,000.00		2,000.00	7,000.00	4,500.00		
2401-6745636	REMOVAL OF EXISTING HANDRAIL AND END				11.000	LS
43,600.00		2,500.00	8,000.00	3,963.64		
	POSTS					
2401-6745650	REMOVAL OF EXISTING STRUCTURES				62.000	LS
404,465.64		300.00	83,000.00	6,523.64		
2401-6745765	REMOVAL OF LIGHT POLES				179.000	EACH
72,221.70		78.00	884.48	403.47		
2401-6745830	REMOVAL OF P.C. CONCRETE MEDIAN BARRIER				5,458.500	LF
47,951.00		4.00	13.10	8.78		
2401-6745910	REMOVAL OF SIGN				587.000	EACH
65,255.24		25.32	740.00	111.17		
2401-6745915	REMOVAL OF SIGN SUPPORT STRUCTURE AND				4.000	EACH
43,254.00		8,480.00	14,000.00	10,813.50		
	FOOTING					
2401-6750001	REMOVALS, AS PER PLAN				101.000	LS
1,865,739.98		250.00	230,000.00	18,472.67		
2401-7207010	REMOVAL OF CONCRETE				2,579.500	SY
13,522.00		4.95	14.00	5.24		
2401-7207030	REMOVAL OF CONCRETE				3.000	LS
8,267.00		1,675.00	3,592.00	2,755.67		
2402-0425030	GRANULAR BACKFILL				4,512.490	CY
97,711.01		11.75	10,000.00	21.65		
2402-0425031	GRANULAR BACKFILL				86,420.390	TON
999,434.74		4.85	990.00	11.56		
2402-0425032	GRANULAR BACKFILL, PLACE ONLY				880.000	TON
5,612.50		6.25	10.00	6.38		
2402-0425033	GRANULAR BACKFILL, PLACE ONLY				133.600	CY
1,336.00		10.00	10.00	10.00		
2402-0425040	FLOODED BACKFILL				8,412.500	CY
240,281.84		13.40	112.50	28.56		
2402-2720000	EXCAVATION, CLASS 20				136,910.010	CY
1,564,515.79		2.45	250.00	11.43		

2402-2720100 EXCAVATION, CLASS 20, FOR ROADWAY PIPE 23,962.610 CY
197,142.07 1.00 100.00 8.23
CULVERT

2402-2721000 EXCAVATION, CLASS 21 4,927.000 CY
661,005.02 15.00 325.00 134.16

2402-2722000 EXCAVATION, CLASS 22 5,668.070 CY
408,294.65 5.00 1,200.00 72.03

2402-2723000 EXCAVATION, CLASS 23 3,362.980 CY
44,297.30 6.00 120.00 13.17

2402-2723100 EXCAVATION, CLASS 23, FOR ROADWAY PIPE 6,033.550 CY
35,414.75 3.90 6.00 5.87
CULVERT

2402-2724000 EXCAVATION, CLASS 24 1,304.000 CY
4,803.00 3.50 4.00 3.68

2402-2724100 EXCAVATION, CLASS 24, FOR ROADWAY PIPE 5,904.000 CY
26,568.00 4.50 4.50 4.50
CULVERT

2403-0100000 STRUCTURAL CONCRETE (MISCELLANEOUS) 2,665.180 CY
1,575,325.34 250.00 4,200.00 591.08

2403-0100010 STRUCTURAL CONCRETE (BRIDGE) 51,696.400 CY
21,436,755.62 261.22 4,500.00 414.67

2403-0100020 STRUCTURAL CONCRETE (RCB CULVERT) 14,294.144 CY
4,453,475.47 240.00 925.00 311.56

2403-7000210 HIGH PERFORMANCE STRUCTURAL CONCRETE 4,987.000 CY
2,800,727.50 540.00 775.00 561.61

2403-7000220 TRIAL BATCH HIGH PERFORMANCE STRUCTURAL 1.000 LS
200.00 200.00 200.00 200.00
CONCRETE

2403-7302000 COLORED SEALER COATING FOR STRUCTURAL 3,253.900 SY
65,423.96 12.69 45.00 20.11
CONCRETE

2404-7775000 REINFORCING STEEL 5388221.410 LB
4,035,996.10 0.52 18.00 0.75

2404-7775005 REINFORCING STEEL, EPOXY COATED 10783150.17 LB
8,207,222.10 0.56 12.02 0.76

2405-2705000 EXCAVATE AND DEWATER 3.000 LS
256,500.00 1,500.00 245,000.00 85,500.00

2407-0550000 BEAMS, PRETENSIONED PRESTRESSED 98.000 EACH
1,198,500.00 5,000.00 25,000.00 12,229.59
CONCRETE,

2407-0550001 BEAMS, PRETENSIONED PRESTRESSED 1.000 EACH
1,500.00 1,500.00 1,500.00 1,500.00
CONCRETE, ERECT AS PER PLAN

2407-0551142 BEAMS, PRETENSIONED PRESTRESSED 10.000 EACH

47,687.00 4,768.70 4,768.70 4,768.70
CONCRETE, A42

2407-0551146 BEAMS, PRETENSIONED PRESTRESSED 8.000 EACH
43,200.00 5,400.00 5,400.00 5,400.00
CONCRETE, A46

2407-0551150 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
28,793.00 5,758.60 5,758.60 5,758.60
CONCRETE, A50

2407-0551155 BEAMS, PRETENSIONED PRESTRESSED 4.000 EACH
24,000.00 6,000.00 6,000.00 6,000.00
CONCRETE, A55

2407-0551242 BEAMS, PRETENSIONED PRESTRESSED 7.000 EACH
31,500.00 4,500.00 4,500.00 4,500.00
CONCRETE, B42

2407-0551250 BEAMS, PRETENSIONED PRESTRESSED 18.000 EACH
106,800.00 5,600.00 6,200.00 5,933.33
CONCRETE, B50

2407-0551255 BEAMS, PRETENSIONED PRESTRESSED 28.000 EACH
175,310.00 6,131.00 6,500.00 6,261.07
CONCRETE, B55

2407-0551259 BEAMS, PRETENSIONED PRESTRESSED 27.000 EACH
192,600.00 6,000.00 11,000.00 7,133.33
CONCRETE, B59

2407-0551263 BEAMS, PRETENSIONED PRESTRESSED 21.000 EACH
160,366.70 7,000.00 8,600.00 7,636.51
CONCRETE, B63

2407-0551267 BEAMS, PRETENSIONED PRESTRESSED 16.000 EACH
123,400.00 7,000.00 14,000.00 7,712.50
CONCRETE, B67

2407-0551342 BEAMS, PRETENSIONED PRESTRESSED 6.000 EACH
30,000.00 5,000.00 5,000.00 5,000.00
CONCRETE, C42

2407-0551346 BEAMS, PRETENSIONED PRESTRESSED 6.000 EACH
45,000.00 7,500.00 7,500.00 7,500.00
CONCRETE, C46

2407-0551355 BEAMS, PRETENSIONED PRESTRESSED 12.000 EACH
72,000.00 6,000.00 6,000.00 6,000.00
CONCRETE, C55

2407-0551359 BEAMS, PRETENSIONED PRESTRESSED 12.000 EACH
90,000.00 7,000.00 8,000.00 7,500.00
CONCRETE, C59

2407-0551363 BEAMS, PRETENSIONED PRESTRESSED 22.000 EACH
161,400.00 6,900.00 8,500.00 7,336.36
CONCRETE, C63

2407-0551367 BEAMS, PRETENSIONED PRESTRESSED 30.000 EACH
209,780.96 6,548.81 7,500.00 6,992.70
CONCRETE, C67

2407-0551371 BEAMS, PRETENSIONED PRESTRESSED 24.000 EACH
198,576.00 7,822.00 8,500.00 8,274.00
CONCRETE, C71

2407-0551375 BEAMS, PRETENSIONED PRESTRESSED 18.000 EACH
168,900.00 8,362.50 12,000.00 9,383.33
CONCRETE, C75

2407-0551380 BEAMS, PRETENSIONED PRESTRESSED 30.000 EACH
277,000.00 8,500.00 10,500.00 9,233.33
CONCRETE, C80

2407-0551485 BEAMS, PRETENSIONED PRESTRESSED 4.000 EACH
52,000.00 13,000.00 13,000.00 13,000.00
CONCRETE, D85

2407-0551495 BEAMS, PRETENSIONED PRESTRESSED 34.000 EACH
409,832.00 11,868.00 12,500.00 12,053.88
CONCRETE, D95

2407-0551510 BEAMS, PRETENSIONED PRESTRESSED 17.000 EACH
231,196.00 13,433.00 14,000.00 13,599.76
CONCRETE, D110

2407-0562840 BEAMS, PRETENSIONED PRESTRESSED 28.000 EACH
193,500.00 6,750.00 7,000.00 6,910.71
CONCRETE, BTB40

2407-0562850 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
45,500.00 9,100.00 9,100.00 9,100.00
CONCRETE, BTB50

2407-0562885 BEAMS, PRETENSIONED PRESTRESSED 10.000 EACH
123,950.00 12,250.00 12,540.00 12,395.00
CONCRETE, BTB85

2407-0562895 BEAMS, PRETENSIONED PRESTRESSED 28.000 EACH
387,600.00 13,700.00 14,100.00 13,842.86
CONCRETE, BTB95

2407-0562900 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
71,750.00 14,350.00 14,350.00 14,350.00
CONCRETE, BTB100

2407-0563045 BEAMS, PRETENSIONED PRESTRESSED 2.000 EACH
22,000.00 11,000.00 11,000.00 11,000.00
CONCRETE, BTC45

2407-0563050 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
42,500.00 8,500.00 8,500.00 8,500.00
CONCRETE, BTC50

2407-0563090 BEAMS, PRETENSIONED PRESTRESSED 21.000 EACH
282,800.00 13,300.00 14,000.00 13,466.67
CONCRETE, BTC90

2407-0563095 BEAMS, PRETENSIONED PRESTRESSED 6.000 EACH
102,000.00 17,000.00 17,000.00 17,000.00
CONCRETE, BTC95

2407-0563100 BEAMS, PRETENSIONED PRESTRESSED 16.000 EACH
241,600.00 15,100.00 15,100.00 15,100.00
CONCRETE, BTC100

2407-0563105 BEAMS, PRETENSIONED PRESTRESSED 12.000 EACH
184,000.00 14,000.00 18,000.00 15,333.33
CONCRETE, BTC105

2407-0563115 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
85,000.00 17,000.00 17,000.00 17,000.00
CONCRETE, BTC115

2407-0563120 BEAMS, PRETENSIONED PRESTRESSED 24.000 EACH
447,400.00 16,000.00 21,000.00 18,641.67
CONCRETE, BTC120

2407-0564055 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
37,500.00 7,500.00 7,500.00 7,500.00
CONCRETE, BTD55

2407-0564065 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
42,500.00 8,500.00 8,500.00 8,500.00
CONCRETE, BTD65

2407-0564080 BEAMS, PRETENSIONED PRESTRESSED 10.000 EACH
120,000.00 12,000.00 12,000.00 12,000.00
CONCRETE, BTD80

2407-0564095 BEAMS, PRETENSIONED PRESTRESSED 5.000 EACH
72,500.00 14,500.00 14,500.00 14,500.00
CONCRETE, BTD95

2407-0564110 BEAMS, PRETENSIONED PRESTRESSED 4.000 EACH
67,384.00 16,846.00 16,846.00 16,846.00
CONCRETE, BTD110

2407-0564115 BEAMS, PRETENSIONED PRESTRESSED 17.000 EACH
305,000.00 17,000.00 19,000.00 17,941.18
CONCRETE, BTD115

2407-0564120 BEAMS, PRETENSIONED PRESTRESSED 20.000 EACH
351,600.00 14,600.00 19,200.00 17,580.00
CONCRETE, BTD120

2407-0564125 BEAMS, PRETENSIONED PRESTRESSED 6.000 EACH
114,000.00 19,000.00 19,000.00 19,000.00
CONCRETE, BTD125

2407-0564130 BEAMS, PRETENSIONED PRESTRESSED 4.000 EACH
78,000.00 19,500.00 19,500.00 19,500.00
CONCRETE, BTD130

2407-0564135 BEAMS, PRETENSIONED PRESTRESSED 37.000 EACH
722,174.00 18,423.00 21,645.00 19,518.22
CONCRETE, BTD135

2407-0564275 BEAMS, PRETENSIONED PRESTRESSED 9.000 EACH
103,500.00 11,500.00 11,500.00 11,500.00
CONCRETE, BTE75

2407-0564280 BEAMS, PRETENSIONED PRESTRESSED 9.000 EACH
108,000.00 12,000.00 12,000.00 12,000.00
CONCRETE, BTE80

2407-0564305 BEAMS, PRETENSIONED PRESTRESSED 9.000 EACH
121,500.00 13,500.00 13,500.00 13,500.00

CONCRETE, BTE105

2407-0564325 BEAMS, PRETENSIONED PRESTRESSED 9.000 EACH
171,000.00 19,000.00 19,000.00 19,000.00
CONCRETE, BTE125

2407-0564330 BEAMS, PRETENSIONED PRESTRESSED 27.000 EACH
513,000.00 19,000.00 19,000.00 19,000.00
CONCRETE, BTE130

2407-0564335 BEAMS, PRETENSIONED PRESTRESSED 14.000 EACH
307,272.00 21,948.00 21,948.00 21,948.00
CONCRETE, BTE135

2407-0564340 BEAMS, PRETENSIONED PRESTRESSED 9.000 EACH
189,000.00 21,000.00 21,000.00 21,000.00
CONCRETE, BTE140

2407-0564345 BEAMS, PRETENSIONED PRESTRESSED 2.000 EACH
53,150.00 26,575.00 26,575.00 26,575.00
CONCRETE, BTE145

2407-0564350 BEAMS, PRETENSIONED PRESTRESSED 40.000 EACH
1,012,000.00 25,000.00 28,000.00 25,300.00
CONCRETE, BTE150

2407-0564355 BEAMS, PRETENSIONED PRESTRESSED 15.000 EACH
434,250.00 28,000.00 30,000.00 28,950.00
CONCRETE, BTE155

2407-0580146 BEAMS, PRETENSIONED PRESTRESSED 6.000 EACH
32,640.00 5,440.00 5,440.00 5,440.00
CONCRETE, LXA46

2407-0580150 BEAMS, PRETENSIONED PRESTRESSED 12.000 EACH
68,340.00 5,695.00 5,695.00 5,695.00
CONCRETE, LXA50

2407-0580267 BEAMS, PRETENSIONED PRESTRESSED 9.000 EACH
68,300.00 7,100.00 8,200.00 7,588.89
CONCRETE, LXB67

2407-0580380 BEAMS, PRETENSIONED PRESTRESSED 12.000 EACH
144,000.00 12,000.00 12,000.00 12,000.00
CONCRETE, LXC80

2407-0580490 BEAMS, PRETENSIONED PRESTRESSED 2.000 EACH
20,000.00 10,000.00 10,000.00 10,000.00
CONCRETE, LXD90

2407-0580500 BEAMS, PRETENSIONED PRESTRESSED 2.000 EACH
24,000.00 12,000.00 12,000.00 12,000.00
CONCRETE, LXD100

2408-6772011 REPAIR BEAM, HEAT STRAIGHTENING, AS PER 1.000 LS
37,950.00 37,950.00 37,950.00 37,950.00
PLAN

2408-7700000 STRUCTURAL STEEL, HAULING AND STORING 2.000 LS
6,500.00 1,500.00 5,000.00 3,250.00

2408-7800000 STRUCTURAL STEEL 3541922.300 LB
8,548,386.69 1.00 69.50 2.41

2408-7900020 SLOTTED DECK DRAIN 1.000 LS
52,000.00 52,000.00 52,000.00 52,000.00

2408-8500100 REINFORCED NEOPRENE 1,154.000 SF
69,240.00 60.00 60.00 60.00

2409-4200001 MISCELLANEOUS HARDWARE 713.000 LB
6,111.00 7.00 9.50 8.57

2409-4575000 TREATED LUMBER 0.590 MFBM
4,012.00 6,800.00 6,800.00 6,800.00

2409-4575001 TREATED TIMBER AND LUMBER 4.077 MFBM
12,231.00 3,000.00 3,000.00 3,000.00

2409-4600001 UNTREATED TIMBER AND LUMBER 4.036 MFBM
32,086.20 7,950.00 7,950.00 7,950.00

2412-0000100 LONGITUDINAL GROOVING IN CONCRETE 83,219.000 SY
249,564.65 1.40 35.00 3.00

2413-0698041 DECK OVER-DEPTH OVERLAY (CLASS O PCC) 2,365.000 SY
164,860.00 58.00 200.00 69.71

2413-0698066 DECK OVERLAY (CLASS O PCC) 17,160.060 SY
853,701.70 38.00 135.00 49.75

2413-0698067 DECK OVERLAY (CLASS HPC-O PCC) 8,179.100 SY
415,341.40 44.00 60.00 50.78

2413-0698074 DECK REPAIR, CLASS A 4,927.640 SY
741,392.90 60.00 380.00 150.46

2413-0698075 DECK REPAIR, CLASS B 187.000 SY
67,425.00 225.00 900.00 360.56

2413-0698081 DECK REPAIR, CLASS A, SPECIAL 237.000 SY
31,680.00 120.00 165.00 133.67

2413-1100000 PREFORMED ELASTIC NEOPRENE JOINT 155.200 LF
8,487.00 45.00 90.00 54.68

2413-1200000 STEEL EXTRUSION JOINT WITH NEOPRENE 2,369.567 LF
406,324.08 95.00 550.00 171.48

2413-1200100 NEOPRENE GLAND INSTALLATION AND TESTING 2,283.767 LF
77,606.74 20.54 100.00 33.98

2414-6424038 CONCRETE BARRIER RAIL, 3'-8" 8,381.720 LF
707,356.55 41.00 110.00 84.39

2414-6424110 CONCRETE BARRIER RAILING 20,572.190 LF
931,286.53 28.00 96.00 45.27

2414-6424111 CONCRETE BARRIER RAILING, MEDIAN 2,328.000 LF
144,800.00 45.00 71.00 62.20

2414-6424119 CONCRETE BARRIER RAILING, AESTHETIC 4,455.870 LF
372,097.66 56.00 145.00 83.51

2414-6424120 CONCRETE OPEN RAILING 6,869.600 LF
383,274.20 40.00 98.00 55.79

2414-6424124	CONCRETE OPEN RAILING, TL-4				12,421.180	LF
656,903.53	39.70	65.00	52.89			
2414-6425410	CONCRETE BARRIER, REINFORCED, SEPARATION				646.060	LF
51,897.00	57.00	111.02	80.33			
2414-6425420	CONCRETE BARRIER, PARAPET				1,000.600	LF
67,219.60	54.00	86.00	67.18			
2414-6431100	RETROFIT CONCRETE BARRIER RAILING				4,415.300	LF
245,661.60	47.00	71.00	55.64			
2414-6444100	STEEL PIPE PEDESTRIAN HAND RAILING				2,541.020	LF
144,768.95	31.00	193.42	56.97			
2414-6445100	STRUCTURAL STEEL PEDESTRIAN HAND RAILING				4,072.840	LF
570,722.81	109.00	170.00	140.13			
2414-6446100	ALUMINUM PEDESTRIAN HAND RAILING				371.300	LF
66,834.00	180.00	180.00	180.00			
2414-6460000	ORNAMENTAL METAL RAILING				4,269.670	LF
686,074.71	44.75	250.00	160.69			
2414-7200010	SAFETY GRATE, TYPE 1, CULVERT				3.000	EACH
8,603.00	1,551.00	3,526.00	2,867.67			
2414-7200020	SAFETY GRATE, TYPE 2, CULVERT				5.000	EACH
19,000.00	3,800.00	3,800.00	3,800.00			
2414-7200030	SAFETY GRATE, TYPE 3, CULVERT				5.000	EACH
52,820.00	10,564.00	10,564.00	10,564.00			
2414-7200040	SAFETY GRATE, TYPE 4, CULVERT				1.000	EACH
26,520.00	26,520.00	26,520.00	26,520.00			
2415-2100000	PRECAST CONCRETE BOX CULVERT,				76.000	LF
31,540.00	415.00	415.00	415.00			
2415-2110404	PRECAST CONCRETE BOX CULVERT, 4 FT. X 4				24.000	LF
14,400.00	600.00 FT.	600.00	600.00			
2415-2110604	PRECAST CONCRETE BOX CULVERT, 6 FT. X 4				20.000	LF
4,800.00	240.00 FT.	240.00	240.00			
2415-2110805	PRECAST CONCRETE BOX CULVERT, 8 FT. X 5				20.000	LF
6,800.00	340.00 FT.	340.00	340.00			
2415-2110806	PRECAST CONCRETE BOX CULVERT, 8 FT. X 6				3,381.000	LF
1,157,376.00	338.56 FT.	420.00	342.32			
2415-2111006	PRECAST CONCRETE BOX CULVERT, 10 FT. X 6				56.000	LF
25,200.00	450.00 FT.	450.00	450.00			
2415-2111007	PRECAST CONCRETE BOX CULVERT, 10 FT. X 7				36.000	LF
34,560.00	960.00 FT.	960.00	960.00			

2415-2111010 PRECAST CONCRETE BOX CULVERT, 10 FT. X 560.000 LF
335,614.38 562.00 759.88 599.31
10 FT.

2415-2111206 PRECAST CONCRETE BOX CULVERT, 12 FT. X 6 66.000 LF
31,020.00 470.00 470.00 470.00
FT.

2415-2111208 PRECAST CONCRETE BOX CULVERT, 12 FT. X 8 12.000 LF
15,960.00 1,330.00 1,330.00 1,330.00
FT.

2415-2111210 PRECAST CONCRETE BOX CULVERT, 12 FT. X 32.000 LF
32,000.00 1,000.00 1,000.00 1,000.00
10 FT.

2415-2111212 PRECAST CONCRETE BOX CULVERT, 12 FT. X 96.000 LF
51,576.00 537.25 537.25 537.25
12 FT.

2415-2200000 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
11,694.00 5,847.00 5,847.00 5,847.00
END SECTION,

2415-2200404 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
5,000.00 2,500.00 2,500.00 2,500.00
END SECTION, 4 FT. X 4 FT.

2415-2200604 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
7,600.00 3,800.00 3,800.00 3,800.00
END SECTION, 6 FT. X 4 FT.

2415-2200805 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
10,800.00 5,400.00 5,400.00 5,400.00
END SECTION, 8 FT. X 5 FT.

2415-2200806 PRECAST CONCRETE BOX CULVERT STRAIGHT 4.000 EACH
28,000.00 7,000.00 7,000.00 7,000.00
END SECTION, 8 FT. X 6 FT.

2415-2201006 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
15,000.00 7,500.00 7,500.00 7,500.00
END SECTION, 10 FT. X 6 FT.

2415-2201007 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
16,000.00 8,000.00 8,000.00 8,000.00
END SECTION, 10 FT. X 7 FT.

2415-2201010 PRECAST CONCRETE BOX CULVERT STRAIGHT 12.000 EACH
149,711.88 4,000.00 16,271.00 12,475.99
END SECTION, 10 FT. X 10 FT.

2415-2201206 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
20,000.00 10,000.00 10,000.00 10,000.00
END SECTION, 12 FT. X 6 FT.

2415-2201210 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
16,000.00 8,000.00 8,000.00 8,000.00
END SECTION, 12 FT. X 10 FT.

2415-2201212 PRECAST CONCRETE BOX CULVERT STRAIGHT 2.000 EACH
27,310.00 13,655.00 13,655.00 13,655.00

END SECTION, 12 FT. X 12 FT.

2416-0100012	APRONS, CONCRETE, 12 IN. DIA.			18.000	EACH
12,125.20	450.00	1,452.20	673.62		
2416-0100015	APRONS, CONCRETE, 15 IN. DIA.			81.000	EACH
52,086.00	250.00	1,350.00	643.04		
2416-0100018	APRONS, CONCRETE, 18 IN. DIA.			151.000	EACH
99,504.20	265.00	1,550.00	658.97		
2416-0100021	APRONS, CONCRETE, 21 IN. DIA.			1.000	EACH
659.70	659.70	659.70	659.70		
2416-0100024	APRONS, CONCRETE, 24 IN. DIA.			138.000	EACH
121,897.45	267.75	2,325.00	883.31		
2416-0100027	APRONS, CONCRETE, 27 IN. DIA.			2.000	EACH
1,035.05	341.25	693.80	517.53		
2416-0100030	APRONS, CONCRETE, 30 IN. DIA.			94.000	EACH
83,363.90	500.00	2,500.00	886.85		
2416-0100036	APRONS, CONCRETE, 36 IN. DIA.			35.000	EACH
38,650.30	700.00	2,300.00	1,104.29		
2416-0100042	APRONS, CONCRETE, 42 IN. DIA.			36.000	EACH
59,415.80	1,060.00	3,100.00	1,650.44		
2416-0100048	APRONS, CONCRETE, 48 IN. DIA.			36.000	EACH
66,688.08	821.54	4,570.00	1,852.45		
2416-0100054	APRONS, CONCRETE, 54 IN. DIA.			8.000	EACH
16,728.00	1,680.00	3,925.70	2,091.00		
2416-0100060	APRONS, CONCRETE, 60 IN. DIA.			22.000	EACH
54,912.00	1,500.00	4,870.00	2,496.00		
2416-0100066	APRONS, CONCRETE, 66 IN. DIA.			3.000	EACH
6,926.00	2,300.00	2,313.00	2,308.67		
2416-0100072	APRONS, CONCRETE, 72 IN. DIA.			13.000	EACH
33,484.00	1,680.00	4,835.00	2,575.69		
2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE			78.000	EACH
42,875.00	310.00	2,000.00	549.68		
	APRONS LESS THAN OR EQUAL TO 36 IN.				
2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE			17.000	EACH
12,530.00	450.00	1,870.00	737.06		
	APRONS GREATER THAN 36 IN.				
2416-0102022	APRONS, CONCRETE ARCH, 22 IN. X 14 IN.			2.000	EACH
2,400.00	1,200.00	1,200.00	1,200.00		
2416-0102029	APRONS, CONCRETE ARCH, 29 IN. X 18 IN.			3.000	EACH
1,725.00	400.00	925.00	575.00		
2416-0102037	APRONS, CONCRETE ARCH, 37 IN. X 23 IN.			5.000	EACH
7,625.00	700.00	2,075.00	1,525.00		
2416-0102044	APRONS, CONCRETE ARCH, 44 IN. X 27 IN.			6.000	EACH
7,838.40	1,306.40	1,306.40	1,306.40		

2416-0102052 APRONS, CONCRETE ARCH, 52 IN. X 32 IN. 2.000 EACH
1,400.00 700.00 700.00 700.00

2416-0102059 APRONS, CONCRETE ARCH, 59 IN. X 36 IN. 3.000 EACH
6,499.20 1,824.60 2,850.00 2,166.40

2416-0102065 APRONS, CONCRETE ARCH, 65 IN. X 40 IN. 4.000 EACH
7,618.00 1,755.00 2,054.00 1,904.50

2416-0102073 APRONS, CONCRETE ARCH, 73 IN. X 45 IN. 1.000 EACH
2,075.40 2,075.40 2,075.40 2,075.40

2416-0102088 APRONS, CONCRETE ARCH, 88 IN. X 54 IN. 2.000 EACH
7,980.00 3,990.00 3,990.00 3,990.00

2416-0102102 APRONS, CONCRETE ARCH, 102 IN. X 62 IN. 1.000 EACH
4,729.00 4,729.00 4,729.00 4,729.00

2416-1160015 CULVERT, CONCRETE ENTRANCE PIPE, 15 IN. 201.000 LF
11,524.80 35.50 76.00 57.34
DIA.

2416-1160018 CULVERT, CONCRETE ENTRANCE PIPE, 18 IN. 1,940.000 LF
71,956.00 33.00 77.50 37.09
DIA.

2416-1160024 CULVERT, CONCRETE ENTRANCE PIPE, 24 IN. 290.000 LF
12,754.00 42.00 50.00 43.98
DIA.

2416-1160030 CULVERT, CONCRETE ENTRANCE PIPE, 30 IN. 4.000 LF
1,025.00 256.25 256.25 256.25
DIA.

2416-1160042 CULVERT, CONCRETE ENTRANCE PIPE, 42 IN. 52.000 LF
6,396.00 95.00 186.00 123.00
DIA.

2416-1160048 CULVERT, CONCRETE ENTRANCE PIPE, 48 IN. 20.000 LF
3,940.00 197.00 197.00 197.00
DIA.

2416-1165015 CULVERT, 2000D CONCRETE ENTRANCE PIPE, 455.000 LF
11,488.75 25.25 25.25 25.25
15 IN. DIA.

2416-1165048 CULVERT, 2000D CONCRETE ENTRANCE PIPE, 168.000 LF
15,960.00 95.00 95.00 95.00
48 IN. DIA.

2416-1180018 CULVERT, CONCRETE ROADWAY PIPE, 18 IN. 436.000 LF
27,628.20 37.00 75.00 63.37
DIA.

2416-1180024 CULVERT, CONCRETE ROADWAY PIPE, 24 IN. 2,733.000 LF
150,803.65 18.25 250.00 55.18
DIA.

2416-1180030 CULVERT, CONCRETE ROADWAY PIPE, 30 IN. 1,152.000 LF
103,225.04 48.09 315.00 89.61
DIA.

2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.				434.000 LF
48,664.90	66.75	300.00	112.13		
2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.				443.000 LF
55,811.40	95.00	183.00	125.99		
2416-1180048	CULVERT, CONCRETE ROADWAY PIPE, 48 IN. DIA.				607.000 LF
76,915.20	85.50	305.00	126.71		
2416-1180054	CULVERT, CONCRETE ROADWAY PIPE, 54 IN. DIA.				120.000 LF
19,683.50	133.35	212.00	164.03		
2416-1180060	CULVERT, CONCRETE ROADWAY PIPE, 60 IN. DIA.				600.000 LF
130,820.00	142.00	563.00	218.03		
2416-1180066	CULVERT, CONCRETE ROADWAY PIPE, 66 IN. DIA.				16.000 LF
4,864.00	304.00	304.00	304.00		
2416-1180072	CULVERT, CONCRETE ROADWAY PIPE, 72 IN. DIA.				181.000 LF
53,266.00	120.00	475.00	294.29		
2416-1190037	CULVERT, CONCRETE ARCH ENTRANCE PIPE, 37 IN. X 23 IN.				66.000 LF
5,940.00	90.00	90.00	90.00		
2416-1190065	CULVERT, CONCRETE ARCH ENTRANCE PIPE, 65 IN. X 40 IN.				12.000 LF
2,928.00	244.00	244.00	244.00		
2416-1190102	CULVERT, CONCRETE ARCH ENTRANCE PIPE, 102 IN. X 62 IN.				12.000 LF
6,984.00	582.00	582.00	582.00		
2416-1200044	CULVERT, CONCRETE ARCH ROADWAY PIPE, 44 IN. X 27 IN.				116.000 LF
18,072.80	155.80	155.80	155.80		
2416-1200052	CULVERT, CONCRETE ARCH ROADWAY PIPE, 52 IN. X 32 IN.				86.000 LF
11,180.00	130.00	130.00	130.00		
2416-1200059	CULVERT, CONCRETE ARCH ROADWAY PIPE, 59 IN. X 36 IN.				44.000 LF
13,234.40	190.45	595.00	300.78		
2416-1200065	CULVERT, CONCRETE ARCH ROADWAY PIPE, 65 IN. X 40 IN.				40.000 LF
7,200.00	180.00	180.00	180.00		
2416-1200073	CULVERT, CONCRETE ARCH ROADWAY PIPE, 73 IN. X 45 IN.				12.000 LF
3,192.60	266.05	266.05	266.05		
2416-1200088	CULVERT, CONCRETE ARCH ROADWAY PIPE, 88 IN. X 54 IN.				96.000 LF
33,062.40	344.40	344.40	344.40		

2416-1240042 CULVERT, 3000D CONCRETE ROADWAY PIPE, 42 IN. DIA. 120.000 LF
11,040.00 92.00 92.00 92.00

2416-1240054 CULVERT, 3000D CONCRETE ROADWAY PIPE, 54 IN. DIA. 74.000 LF
11,840.00 160.00 160.00 160.00

2416-1245036 CULVERT, 3750D CONCRETE ROADWAY PIPE, 36 IN. DIA. 26.000 LF
5,393.70 207.45 207.45 207.45

2416-1262018 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 18 IN. DIA. 104.000 LF
24,960.00 240.00 240.00 240.00

2416-1262024 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 24 IN. DIA. 130.000 LF
49,400.00 380.00 380.00 380.00

2416-1262036 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 36 IN. DIA. 42.000 LF
22,050.00 525.00 525.00 525.00

2416-1264018 CULVERT, CONCRETE PIPE, 3750D, TRENCHLESS, 18 IN. DIA. 188.000 LF
62,040.00 330.00 330.00 330.00

2416-1541036 REMOVE AND REINSTALL RIGID PIPE CULVERT LESS THAN OR EQUAL TO 36 IN. 252.000 LF
24,114.00 15.00 130.00 95.69

2416-1541136 REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER THAN 36 IN. 54.000 LF
7,200.00 80.00 200.00 133.33

2417-0225012 APRONS, METAL, 12 IN. DIA. 15.000 EACH
2,673.60 151.20 211.50 178.24

2417-0225015 APRONS, METAL, 15 IN. DIA. 44.000 EACH
8,186.70 125.00 240.00 186.06

2417-0225018 APRONS, METAL, 18 IN. DIA. 158.000 EACH
31,278.00 82.00 275.00 197.96

2417-0225024 APRONS, METAL, 24 IN. DIA. 96.000 EACH
26,783.99 106.00 674.00 279.00

2417-0225030 APRONS, METAL, 30 IN. DIA. 11.000 EACH
5,158.10 350.00 521.35 468.92

2417-0225036 APRONS, METAL, 36 IN. DIA. 14.000 EACH
6,198.00 340.00 575.00 442.71

2417-0225042 APRONS, METAL, 42 IN. DIA. 9.000 EACH
7,386.20 570.00 1,100.00 820.69

2417-0225048 APRONS, METAL, 48 IN. DIA. 7.000 EACH
6,460.00 670.00 1,400.00 922.86

2417-0225054 APRONS, METAL, 54 IN. DIA. 4.000 EACH
3,357.45 750.00 1,107.45 839.36

2417-0225060 APRONS, METAL, 60 IN. DIA. 1.000 EACH
1,000.00 1,000.00 1,000.00 1,000.00

2417-0225066 APRONS, METAL, 66 IN. DIA. 5.000 EACH
6,256.65 1,175.00 1,556.65 1,251.33

2417-0225072 APRONS, METAL, 72 IN. DIA. 4.000 EACH
7,000.00 1,750.00 1,750.00 1,750.00

2417-0225084 APRONS, METAL, 84 IN. DIA. 1.000 EACH
2,650.00 2,650.00 2,650.00 2,650.00

2417-0250035 APRONS, METAL, ARCH, 35 IN. X 24 IN. 4.000 EACH
1,900.00 475.00 475.00 475.00

2417-0250042 APRONS, METAL, ARCH, 42 IN. X 29 IN. 2.000 EACH
2,029.60 1,014.80 1,014.80 1,014.80

2417-0330018 APRONS, SAFETY SLOPE, 18 IN. DIA. 4.000 EACH
1,675.00 380.00 535.00 418.75

2417-0330024 APRONS, SAFETY SLOPE, 24 IN. DIA. 20.000 EACH
11,125.00 400.00 1,000.00 556.25

2417-0330030 APRONS, SAFETY SLOPE, 30 IN. DIA. 2.000 EACH
2,700.00 1,350.00 1,350.00 1,350.00

2417-0330036 APRONS, SAFETY SLOPE, 36 IN. DIA. 4.000 EACH
9,600.00 2,400.00 2,400.00 2,400.00

2417-0330060 APRONS, SAFETY SLOPE, 60 IN. DIA. 4.000 EACH
22,000.00 5,500.00 5,500.00 5,500.00

2417-0341036 REMOVE AND REINSTALL METAL APRONS LESS 1.000 EACH
690.00 690.00 690.00 690.00
THAN OR EQUAL TO 36 IN.

2417-1007000 CORRUGATED PIPE CULVERT, 175.000 LF
3,307.50 18.90 18.90 18.90

2417-1040015 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 8,689.000 LF
202,015.26 12.25 34.00 23.25
15 IN. DIA.

2417-1040018 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 6,924.900 LF
152,287.23 14.58 106.50 21.99
18 IN. DIA.

2417-1040024 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 3,030.500 LF
82,420.95 18.00 75.00 27.20
24 IN. DIA.

2417-1040030 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 472.000 LF
21,380.85 40.00 126.50 45.30
30 IN. DIA.

2417-1040036 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 928.000 LF
43,094.29 32.01 60.00 46.44
36 IN. DIA.

2417-1040042 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 52.000 LF
2,340.00 45.00 45.00 45.00

42 IN. DIA.

2417-1040048 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 128.000 LF
6,450.00 50.00 51.25 50.39
48 IN. DIA.

2417-1040060 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 116.000 LF
8,265.00 71.25 71.25 71.25
60 IN. DIA.

2417-1040072 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 329.500 LF
30,184.20 77.85 145.00 91.61
72 IN. DIA.

2417-1040084 CULVERT, CORRUGATED METAL ENTRANCE PIPE, 16.000 LF
2,800.00 175.00 175.00 175.00
84 IN. DIA.

2417-1060018 CULVERT, CORRUGATED METAL ROADWAY PIPE, 514.000 LF
10,576.80 18.50 46.60 20.58
18 IN. DIA.

2417-1060024 CULVERT, CORRUGATED METAL ROADWAY PIPE, 1,390.000 LF
48,370.50 21.00 102.00 34.80
24 IN. DIA.

2417-1060030 CULVERT, CORRUGATED METAL ROADWAY PIPE, 370.000 LF
17,456.60 45.00 50.45 47.18
30 IN. DIA.

2417-1060036 CULVERT, CORRUGATED METAL ROADWAY PIPE, 631.000 LF
36,363.20 42.00 73.30 57.63
36 IN. DIA.

2417-1060042 CULVERT, CORRUGATED METAL ROADWAY PIPE, 767.000 LF
54,721.80 47.00 105.00 71.35
42 IN. DIA.

2417-1060048 CULVERT, CORRUGATED METAL ROADWAY PIPE, 346.000 LF
25,462.00 67.00 87.00 73.59
48 IN. DIA.

2417-1060054 CULVERT, CORRUGATED METAL ROADWAY PIPE, 304.800 LF
23,888.70 74.00 100.25 78.38
54 IN. DIA.

2417-1060060 CULVERT, CORRUGATED METAL ROADWAY PIPE, 184.000 LF
18,138.28 85.00 183.19 98.58
60 IN. DIA.

2417-1060066 CULVERT, CORRUGATED METAL ROADWAY PIPE, 155.400 LF
9,491.93 54.00 125.45 61.08
66 IN. DIA.

2417-1060072 CULVERT, CORRUGATED METAL ROADWAY PIPE, 120.000 LF
10,992.00 91.60 91.60 91.60
72 IN. DIA.

2417-1080035 CULVERT, CORRUGATED METAL ARCH ENTRANCE 62.000 LF
3,999.00 64.50 64.50 64.50
PIPE, 35 IN. X 24 IN.

2417-1100042 CULVERT, CORRUGATED METAL ARCH ROADWAY 184.000 LF

12,692.80 60.35 78.40 68.98
PIPE, 42 IN. X 29 IN.

2417-1130015 CULVERT, CORRUGATED POLYETHYLENE 18.000 LF
972.00 54.00 54.00 54.00
ENTRANCE PIPE, 15 IN.

2417-1140024 CULVERT, CORRUGATED POLYETHYLENE ROADWAY 52.000 LF
3,432.00 66.00 66.00 66.00
PIPE, 24 IN.

2417-1461036 REMOVE AND REINSTALL CORRUGATED PIPE 313.000 LF
4,665.00 12.00 17.00 14.90
CULVERT LESS THAN OR EQUAL TO 36 IN.

2417-2307030 DRAIN, CORRUGATED METAL SLOTTED PIPE, 30 504.000 LF
52,241.50 62.50 180.00 103.65
IN., W/6 IN. GRATE

2417-2307036 DRAIN, CORRUGATED METAL SLOTTED PIPE, 36 364.000 LF
33,124.00 91.00 91.00 91.00
IN., W/6 IN. GRATE

2417-3550024 SLOTTED FLUME, CORRUGATED METAL, 24 IN. 72.000 LF
2,736.00 38.00 38.00 38.00

2417-5895015 BEVELED PIPE AND GUARD, 15 INCH 46.000 EACH
54,714.00 650.00 1,650.00 1,189.43

2418-1220000 PIPE INSTALLED BY TRENCHLESS 132.000 LF
47,520.00 360.00 360.00 360.00
CONSTRUCTION,

2420-1280096 CULVERT, STRUCTURAL PLATE ROADWAY PIPE, 84.000 LF
31,080.00 370.00 370.00 370.00
96 IN. DIA.

2420-1280108 CULVERT, STRUCTURAL PLATE ROADWAY PIPE, 88.000 LF
35,200.00 400.00 400.00 400.00
108 IN. DIA.

2420-1280120 CULVERT, STRUCTURAL PLATE ROADWAY PIPE, 104.000 LF
42,640.00 410.00 410.00 410.00
120 IN. DIA.

2420-1300117 CULVERT, STRUCTURAL PLATE PIPE ARCH, 117 107.000 LF
56,175.00 525.00 525.00 525.00
IN. X 79 IN.

2422-0360015 APRONS, UNCLASSIFIED, 15 IN. DIA. 14.000 EACH
3,363.00 150.00 650.00 240.21

2422-0360018 APRONS, UNCLASSIFIED, 18 IN. DIA. 69.000 EACH
26,849.00 140.00 649.00 389.12

2422-0360021 APRONS, UNCLASSIFIED, 21 IN. DIA. 2.000 EACH
440.00 220.00 220.00 220.00

2422-0360024 APRONS, UNCLASSIFIED, 24 IN. DIA. 70.000 EACH
41,913.50 160.00 674.00 598.76

2422-0360030 APRONS, UNCLASSIFIED, 30 IN. DIA. 9.000 EACH
4,640.00 220.00 1,000.00 515.56

2422-0360036 APRONS, UNCLASSIFIED, 36 IN. DIA. 6.000 EACH
3,370.00 350.00 813.00 561.67

2422-1722015 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 15 1,947.000 LF
39,679.60 12.20 26.00 20.38
IN. DIA.

2422-1722018 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 18 2,631.000 LF
72,565.00 18.95 40.00 27.58
IN. DIA.

2422-1722021 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 21 12.000 LF
354.60 29.55 29.55 29.55
IN. DIA.

2422-1722024 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 24 5,117.000 LF
142,284.10 17.25 51.00 27.81
IN. DIA.

2422-1722030 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 30 1,572.000 LF
46,573.60 27.40 49.00 29.63
IN. DIA.

2422-1722036 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 36 811.000 LF
28,874.00 34.00 44.50 35.60
IN. DIA.

2422-1722042 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 42 374.000 LF
14,964.30 39.45 42.45 40.01
IN. DIA.

2422-1722048 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 48 381.000 LF
19,277.30 48.80 52.50 50.60
IN. DIA.

2422-1722054 CULVERT, UNCLASSIFIED ENTRANCE PIPE, 54 153.000 LF
16,193.85 100.45 125.45 105.84
IN. DIA.

2422-1723024 CULVERT, UNCLASSIFIED ROADWAY PIPE, 24 284.000 LF
14,111.12 35.04 70.90 49.69
IN. DIA.

2422-1723030 CULVERT, UNCLASSIFIED ROADWAY PIPE, 30 232.000 LF
10,390.40 30.00 69.20 44.79
IN. DIA.

2422-1723036 CULVERT, UNCLASSIFIED ROADWAY PIPE, 36 238.000 LF
13,535.20 40.00 74.40 56.87
IN. DIA.

2422-1723048 CULVERT, UNCLASSIFIED ROADWAY PIPE, 48 67.000 LF
5,092.00 76.00 76.00 76.00
IN. DIA.

2422-1723054 CULVERT, UNCLASSIFIED ROADWAY PIPE, 54 10.000 LF
1,250.00 125.00 125.00 125.00
IN. DIA.

2423-1010700 OVERHEAD SIGN SUPPORT STRUCTURE, 1.000 EACH
38,500.00 38,500.00 38,500.00 38,500.00
ALUMINUM SUPERSTRUCTURE, 70 FT. SPAN

2423-1050330 OVERHEAD SIGN SUPPORT STRUCTURE, 11.000 EACH
300,000.00 22,500.00 27,750.00 27,272.73
CANTILEVERED, 33 FT. ARM

2423-1050350 OVERHEAD SIGN SUPPORT STRUCTURE, 1.000 EACH
22,600.00 22,600.00 22,600.00 22,600.00
CANTILEVERED, 35 FT. ARM

2424-6772250 SHOTCRETE 6,800.000 SF
238,000.00 35.00 35.00 35.00

2426-6772010 BEAM REPAIR, AS PER PLAN 4.000 LS
17,500.00 2,500.00 6,000.00 4,375.00

2426-6772013 REPAIR BEAM ENDS 16.000 EACH
24,350.00 350.00 3,640.00 1,521.88

2426-6772016 CONCRETE REPAIR 5,267.960 SF
491,942.22 40.00 546.00 93.38

2426-6772020 PARTIAL DEPTH BRIDGE DECK FINISH PATCH 4,713.000 SF
179,758.77 35.40 40.61 38.14

2427-0686010 BRIDGE CLEANING 15.000 LS
273,835.76 2,500.00 40,000.00 18,255.72

2429-0000100 PRE-ENGINEERED STEEL TRUSS TRAIL BRIDGE, 5.000 EACH
605,140.00 47,140.00 300,000.00 121,028.00

2430-0000100 MODULAR BLOCK RETAINING WALL 11,181.400 SF
259,823.54 18.50 45.00 23.24

2431-0000100 SEGMENTAL BLOCK RETAINING WALL 16,569.000 SF
411,564.06 17.00 50.66 24.84

2432-0000100 MECHANICALLY STABILIZED EARTH RETAINING 147,921.000 SF
3,358,621.45 20.70 32.00 22.71
WALL

2433-0001030 CONCRETE DRILLED SHAFT, 30 IN. DIAMETER 1,281.000 LF
320,250.00 250.00 250.00 250.00

2433-0001036 CONCRETE DRILLED SHAFT, 36 IN. DIAMETER 272.000 LF
156,400.00 575.00 575.00 575.00

2433-0001060 CONCRETE DRILLED SHAFT, 60 IN. DIAMETER 3,651.000 LF
1,095,300.00 300.00 300.00 300.00

2433-0002000 LOAD CELL TEST 2.000 EACH
206,000.00 103,000.00 103,000.00 103,000.00

2433-0003000 DEMONSTRATION SHAFT 188.500 LF
172,425.00 400.00 1,000.00 914.72

2434-0000100 DISC BEARING ASSEMBLIES 28.000 EACH
75,600.00 2,700.00 2,700.00 2,700.00

2435-0100490 MANHOLE, RA-49 3.000 EACH
7,075.00 1,750.00 3,575.00 2,358.33

2435-0100500 MANHOLE, RA-50 14.000 EACH
38,850.00 1,500.00 4,275.00 2,775.00

2435-0130148 MANHOLE, SANITARY SEWER, SW-301, 48 IN. 38.000 EACH
114,333.25 1,827.03 4,120.00 3,008.77

2435-0130348 MANHOLE, SANITARY SEWER, SW-303, 48 IN. 10.000 EACH
37,799.50 2,100.00 4,275.00 3,779.95

2435-0130360 MANHOLE, SANITARY SEWER, SW-303, 60 IN. 2.000 EACH
10,608.00 5,304.00 5,304.00 5,304.00

2435-0130384 MANHOLE, SANITARY SEWER, SW-303, 84 IN. 1.000 EACH
18,500.00 18,500.00 18,500.00 18,500.00

2435-0140148 MANHOLE, STORM SEWER, SW-401, 48 IN. 72.000 EACH
170,289.30 981.88 3,750.00 2,365.13

2435-0140160 MANHOLE, STORM SEWER, SW-401, 60 IN. 19.000 EACH
72,501.94 1,176.54 6,355.00 3,815.89

2435-0140172 MANHOLE, STORM SEWER, SW-401, 72 IN. 8.000 EACH
37,278.80 3,450.00 5,000.00 4,659.85

2435-0140184 MANHOLE, STORM SEWER, SW-401, 84 IN. 7.000 EACH
51,361.89 1,786.09 10,215.00 7,337.41

2435-0140196 MANHOLE, STORM SEWER, SW-401, 96 IN. 2.000 EACH
8,878.76 2,378.76 6,500.00 4,439.38

2435-0140200 MANHOLE, STORM SEWER, SW-402 18.000 EACH
70,580.41 1,600.00 6,083.10 3,921.13

2435-0140204 MANHOLE, STORM SEWER, SW-402, TOP ONLY 2.000 EACH
3,150.00 1,500.00 1,650.00 1,575.00

2435-0140214 MANHOLE, STORM SEWER, SW-402 MODIFIED, 7.000 EACH
8,575.00 1,225.00 1,225.00 1,225.00
TOP ONLY

2435-0140300 MANHOLE, STORM SEWER, SW-403 10.000 EACH
59,066.40 2,900.00 17,000.00 5,906.64

2435-0140310 MANHOLE, STORM SEWER, SW-403 MODIFIED 8.000 EACH
112,000.00 14,000.00 14,000.00 14,000.00

2435-0140400 MANHOLE, STORM SEWER, SW-404 1.000 EACH
3,441.90 3,441.90 3,441.90 3,441.90

2435-0200400 INTAKE, RA-40 27.000 EACH
68,663.60 2,065.90 3,600.00 2,543.10

2435-0200410 INTAKE, RA-41 8.000 EACH
20,736.00 1,859.00 3,500.00 2,592.00

2435-0200420 INTAKE, RA-42 4.000 EACH
6,350.00 1,400.00 1,650.00 1,587.50

2435-0200430 INTAKE, RA-43 16.000 EACH
34,889.40 1,165.00 4,000.00 2,180.59

2435-0200471 BARRIER INTAKE, RA-47A 54.000 EACH
380,062.80 7,038.20 7,038.20 7,038.20

2435-0200481 BARRIER INTAKE, RA-48A 52.000 EACH

272,957.20 2,787.75 11,200.00 5,249.18

2435-0200600 INTAKE, RA-60 6.000 EACH
16,915.50 2,819.25 2,819.25 2,819.25

2435-0200610 INTAKE, RA-61 1.000 EACH
2,000.00 2,000.00 2,000.00 2,000.00

2435-0200620 INTAKE, RA-62 1.000 EACH
3,100.00 3,100.00 3,100.00 3,100.00

2435-0200630 INTAKE, RA-63 52.000 EACH
63,186.00 777.00 2,400.00 1,215.12

2435-0200640 INTAKE, RA-64 3.000 EACH
5,800.00 1,850.00 2,100.00 1,933.33

2435-0200700 INTAKE, RA-70 3.000 EACH
9,300.00 3,100.00 3,100.00 3,100.00

2435-0250100 INTAKE, SW-501 134.000 EACH
287,337.13 1,250.00 4,605.00 2,144.31

2435-0250104 INTAKE, SW-501, TOP ONLY 2.000 EACH
4,080.00 2,040.00 2,040.00 2,040.00

2435-0250200 INTAKE, SW-502 3.000 EACH
6,984.12 1,884.12 3,000.00 2,328.04

2435-0250300 INTAKE, SW-503 54.000 EACH
181,575.60 2,700.00 4,000.00 3,362.51

2435-0250400 INTAKE, SW-504 2.000 EACH
12,546.80 6,273.40 6,273.40 6,273.40

2435-0250404 INTAKE, SW-504, TOP ONLY 6.000 EACH
16,830.00 2,805.00 2,805.00 2,805.00

2435-0250500 INTAKE, SW-505 81.000 EACH
320,466.00 2,600.00 6,451.00 3,956.37

2435-0250600 INTAKE, SW-506 24.000 EACH
148,324.80 3,300.00 9,823.70 6,180.20

2435-0250610 INTAKE, SW-506 MODIFIED 2.000 EACH
27,530.00 13,765.00 13,765.00 13,765.00

2435-0250700 INTAKE, SW-507 49.000 EACH
157,053.30 1,850.00 7,423.50 3,205.17

2435-0250704 INTAKE, SW-507, TOP ONLY 10.000 EACH
30,018.00 1,200.00 5,239.50 3,001.80

2435-0250710 INTAKE, SW-507 MODIFIED 5.000 EACH
16,500.00 2,400.00 3,900.00 3,300.00

2435-0250714 INTAKE, SW-507 MODIFIED, TOP ONLY 4.000 EACH
4,800.00 1,200.00 1,200.00 1,200.00

2435-0250800 INTAKE, SW-508 68.000 EACH
197,739.40 1,575.00 4,600.00 2,907.93

2435-0250804 INTAKE, SW-508, TOP ONLY 10.000 EACH

30,600.00 3,060.00 3,060.00 3,060.00

2435-0250810 INTAKE, SW-508 MODIFIED 1.000 EACH
3,960.00 3,960.00 3,960.00 3,960.00

2435-0250814 INTAKE, SW-508 MODIFIED, TOP ONLY 2.000 EACH
5,000.00 2,500.00 2,500.00 2,500.00

2435-0250900 INTAKE, SW-509 63.000 EACH
226,610.00 2,800.00 4,950.00 3,596.98

2435-0250910 INTAKE, SW-509 MODIFIED 18.000 EACH
87,300.00 4,850.00 4,850.00 4,850.00

2435-0250912 INTAKE, SW-509 MODIFIED, WELL ONLY 1.000 EACH
4,800.00 4,800.00 4,800.00 4,800.00

2435-0251000 INTAKE, SW-510 70.000 EACH
222,507.35 2,200.00 5,200.00 3,178.68

2435-0251004 INTAKE, SW-510, TOP ONLY 48.000 EACH
171,360.00 3,570.00 3,570.00 3,570.00

2435-0251010 INTAKE, SW-510 MODIFIED 2.000 EACH
10,000.00 5,000.00 5,000.00 5,000.00

2435-0251100 INTAKE, SW-511 18.000 EACH
54,295.90 1,900.00 4,990.30 3,016.44

2435-0251218 INTAKE, SW-512, 18 IN. 23.000 EACH
31,510.00 900.00 1,600.00 1,370.00

2435-0251224 INTAKE, SW-512, 24 IN. 12.000 EACH
18,081.00 825.00 2,330.00 1,506.75

2435-0251226 INTAKE, SW-512, 24 IN., TOP ONLY 4.000 EACH
6,120.00 1,530.00 1,530.00 1,530.00

2435-0251230 INTAKE, SW-512, 30 IN. 5.000 EACH
9,670.00 1,560.00 2,330.00 1,934.00

2435-0251232 INTAKE, SW-512, 30 IN., TOP ONLY 1.000 EACH
2,040.00 2,040.00 2,040.00 2,040.00

2435-0251236 INTAKE, SW-512, 36 IN. 14.000 EACH
16,950.00 850.00 2,600.00 1,210.71

2435-0251300 INTAKE, SW-513 14.000 EACH
45,991.70 2,200.00 7,236.70 3,285.12

2435-0254100 INTAKE, SW-541 17.000 EACH
61,370.00 2,765.00 5,100.00 3,610.00

2435-0254104 INTAKE, SW-541, TOP ONLY 1.000 EACH
1,500.00 1,500.00 1,500.00 1,500.00

2435-0254110 INTAKE, SW-541 MODIFIED 1.000 EACH
4,125.00 4,125.00 4,125.00 4,125.00

2435-0254114 INTAKE, SW-541 MODIFIED, TOP ONLY 1.000 EACH
2,600.00 2,600.00 2,600.00 2,600.00

2435-0254200 INTAKE EXTENSION UNIT, SW-542 5.000 EACH

28,750.00 5,750.00 5,750.00 5,750.00

2435-0254500 INTAKE, SW-545 40.000 EACH
180,567.21 2,500.00 4,950.00 4,514.18

2435-0254510 INTAKE, SW-545 MODIFIED 9.000 EACH
40,736.50 3,387.30 5,950.00 4,526.28

2435-0254514 INTAKE, SW-545 MODIFIED, TOP ONLY 1.000 EACH
2,250.00 2,250.00 2,250.00 2,250.00

2435-0254900 BARRIER INTAKE, SW-549 18.000 EACH
118,443.00 6,379.00 10,000.00 6,580.17

2435-0500000 CASTING EXTENSION RINGS 23.000 EACH
12,650.00 550.00 550.00 550.00

2435-0600010 MANHOLE ADJUSTMENT, MINOR 102.000 EACH
67,702.22 168.00 1,475.00 663.75

2435-0600020 MANHOLE ADJUSTMENT, MAJOR 52.000 EACH
75,249.12 725.00 5,700.00 1,447.10

2435-0600110 INTAKE ADJUSTMENT, MINOR 41.000 EACH
93,698.70 400.00 2,448.90 2,285.33

2435-0600120 INTAKE ADJUSTMENT, MAJOR 17.000 EACH
33,961.60 542.85 2,730.40 1,997.74

2435-0700010 CONNECTION TO EXISTING MANHOLE 42.000 EACH
40,812.65 400.00 2,870.65 971.73

2435-0700020 CONNECTION TO EXISTING INTAKE 4.000 EACH
4,200.00 400.00 1,450.00 1,050.00

2499-0100000 PIPE INSTALLED BY TRENCHLESS 96.000 LF
55,142.40 574.40 574.40 574.40
CONSTRUCTION,

2499-0700008 ERECT DETOUR BRIDGE UNITS 1.000 LS
11,500.00 11,500.00 11,500.00 11,500.00

2499-0700009 HAUL DETOUR BRIDGE UNITS 1.000 LS
14,000.00 14,000.00 14,000.00 14,000.00

2499-0700070 BRIDGE RAISING 1.000 LS
7,500.00 7,500.00 7,500.00 7,500.00

2499-0800000 PAVING NOTCH REPLACEMENT 342.800 LF
46,264.00 100.00 230.00 134.96

2499-2300001 DECK DRAINS 3.000 LS
39,400.00 7,400.00 16,000.00 13,133.33

2499-2300002 BRIDGE DRAINAGE SYSTEM 1.000 LS
110,000.00 110,000.00 110,000.00 110,000.00

2499-2300026 DRAIN EXTENSIONS 86.000 EACH
46,860.00 250.00 1,000.00 544.88

2499-4000036 SLIPLINING EXISTING CULVERTS, LESS THAN 58.000 LF
6,670.00 115.00 115.00 115.00
OR EQUAL TO 36 IN. DIA. OR HEIGHT

2499-4000136 SLIPLINING EXISTING CULVERTS, GREATER 243.500 LF
36,507.50 142.00 165.00 149.93
THAN 36 IN. DIA. OR HEIGHT

2501-0201042 PILES, STEEL, HP 10 X 42 69,505.000 LF
2,013,603.30 20.00 140.00 28.97

2501-0201057 PILES, STEEL, HP 10 X 57 142,225.000 LF
4,862,894.60 24.00 60.00 34.19

2501-0201253 PILES, STEEL, HP 12 X 53 36,115.000 LF
1,227,960.00 26.00 50.00 34.00

2501-0201473 PILES, STEEL, HP 14 X 73 12,085.000 LF
523,756.00 34.45 46.00 43.34

2501-0201489 PILES, STEEL, HP 14 X 89 3,645.000 LF
176,850.00 46.00 55.00 48.52

2501-5374060 TEST PILE 1.000 LS
1,500.00 1,500.00 1,500.00 1,500.00

2501-5475042 CONCRETE ENCASEMENT OF STEEL H PILES, HP 5,340.580 LF
376,047.30 40.00 120.00 70.41
10 X 42 (P10A TYPE 3)

2501-5475053 CONCRETE ENCASEMENT OF STEEL H PILES, HP 2,559.200 LF
189,961.20 58.00 180.00 74.23
12 X 53 (P10A TYPE 3)

2501-5478042 CONCRETE ENCASEMENT OF STEEL H PILES, HP 1,889.600 LF
128,710.40 65.00 75.00 68.12
10 X 42 (P10L TYPE 3)

2501-5478053 CONCRETE ENCASEMENT OF STEEL H PILES, HP 3,349.100 LF
197,263.30 45.00 75.00 58.90
12 X 53 (P10L TYPE 3)

2501-5478073 CONCRETE ENCASEMENT OF STEEL H PILES, HP 1,594.000 LF
125,229.40 60.00 101.00 78.56
14 X 73 (P10L TYPE 3)

2501-5650216 PILES, PRESTRESSED CONCRETE, 16 IN. 1,440.000 LF
73,440.00 51.00 51.00 51.00
(P10A TYPE 2)

2501-5658214 PILES, PRESTRESSED CONCRETE, 14 IN. 1,170.000 LF
58,500.00 50.00 50.00 50.00
(P10L TYPE 2)

2501-5658216 PILES, PRESTRESSED CONCRETE, 16 IN. 1,440.000 LF
89,280.00 62.00 62.00 62.00
(P10L TYPE 2)

2501-5775000 PILES, STEEL SHEET 6,646.000 SF
142,271.75 17.00 32.75 21.41

2501-6335010 PREBORED HOLES 11,507.000 LF
455,479.40 24.00 625.00 39.58

2501-8400170 TEMPORARY SHEET PILES AND SHORING 5.000 LS
532,720.00 16,220.00 316,000.00 106,544.00

2501-8400172 TEMPORARY SHORING 13.000 LS
459,800.00 2,000.00 100,000.00 35,369.23

2501-8400179 TEMPORARY SUPPORTS 2.000 LS
55,000.00 24,000.00 31,000.00 27,500.00

2502-2301000 FIN DRAIN, AS PER PLAN 895.000 LF
10,292.50 11.50 11.50 11.50

2502-2308100 TRENCH DRAIN 1,695.000 LF
86,660.00 15.00 52.00 51.13

2502-4388106 INTAKE, STANDPIPE, 6 IN., AS PER PLAN 1.000 EACH
250.00 250.00 250.00 250.00

2502-4388108 INTAKE, STANDPIPE, 8 IN., AS PER PLAN 7.000 EACH
910.00 130.00 130.00 130.00

2502-6745952 REMOVAL OF SUBDRAIN 52,125.600 LF
96,647.22 1.47 5.00 1.85

2502-8212024 SUBDRAIN, LONGITUDINAL, (BACKSLOPE) 4 3,400.000 LF
36,000.00 10.00 12.00 10.59
IN. DIA.

2502-8212034 SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. 1101462.700 LF
5,685,249.43 2.90 141.40 5.16
DIA.

2502-8212036 SUBDRAIN, LONGITUDINAL, (SHOULDER) 6 IN. 49,205.000 LF
449,539.30 5.90 18.00 9.14
DIA.

2502-8212104 SUBDRAIN, PLASTIC PIPE, 4 IN. 4,116.000 LF
43,311.60 6.00 16.72 10.52

2502-8212106 SUBDRAIN, PLASTIC PIPE, 6 IN. 20.000 LF
140.00 7.00 7.00 7.00

2502-8212115 SUBDRAIN, PLASTIC PIPE, 15 IN. 30.000 LF
420.00 14.00 14.00 14.00

2502-8212204 SUBDRAIN, PERFORATED PLASTIC PIPE, 4 IN. 19,046.500 LF
166,636.39 4.45 18.00 8.75
DIA.

2502-8212206 SUBDRAIN, PERFORATED PLASTIC PIPE, 6 IN. 14,500.000 LF
162,925.85 7.50 14.15 11.24
DIA.

2502-8212208 SUBDRAIN, PERFORATED PLASTIC PIPE, 8 IN. 2,070.000 LF
8,280.00 4.00 4.00 4.00
DIA.

2502-8212210 SUBDRAIN, PERFORATED PLASTIC PIPE, 10 114.000 LF
3,192.00 28.00 28.00 28.00
IN. DIA.

2502-8212212 SUBDRAIN, PERFORATED PLASTIC PIPE, 12 19.000 LF
608.00 32.00 32.00 32.00
IN. DIA.

2502-8212304 SUBDRAIN, STANDARD, PERFORATED, 4 IN., 14,549.900 LF
131,160.60 8.50 20.00 9.01
AS PER PLAN

2502-8212306 SUBDRAIN, STANDARD, PERFORATED, 6 IN., 3,650.000 LF
32,032.50 1.00 11.00 8.78
AS PER PLAN

2502-8212406 SUBDRAIN, STANDARD, NON-PERFORATED, 6 18.000 LF
329.94 18.33 18.33 18.33
IN., AS PER PLAN

2502-8212415 SUBDRAIN, STANDARD, NON-PERFORATED, 15 64.000 LF
960.00 15.00 15.00 15.00
IN., AS PER PLAN

2502-8213106 SUBDRAIN, PVC, STANDARD, NON-PERFORATED, 111.000 LF
1,282.05 11.55 11.55 11.55
6 IN.

2502-8213108 SUBDRAIN, PVC, STANDARD, NON-PERFORATED, 75.000 LF
1,125.00 15.00 15.00 15.00
8 IN.

2502-8213206 SUBDRAIN, PVC, STANDARD, PERFORATED, 6 7,318.000 LF
88,445.82 8.70 15.86 12.09
IN.

2502-8213208 SUBDRAIN, PVC, STANDARD, PERFORATED, 8 709.000 LF
11,875.75 16.75 16.75 16.75
IN.

2502-8214515 SUBDRAIN, 1500D CONCRETE PIPE, 15 IN. 95.000 LF
5,809.25 61.15 61.15 61.15
DIA.

2502-8214521 SUBDRAIN, 1500D CONCRETE PIPE, 21 IN. 185.000 LF
11,886.25 64.25 64.25 64.25
DIA.

2502-8214536 SUBDRAIN, 1500D CONCRETE PIPE, 36 IN. 320.000 LF
28,128.00 87.90 87.90 87.90
DIA.

2502-8215012 SUBDRAIN, 2000D CONCRETE PIPE, 12 IN. 155.000 LF
5,437.50 27.30 67.50 35.08
DIA.

2502-8215018 SUBDRAIN, 2000D CONCRETE PIPE, 18 IN. 125.000 LF
4,331.25 34.65 34.65 34.65
DIA.

2502-8215024 SUBDRAIN, 2000D CONCRETE PIPE, 24 IN. 6.000 LF
510.00 85.00 85.00 85.00
DIA.

2502-8215106 SUBDRAIN, CORRUGATED METAL PIPE, 6 IN. 128.000 LF
3,352.30 12.85 50.00 26.19
DIA.

2502-8215112 SUBDRAIN, CORRUGATED METAL PIPE, 12 IN. 362.000 LF
21,244.50 15.00 61.65 58.69
DIA.

2502-8215124 SUBDRAIN, CORRUGATED METAL PIPE, 24 IN. 120.000 LF
5,760.00 48.00 48.00 48.00
DIA.

2502-8215804 SUBDRAIN, TILE, 4 IN. DIA. 7,804.000 LF
69,705.00 3.00 10.50 8.93

2502-8215806 SUBDRAIN, TILE, 6 IN. DIA. 145.000 LF
2,318.00 9.40 50.00 15.99

2502-8215810 SUBDRAIN, TILE, 10 IN. DIA. 44.000 LF
814.40 13.00 23.10 18.51

2502-8215812 SUBDRAIN, TILE, 12 IN. DIA. 966.000 LF
25,028.00 14.00 30.50 25.91

2502-8220193 SUBDRAIN OUTLET (RF-19C) 1,128.000 EACH
186,251.99 48.34 500.00 165.12

2502-8220196 SUBDRAIN OUTLET, RF-19E 4,059.000 EACH
673,236.09 25.00 1,000.00 165.86

2502-8220197 SUBDRAIN OUTLET (RF-19F) 41.000 EACH
12,289.43 150.00 1,000.00 299.74

2502-8221006 SUBDRAIN RISER, 6 IN., AS PER PLAN 34.000 EACH
5,221.98 120.33 250.00 153.59

2503-0110008 STORM SEWER GRAVITY MAIN, TRENCHED, 8 341.000 LF
9,157.50 26.25 40.00 26.85
IN.

2503-0110012 STORM SEWER GRAVITY MAIN, TRENCHED, 12 164.000 LF
7,609.80 35.00 105.00 46.40
IN.

2503-0110015 STORM SEWER GRAVITY MAIN, TRENCHED, 15 1,983.000 LF
94,607.38 46.00 63.50 47.71
IN.

2503-0110018 STORM SEWER GRAVITY MAIN, TRENCHED, 18 470.000 LF
22,752.80 48.40 50.00 48.41
IN.

2503-0110021 STORM SEWER GRAVITY MAIN, TRENCHED, 21 47.000 LF
2,350.00 50.00 50.00 50.00
IN.

2503-0110024 STORM SEWER GRAVITY MAIN, TRENCHED, 24 1,965.000 LF
81,974.09 26.25 56.68 41.72
IN.

2503-0110027 STORM SEWER GRAVITY MAIN, TRENCHED, 27 430.000 LF
21,285.00 49.50 49.50 49.50
IN.

2503-0110030 STORM SEWER GRAVITY MAIN, TRENCHED, 30 2,510.000 LF
105,262.00 41.00 60.00 41.94
IN.

2503-0110036 STORM SEWER GRAVITY MAIN, TRENCHED, 36 25.000 LF
1,750.00 70.00 70.00 70.00

IN.

2503-0111015 STORM SEWER GRAVITY MAIN, TRENCHED, HIGH 41.000 LF
1,066.00 26.00 26.00 26.00
DENSITY POLYETHYLENE PIPE (HDPE), 15 IN
.

2503-0111018 STORM SEWER GRAVITY MAIN, TRENCHED, HIGH 145.000 LF
6,090.00 42.00 42.00 42.00
DENSITY POLYETHYLENE PIPE (HDPE), 18 IN
.

2503-0111024 STORM SEWER GRAVITY MAIN, TRENCHED, HIGH 9.000 LF
558.00 62.00 62.00 62.00
DENSITY POLYETHYLENE PIPE (HDPE), 24 IN
.

2503-0111030 STORM SEWER GRAVITY MAIN, TRENCHED, HIGH 44.800 LF
2,105.60 47.00 47.00 47.00
DENSITY POLYETHYLENE PIPE (HDPE), 30 IN
.

2503-0112008 STORM SEWER GRAVITY MAIN, TRENCHED, 18.500 LF
277.50 15.00 15.00 15.00
POLYVINYL CHLORIDE PIPE (PVC), 8 IN.

2503-0112010 STORM SEWER GRAVITY MAIN, TRENCHED, 120.000 LF
5,158.13 41.50 45.29 42.98
POLYVINYL CHLORIDE PIPE (PVC), 10 IN.

2503-0112012 STORM SEWER GRAVITY MAIN, TRENCHED, 106.000 LF
2,703.00 25.50 25.50 25.50
POLYVINYL CHLORIDE PIPE (PVC), 12 IN.

2503-0114212 STORM SEWER GRAVITY MAIN, TRENCHED, 3,042.000 LF
124,876.29 25.00 77.28 41.05
REINFORCED CONCRETE PIPE (RCP), 2000D (C
III), 12 IN.

2503-0114215 STORM SEWER GRAVITY MAIN, TRENCHED, 32,568.500 LF
1,298,328.91 17.00 225.00 39.86
REINFORCED CONCRETE PIPE (RCP), 2000D (C
III), 15 IN.

2503-0114218 STORM SEWER GRAVITY MAIN, TRENCHED, 7,441.100 LF
317,706.90 21.00 225.00 42.70
REINFORCED CONCRETE PIPE (RCP), 2000D (C
III), 18 IN.

2503-0114221 STORM SEWER GRAVITY MAIN, TRENCHED, 996.000 LF
33,366.00 33.50 33.50 33.50
REINFORCED CONCRETE PIPE (RCP), 2000D (C
III), 21 IN.

2503-0114224 STORM SEWER GRAVITY MAIN, TRENCHED, 14,411.000 LF
717,596.65 33.00 250.00 49.80
REINFORCED CONCRETE PIPE (RCP), 2000D (C
III), 24 IN.

2503-0114227 STORM SEWER GRAVITY MAIN, TRENCHED, 1,108.000 LF
43,780.12 39.10 41.16 39.51
REINFORCED CONCRETE PIPE (RCP), 2000D (C
III), 27 IN.

2503-0114230 STORM SEWER GRAVITY MAIN, TRENCHED, 7,722.200 LF
442,773.42 35.00 125.00 57.34
REINFORCED CONCRETE PIPE (RCP), 2000D (C III), 30 IN.

2503-0114236 STORM SEWER GRAVITY MAIN, TRENCHED, 3,179.100 LF
224,116.61 57.70 120.44 70.50
REINFORCED CONCRETE PIPE (RCP), 2000D (C III), 36 IN.

2503-0114242 STORM SEWER GRAVITY MAIN, TRENCHED, 2,233.000 LF
220,434.10 56.00 132.00 98.72
REINFORCED CONCRETE PIPE (RCP), 2000D (C III), 42 IN.

2503-0114248 STORM SEWER GRAVITY MAIN, TRENCHED, 1,078.000 LF
123,884.92 80.00 352.00 114.92
REINFORCED CONCRETE PIPE (RCP), 2000D (C III), 48 IN.

2503-0114254 STORM SEWER GRAVITY MAIN, TRENCHED, 94.000 LF
13,545.40 144.10 144.10 144.10
REINFORCED CONCRETE PIPE (RCP), 2000D (C III), 54 IN.

2503-0114272 STORM SEWER GRAVITY MAIN, TRENCHED, 136.700 LF
29,117.10 213.00 213.00 213.00
REINFORCED CONCRETE PIPE (RCP), 2000D (C III), 72 IN.

2503-0114424 STORM SEWER GRAVITY MAIN, TRENCHED, 49.000 LF
3,871.00 79.00 79.00 79.00
REINFORCED CONCRETE PIPE (RCP), 3000D (C IV), 24 IN.

2503-0114460 STORM SEWER GRAVITY MAIN, TRENCHED, 335.000 LF
65,325.00 195.00 195.00 195.00
REINFORCED CONCRETE PIPE (RCP), 3000D (C IV), 60 IN.

2503-0114472 STORM SEWER GRAVITY MAIN, TRENCHED, 1,385.000 LF
351,790.00 254.00 254.00 254.00
REINFORCED CONCRETE PIPE (RCP), 3000D (C IV), 72 IN.

2503-0114615 STORM SEWER GRAVITY MAIN, TRENCHED, 3,713.000 LF
130,104.00 31.50 43.00 35.04
REINFORCED CONCRETE PIPE (RCP), 3750D (C V), 15 IN.

2503-0114618 STORM SEWER GRAVITY MAIN, TRENCHED, 2,867.000 LF
113,951.50 36.50 53.00 39.75
REINFORCED CONCRETE PIPE (RCP), 3750D (C V), 18 IN.

2503-0116222 STORM SEWER GRAVITY MAIN, TRENCHED, 157.000 LF
9,118.10 39.15 68.00 58.08
REINFORCED CONCRETE ARCH PIPE (RCAP), 20(CLASS A-III), 22 IN. X 14 IN.

2503-0116229 STORM SEWER GRAVITY MAIN, TRENCHED, 246.000 LF
13,030.00 51.00 62.00 52.97

REINFORCED CONCRETE ARCH PIPE (RCAP), 20(CLASS A-III), 29 IN. X 18 IN.

2503-0116237 STORM SEWER GRAVITY MAIN, TRENCHED, 105.000 LF
9,975.00 95.00 95.00 95.00
REINFORCED CONCRETE ARCH PIPE (RCAP), 20(CLASS A-III), 37 IN. X 23 IN.

2503-0116252 STORM SEWER GRAVITY MAIN, TRENCHED, 51.000 LF
9,435.00 185.00 185.00 185.00
REINFORCED CONCRETE ARCH PIPE (RCAP), 20(CLASS A-III), 52 IN. X 32 IN.

2503-0116265 STORM SEWER GRAVITY MAIN, TRENCHED, 28.600 LF
5,434.00 190.00 190.00 190.00
REINFORCED CONCRETE ARCH PIPE (RCAP), 20(CLASS A-III), 65 IN. X 40 IN.

2503-0120024 STORM SEWER GRAVITY MAIN, TRENCHLESS, 24 78.000 LF
27,300.00 350.00 350.00 350.00
IN.

2503-0120042 STORM SEWER GRAVITY MAIN, TRENCHLESS, 42 60.000 LF
36,780.00 613.00 613.00 613.00
IN.

2503-0124218 STORM SEWER GRAVITY MAIN, TRENCHLESS, 118.000 LF
26,137.00 221.50 221.50 221.50
REINFORCED CONCRETE PIPE (RCP), 2000D (CSS III), 18 IN.

2503-0124224 STORM SEWER GRAVITY MAIN, TRENCHLESS, 176.000 LF
68,640.00 390.00 390.00 390.00
REINFORCED CONCRETE PIPE (RCP), 2000D (CSS III), 24 IN.

2503-0124227 STORM SEWER GRAVITY MAIN, TRENCHLESS, 92.000 LF
29,486.00 320.50 320.50 320.50
REINFORCED CONCRETE PIPE (RCP), 2000D (CSS III), 27 IN.

2503-0124421 STORM SEWER GRAVITY MAIN, TRENCHLESS, 55.000 LF
17,325.00 315.00 315.00 315.00
REINFORCED CONCRETE PIPE (RCP), 3000D (CSS IV), 21 IN.

2503-0124436 STORM SEWER GRAVITY MAIN, TRENCHLESS, 110.000 LF
41,250.00 375.00 375.00 375.00
REINFORCED CONCRETE PIPE (RCP), 3000D (CSS IV), 36 IN.

2503-0124624 STORM SEWER GRAVITY MAIN, TRENCHLESS, 80.000 LF
20,000.00 250.00 250.00 250.00
REINFORCED CONCRETE PIPE (RCP), 3750D (CSS V), 24 IN.

2503-0200036 REMOVE STORM SEWER PIPE LESS THAN OR 24,406.500 LF
300,015.80 4.25 54.00 12.29
EQUAL TO 36 IN.

2503-0200136 REMOVE STORM SEWER PIPE GREATER THAN 36 962.000 LF
10,283.29 5.00 49.00 10.69
IN.

2503-0200236 REMOVE AND REINSTALL STORM SEWER PIPE 80.000 LF
4,192.00 50.00 54.00 52.40
LESS THAN OR EQUAL TO 36 IN.

2503-0500400 BRIDGE END DRAIN, RF-40 94.000 EACH
250,850.00 1,300.00 5,000.00 2,668.62

2503-3775012 GATE, OUTLET CONTROL, FLAP, 12 IN. 1.000 EACH
1,130.90 1,130.90 1,130.90 1,130.90

2503-3775018 GATE, OUTLET CONTROL, FLAP, 18 IN. 1.000 EACH
1,435.40 1,435.40 1,435.40 1,435.40

2503-3775024 GATE, OUTLET CONTROL, FLAP, 24 IN. 4.000 EACH
6,950.00 550.00 2,200.00 1,737.50

2503-4360110 INTAKE, MODIFICATION 2.000 EACH
2,729.88 1,364.94 1,364.94 1,364.94

2503-4400000 INTAKE, TOP ONLY, AS PER PLAN 3.000 EACH
2,045.70 605.35 835.00 681.90

2503-4450245 INTAKE, REBUILDING, AS PER PLAN 3.000 EACH
1,600.00 450.00 700.00 533.33

2503-4450410 INTAKE, TYPE B, AS PER PLAN 4.000 EACH
11,600.00 2,900.00 2,900.00 2,900.00

2503-4450430 INTAKE, TYPE D, AS PER PLAN 3.000 EACH
11,100.00 3,700.00 3,700.00 3,700.00

2503-4470400 INTAKE, RA-40 5.000 EACH
12,239.00 2,200.00 3,239.00 2,447.80

2503-4470404 INTAKE, RA-40, TOP ONLY 1.000 EACH
2,200.00 2,200.00 2,200.00 2,200.00

2503-4470410 INTAKE, RA-41 1.000 EACH
4,169.00 4,169.00 4,169.00 4,169.00

2503-4470414 INTAKE, RA-41, TOP ONLY 2.000 EACH
8,360.00 4,180.00 4,180.00 4,180.00

2503-4470430 INTAKE, RA-43 7.000 EACH
23,100.00 3,300.00 3,300.00 3,300.00

2503-4470434 INTAKE, RA-43, TOP ONLY 3.000 EACH
3,900.00 1,300.00 1,300.00 1,300.00

2503-4470437 INTAKE, RA-43 MODIFIED, WELL ONLY 3.000 EACH
17,400.00 5,800.00 5,800.00 5,800.00

2503-4470610 INTAKE, RA-61 1.000 EACH
1,700.00 1,700.00 1,700.00 1,700.00

2503-4470630 INTAKE, RA-63 7.000 EACH
9,300.00 1,000.00 2,000.00 1,328.57

2503-4470704 INTAKE, RA-70 TOP ONLY 2.000 EACH
10,230.00 5,115.00 5,115.00 5,115.00

2503-4480500 STORM SEWER UTILITY ACCESS, RA-50 8.000 EACH

20,100.00 2,000.00 4,500.00 2,512.50

2503-4480505 STORM SEWER UTILITY ACCESS, RA-50 5.000 EACH
17,400.00 3,200.00 3,900.00 3,480.00
MODIFIED

2503-7181036 REMOVE STORM SEWER PIPE LESS THAN OR 325.000 LF
1,638.00 4.00 10.00 5.04
EQUAL TO 36 IN.

2503-7181136 REMOVE STORM SEWER PIPE GREATER THAN 36 450.000 LF
3,600.00 8.00 8.00 8.00
IN.

2503-7182036 REMOVE AND REINSTALL STORM SEWER PIPE 55.000 LF
1,650.00 30.00 30.00 30.00
LESS THAN OR EQUAL TO 36 IN.

2503-7325012 SEWER PIPE, 2000D STORM, 12 IN. DIA. 595.000 LF
15,237.08 23.00 72.70 25.61

2503-7325015 SEWER PIPE, 2000D STORM, 15 IN. DIA. 1,172.000 LF
37,799.00 25.00 44.00 32.25

2503-7325018 SEWER PIPE, 2000D STORM, 18 IN. DIA. 1,375.000 LF
47,893.50 29.50 39.50 34.83

2503-7325021 SEWER PIPE, 2000D STORM, 21 IN. DIA. 51.500 LF
1,442.00 28.00 28.00 28.00

2503-7325024 SEWER PIPE, 2000D STORM, 24 IN. DIA. 1,290.000 LF
56,852.00 30.00 385.00 44.07

2503-7325027 SEWER PIPE, 2000D STORM, 27 IN. DIA. 276.000 LF
11,730.00 42.50 42.50 42.50

2503-7325030 SEWER PIPE, 2000D STORM, 30 IN. DIA. 980.500 LF
37,189.00 36.00 67.00 37.93

2503-7325042 SEWER PIPE, 2000D STORM, 42 IN. DIA. 165.000 LF
12,375.00 75.00 75.00 75.00

2503-7325048 SEWER PIPE, 2000D STORM, 48 IN. DIA. 384.000 LF
36,480.00 95.00 95.00 95.00

2503-7325066 SEWER PIPE, 2000D STORM, 66 IN. DIA. 414.000 LF
52,992.00 128.00 128.00 128.00

2503-7326015 SEWER PIPE, 2000D JACKED STORM, 15 IN. 32.000 LF
7,808.00 244.00 244.00 244.00
DIA.

2503-7382008 SEWER PIPE, PLASTIC STORM, 8 IN. DIA. 56.000 LF
700.00 12.50 12.50 12.50

2503-7382010 SEWER PIPE, PLASTIC STORM, 10 IN. DIA. 263.000 LF
5,391.50 20.50 20.50 20.50

2504-0114008 SANITARY SEWER GRAVITY MAIN, TRENCHED, 1,892.000 LF
81,909.23 35.34 48.57 43.29
POLYVINYL CHLORIDE PIPE (PVC), 8 IN.

2504-0114012 SANITARY SEWER GRAVITY MAIN, TRENCHED, 1,079.000 LF

51,997.01 48.19 48.19 48.19
POLYVINYL CHLORIDE PIPE (PVC), 12 IN.

2504-0114018 SANITARY SEWER GRAVITY MAIN, TRENCHED, 1,535.000 LF
90,472.90 58.94 58.94 58.94
POLYVINYL CHLORIDE PIPE (PVC), 18 IN.

2504-0114024 SANITARY SEWER GRAVITY MAIN, TRENCHED, 140.000 LF
11,354.00 81.10 81.10 81.10
POLYVINYL CHLORIDE PIPE (PVC), 24 IN.

2504-0116004 SANITARY SEWER GRAVITY MAIN, TRENCHED, 20.000 LF
860.00 43.00 43.00 43.00
DUCTILE IRON PIPE (DIP), 4 IN.

2504-0116008 SANITARY SEWER GRAVITY MAIN, TRENCHED, 86.000 LF
6,260.20 64.00 73.95 72.79
DUCTILE IRON PIPE (DIP), 8 IN.

2504-0116010 SANITARY SEWER GRAVITY MAIN, TRENCHED, 47.000 LF
3,102.00 66.00 66.00 66.00
DUCTILE IRON PIPE (DIP), 10 IN.

2504-0116018 SANITARY SEWER GRAVITY MAIN, TRENCHED, 161.000 LF
27,048.00 168.00 168.00 168.00
DUCTILE IRON PIPE (DIP), 18 IN.

2504-0119008 SANITARY SEWER GRAVITY MAIN, TRENCHED, 80.000 LF
6,880.00 86.00 86.00 86.00
VITRIFIED CLAY PIPE (VCP), EXTRA
STRENGT, 8 IN.

2504-0119012 SANITARY SEWER GRAVITY MAIN, TRENCHED, 24.000 LF
1,536.00 64.00 64.00 64.00
VITRIFIED CLAY PIPE (VCP), EXTRA
STRENGT, 12 IN.

2504-0119015 SANITARY SEWER GRAVITY MAIN, TRENCHED, 6.000 LF
720.00 120.00 120.00 120.00
VITRIFIED CLAY PIPE (VCP), EXTRA
STRENGT, 15 IN.

2504-0200404 SANITARY SEWER SERVICE STUB, POLYVINYL 548.000 LF
19,180.00 35.00 35.00 35.00
CHLORIDE PIPE (PVC), 4 IN.

2504-0200406 SANITARY SEWER SERVICE STUB, POLYVINYL 997.000 LF
38,148.50 27.00 55.62 38.26
CHLORIDE PIPE (PVC), 6 IN.

2504-0220000 SANITARY SEWER SERVICE RELOCATION 7.000 EACH
6,100.00 320.00 2,250.00 871.43

2504-0230000 SEWAGE AIR RELEASE VALVE AND PIT 1.000 EACH
5,300.00 5,300.00 5,300.00 5,300.00

2504-0240036 REMOVE SANITARY SEWER PIPE LESS THAN OR 3,613.000 LF
44,381.91 1.03 94.36 12.28
EQUAL TO 36 IN.

2504-4650007 UTILITY ACCESS, REBUILD SANITARY SEWER, 1.000 EACH
359.69 359.69 359.69 359.69
TOP ONLY

2504-7065008 SEWER PIPE, PLASTIC SANITARY, 8 IN. DIA. 582.500 LF
20,856.25 32.50 36.00 35.80

2504-7065015 SEWER PIPE, PLASTIC SANITARY, 15 IN. 2,732.000 LF
112,012.00 41.00 41.00 41.00
DIA.

2504-7065018 SEWER PIPE, PLASTIC SANITARY, 18 IN. 644.000 LF
27,370.00 42.50 42.50 42.50
DIA.

2504-7065021 SEWER PIPE, PLASTIC SANITARY, 21 IN. 382.500 LF
17,212.50 45.00 45.00 45.00
DIA.

2504-7398004 SEWER SERVICE, SANITARY, 4 IN. DIA. 209.400 LF
5,444.40 26.00 26.00 26.00

2504-7398006 SEWER SERVICE, SANITARY, 6 IN. DIA. 775.000 LF
42,801.00 55.00 77.00 55.23

2504-8462510 SANITARY SEWER UTILITY ACCESS (PRECAST) 3.000 EACH
7,200.00 2,400.00 2,400.00 2,400.00
(RA-51)

2504-8463500 UTILITY ACCESS, SANITARY SEWER, STANDARD 20.000 EACH
59,975.00 2,500.00 5,000.00 2,998.75

2505-4008100 REMOVAL OF GUARDRAIL 9,577.000 LF
40,226.70 1.50 10.00 4.20

2505-4008120 REMOVAL OF STEEL BEAM GUARDRAIL 48,879.450 LF
222,461.04 1.50 23.00 4.55

2505-4008130 REMOVAL OF CABLE GUARDRAIL 32,192.000 LF
69,930.55 1.00 5.00 2.17

2505-4008200 INSTALLATION OF GUARDRAIL 20,337.300 LF
270,276.70 4.00 27.00 13.29

2505-4008300 STEEL BEAM GUARDRAIL 28,435.050 LF
464,334.83 5.50 120.00 16.33

2505-4008400 STEEL BEAM GUARDRAIL BARRIER TRANSITION 445.000 EACH
686,120.70 787.50 2,100.00 1,541.84
SECTION

2505-4020229 GUARDRAIL, END ANCHORAGE, CABLE, RE-29A 45.000 EACH
41,560.00 800.00 2,160.00 923.56

2505-4020580 GUARDRAIL, SPECIAL ANCHOR SECTION 20.000 EACH
43,050.00 1,050.00 3,150.00 2,152.50

2505-4021010 STEEL BEAM GUARDRAIL END ANCHOR, BOLTED 409.000 EACH
98,632.40 100.00 2,100.00 241.16

2505-4021020 STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM 17.000 EACH
15,450.00 200.00 2,000.00 908.82

2505-4021030 STEEL BEAM GUARDRAIL END ANCHOR, THRIE 9.000 EACH
4,150.00 250.00 1,200.00 461.11
BEAM

2505-4021272 GUARDRAIL, END ANCHORAGE, BEAM, RE-27B 8.000 EACH
1,700.00 125.00 300.00 212.50

2505-4021690 GUARDRAIL, END ANCHORAGE, BEAM, RE-69 97.000 EACH
24,320.00 120.00 325.00 250.72

2505-4021700 STEEL BEAM GUARDRAIL END TERMINAL 462.000 EACH
781,930.30 220.00 2,200.00 1,692.49

2505-4021701 STEEL BEAM GUARDRAIL FLARED END TERMINAL 38.000 EACH
66,955.00 1,250.00 3,000.00 1,761.97

2505-4021762 GUARDRAIL TERMINAL, BEAM, FLARED, RE-76 118.000 EACH
152,986.00 1,000.00 1,800.00 1,296.49

2505-4500370 GUARDRAIL, SPECIAL POST ADAPTER UNIT, 6.000 EACH
1,800.00 300.00 300.00 300.00
RE-37

2505-6000111 HIGH TENSION CABLE GUARDRAIL 224,238.800 LF
1,727,713.03 5.90 20.00 7.70

2505-6000121 HIGH TENSION CABLE GUARDRAIL, END ANCHOR 145.000 EACH
306,273.84 1,600.00 3,150.00 2,112.23

2505-6000131 HIGH TENSION CABLE GUARDRAIL, SPARE 13.000 EACH
22,094.62 1,200.00 2,625.00 1,699.59
PARTS KIT

2505-6000211 LOW TENSION CABLE GUARDRAIL 4,155.000 LF
23,974.00 4.00 14.10 5.77

2505-6000221 LOW TENSION CABLE GUARDRAIL END ANCHOR 10.000 EACH
12,400.00 1,000.00 1,300.00 1,240.00

2506-4984000 FLOWABLE MORTAR 1,566.480 CY
209,786.66 86.30 1,400.00 133.92

2507-0050005 EARTH SCREW ANCHOR 225.000 EACH
9,391.80 35.00 64.90 41.74

2507-3250005 ENGINEERING FABRIC 157,775.450 SY
361,549.61 0.95 16.00 2.29

2507-4011100 CONCRETE GROUT FOR REVETMENT OR GABION 247.500 CY
53,715.00 150.00 285.00 217.03

2507-6799000 BANK SHAPING 4.000 LS
6,600.00 700.00 2,900.00 1,650.00

2507-6800011 REVETMENT, CLASS A 1,106.000 SY
21,567.00 19.50 19.50 19.50

2507-6800021 REVETMENT, CLASS B 6,910.000 TON
272,110.20 20.00 48.50 39.38

2507-6800042 REVETMENT, CLASS D 7,788.200 TON
290,484.40 25.00 55.00 37.30

2507-6800061 REVETMENT, CLASS E 129,898.730 TON
4,040,049.53 10.45 150.00 31.10

2507-6825001 REVETMENT, CONCRETE, HAUL AND PLACE 57.000 CY
2,850.00 50.00 50.00 50.00

2507-6825005 REVETMENT, CONCRETE, HAUL AND PLACE 730.000 TON
12,919.98 14.97 20.00 17.70

2507-6850053 REVETMENT, SPECIAL 470.000 TON
15,040.00 32.00 32.00 32.00

2507-6875002 REVETMENT, REMOVE AND REPLACE 1,430.100 CY
25,721.50 12.00 65.00 17.99

2507-8029000 EROSION STONE 13,195.470 TON
303,055.60 10.00 100.00 22.97

2507-8500040 FABRIC FORMED CONCRETE REVETMENT, 1,314.200 SY
49,584.15 35.00 38.50 37.73
ARTICULATING BLOCK MAT, 4 INCH

2507-8500060 FABRIC FORMED CONCRETE REVETMENT, 1,581.600 SY
49,419.62 27.50 35.00 31.25
ARTICULATING BLOCK MAT, 6 INCH

2507-8500080 FABRIC FORMED CONCRETE REVETMENT, 1,934.900 SY
72,880.13 28.95 40.00 37.67
ARTICULATING BLOCK MAT, 8 INCH

2507-8501100 CONCRETE GROUT FOR FABRIC FORMED 795.300 CY
188,187.50 120.00 285.00 236.62
CONCRETE REVETMENT

2508-0804000 BRIDGE CLEANING FOR PAINTING 15.000 LS
276,720.00 810.00 120,000.00 18,448.00

2508-0805000 BLAST CLEANING OF STRUCTURAL STEEL 16.000 LS
2,055,827.00 4,950.00 617,000.00 128,489.19

2508-0970000 CONTAINMENT 23.000 LS
889,810.00 550.00 200,000.00 38,687.39

2508-0990000 PAINT WASTE TRANSPORT AND DISPOSAL 14.000 LS
110,200.00 1,000.00 40,000.00 7,871.43

2508-0991000 PAINTING OF STRUCTURAL STEEL 24.000 LS
843,121.00 3,000.00 130,000.00 35,130.04

2509-0000012 TEMPORARY CRASH CUSHION 1.000 EACH
3,500.00 3,500.00 3,500.00 3,500.00

2510-6745030 REMOVAL OF ANCHOR LUGS 6.000 EACH
3,600.00 600.00 600.00 600.00

2510-6745640 REMOVAL OF EXISTING P.C. OVERLAY 8,159.200 SY
111,164.60 6.00 15.00 13.62

2510-6745850 REMOVAL OF PAVEMENT 1394406.987 SY
6,463,553.71 1.55 191.00 4.64

2510-6750501 REMOVAL AND CRUSHING OF PAVEMENT 261,627.720 SY
658,414.61 1.00 5.06 2.52

2510-6750600 REMOVAL OF INTAKES AND UTILITY ACCESSES 471.000 EACH
236,402.90 157.86 2,300.00 501.92

2511-0300000	REMOVAL OF RECREATIONAL TRAIL				16,348.300	SY
55,833.22	2.50	5.25	3.42			
2511-0301300	RECREATIONAL TRAIL, HOT MIX ASPHALT, 3 IN.				1,908.000	SY
36,538.20	19.15	19.15	19.15			
2511-0301400	RECREATIONAL TRAIL, HOT MIX ASPHALT, 4 IN.				22,710.900	SY
424,336.60	16.00	25.00	18.68			
2511-0301500	RECREATIONAL TRAIL, HOT MIX ASPHALT, 5 IN.				2,058.000	SY
72,030.00	35.00	35.00	35.00			
2511-0301600	RECREATIONAL TRAIL, HOT MIX ASPHALT, 6 IN.				23,281.600	SY
735,641.80	7.00	40.00	31.60			
2511-0302500	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 5 IN.				133,771.400	SY
3,056,835.51	21.00	45.00	22.85			
2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.				105,340.300	SY
2,415,989.15	20.57	67.00	22.94			
2511-0302700	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 7 IN.				2,227.100	SY
55,578.66	24.41	29.45	24.96			
2511-0302800	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 8 IN.				2,303.560	SY
89,617.25	29.53	75.00	38.90			
2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL				1,169.640	STA
141,071.66	25.04	700.00	120.61			
2511-6745900	REMOVAL OF SIDEWALK				33,656.990	SY
255,281.12	2.00	120.00	7.58			
2511-7526004	SIDEWALK, P.C. CONCRETE, 4 IN.				40,099.810	SY
1,188,818.36	22.00	185.00	29.65			
2511-7526005	SIDEWALK, P.C. CONCRETE, 5 IN.				23,443.300	SY
729,682.65	25.00	102.00	31.13			
2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.				13,253.080	SY
559,003.00	25.00	165.00	42.18			
2511-7526008	SIDEWALK, P.C. CONCRETE, 8 IN.				382.410	SY
18,873.75	32.00	120.00	49.35			
2511-7526106	SIDEWALK, REINFORCED P.C. CONCRETE, 6 IN.				822.500	SY
31,658.50	35.00	200.00	38.49			
2511-7528100	DETECTABLE WARNINGS FOR CURB RAMPS				17,885.200	SF
561,411.77	3.00	150.00	31.39			
2512-1725156	CURB AND GUTTER, P.C. CONCRETE, 1.5 FT.				8,353.000	LF

187,689.95 18.00 55.00 22.47

2512-1725206 CURB AND GUTTER, P.C. CONCRETE, 2.0 FT. 8,050.000 LF
201,335.15 13.00 50.00 25.01

2512-1725256 CURB AND GUTTER, P.C. CONCRETE, 2.5 FT. 21,811.900 LF
521,720.84 18.00 52.50 23.92

2512-1725306 CURB AND GUTTER, P.C. CONCRETE, 3.0 FT. 4,014.200 LF
84,400.40 16.25 42.00 21.03

2512-1725356 CURB AND GUTTER, P.C. CONCRETE, 3.5 FT. 1,377.600 LF
47,705.80 25.00 36.00 34.63

2512-1725406 CURB AND GUTTER, P.C. CONCRETE, 4.0 FT. 831.000 LF
17,487.00 21.00 30.00 21.04

2512-1725456 CURB AND GUTTER, P.C. CONCRETE, 4.5 FT. 2,195.000 LF
76,825.00 35.00 35.00 35.00

2512-1725506 CURB AND GUTTER, P.C. CONCRETE, 5.0 FT. 223.000 LF
8,362.50 37.50 37.50 37.50

2512-1725556 CURB AND GUTTER, P.C. CONCRETE, 5.5 FT. 11,909.000 LF
285,816.00 24.00 24.00 24.00

2512-1750006 CURB AND GUTTER, P.C. CONCRETE, AS PER PLAN 285.000 LF
13,466.25 47.25 47.25 47.25

2512-1859000 CURB, SPECIAL, AS PER PLAN 2,746.100 LF
40,701.00 10.00 16.00 14.82

2513-0001020 CONCRETE BARRIER, BA-102 481.900 LF
76,247.61 115.00 159.90 158.22

2513-0001050 CONCRETE BARRIER, BA-105 7.000 EACH
13,181.00 1,325.00 1,976.00 1,883.00

2513-0001070 CONCRETE BARRIER RAIL, BA-107 7.000 EACH
11,953.00 1,465.00 1,748.00 1,707.57

2513-0001080 CONCRETE BARRIER RAIL, BA-108 10.000 EACH
36,000.00 2,500.00 5,000.00 3,600.00

2513-0471000 CONCRETE BARRIER, APPROACH, AS PER PLAN 3.000 EACH
15,750.00 3,750.00 6,000.00 5,250.00

2513-0471001 CONCRETE BARRIER, APPROACH, MODIFIED 4.000 EACH
24,400.00 6,100.00 6,100.00 6,100.00

2513-0471046 CONCRETE BARRIER, APPROACH, RE-46 9.000 EACH
26,764.56 1,700.00 3,500.00 2,973.84

2513-0473441 CONCRETE BARRIER, RE-44A 7,789.500 LF
451,791.00 58.00 58.00 58.00

2513-0473443 CONCRETE BARRIER, RE-44C 1,598.700 LF
90,326.55 56.50 56.50 56.50

2513-0473445 CONCRETE BARRIER, RE-44E 2,039.800 LF
95,666.60 42.00 65.00 46.90

2513-0473446 CONCRETE BARRIER, RE-44F 4,470.000 LF
212,325.00 47.50 47.50 47.50

2513-0473448 CONCRETE BARRIER, RE-44H 2.000 EACH
3,200.00 1,600.00 1,600.00 1,600.00

2513-0474990 CONCRETE BARRIER, REINFORCED, AS PER PLAN 936.700 LF
149,879.32 140.70 475.00 160.01

2513-0475000 CONCRETE BARRIER TRANSITION SECTION 9.000 EACH
13,500.00 1,500.00 1,500.00 1,500.00

2515-2475005 DRIVEWAY, P.C. CONCRETE, 5 IN. 941.000 SY
26,792.00 20.20 50.00 28.47

2515-2475006 DRIVEWAY, P.C. CONCRETE, 6 IN. 18,212.350 SY
704,608.59 26.50 107.00 38.69

2515-2475007 DRIVEWAY, P.C. CONCRETE, 7 IN. 11,933.030 SY
473,566.42 26.50 54.00 39.69

2515-2475008 DRIVEWAY, P.C. CONCRETE, 8 IN. 9,933.260 SY
392,636.92 30.00 77.00 39.53

2515-2475009 DRIVEWAY, P.C. CONCRETE, 9 IN. 3,883.000 SY
184,684.61 46.51 47.99 47.56

2515-6745600 REMOVAL OF PAVED DRIVEWAY 49,089.740 SY
306,233.59 3.15 74.00 6.24

2516-6745375 REMOVAL OF CONCRETE STEPS 11.500 CY
5,624.00 442.00 925.00 489.04

2516-6745877 REMOVAL OF RETAINING WALLS AND FOOTINGS 8.000 LS
50,110.00 550.00 21,400.00 6,263.75

2516-7825000 P.C. CONCRETE STEPS 10.800 CY
8,384.37 750.00 1,000.00 776.33

2516-8625000 COMBINED CONCRETE SIDEWALK AND RETAINING WALL 163.870 CY
103,863.54 500.00 2,000.00 633.82

2516-8725000 P.C. CONCRETE RETAINING WALL 276.240 CY
191,683.70 627.50 1,005.00 693.90

2516-8725006 LIMESTONE RETAINING WALL, AS PER PLAN 1,110.000 SF
39,960.00 36.00 36.00 36.00

2516-8725065 SPECIAL RETAINING WALL, AS PER PLAN 463.000 SF
13,069.20 21.00 44.40 28.23

2517-4225210 RAILROAD APPROACH SECTION, P.C.C. 392.640 SY
34,422.00 46.00 105.00 87.67

2517-4225220 RAILROAD APPROACH SECTION, HMA 48.800 SY
13,420.00 275.00 275.00 275.00

2518-0470005 CROSSOVER BARRICADE 1.000 EACH
3,600.00 3,600.00 3,600.00 3,600.00

2518-6765001 REMOVE AND REINSTALL CROSSOVER 4.000 EACH

5,000.00 750.00 2,750.00 1,250.00
BARRICADES

2518-6890032 ROAD CLOSURE (URBAN), PERMANENT, RE-3B 12.000 EACH
9,523.70 530.00 970.00 793.64

2518-6891810 PERMANENT ROAD CLOSURE, RURAL, SI-181 32.000 LF
2,720.00 85.00 85.00 85.00

2518-6891820 PERMANENT ROAD CLOSURE, URBAN, SI-182 3.000 EACH
1,930.00 600.00 730.00 643.33

2518-6910000 SAFETY CLOSURE 1,540.000 EACH
215,197.30 10.00 695.00 139.74

2519-1001000 FENCE, CHAIN LINK, VINYL COATED 12,876.000 LF
195,346.12 12.96 52.00 15.17

2519-1002042 FENCE, CHAIN LINK, 42 IN. HEIGHT 40.000 LF
1,200.00 30.00 30.00 30.00

2519-1002048 FENCE, CHAIN LINK, 48 IN. HEIGHT 410.000 LF
6,835.00 16.30 17.25 16.67

2519-1002060 FENCE, CHAIN LINK, 60 IN. HEIGHT 486.500 LF
12,162.50 25.00 25.00 25.00

2519-1002072 FENCE, CHAIN LINK, 72 IN. HEIGHT 4,873.200 LF
77,121.71 3.30 43.00 15.83

2519-1002096 FENCE, CHAIN LINK, 96 IN. HEIGHT 207.200 LF
11,112.14 53.63 53.63 53.63

2519-1002120 FENCE, CHAIN LINK, 120 IN. HEIGHT 1,600.000 LF
31,533.00 18.40 27.50 19.71

2519-1003072 FENCE, CHAIN LINK W/TH SECURITY TOP, 72 181.000 LF
3,511.40 19.40 19.40 19.40
IN. HEIGHT

2519-1004072 FENCE, CHAIN LINK, 72 IN. HEIGHT, ON 445.000 LF
15,395.81 33.19 35.00 34.60
WALL

2519-1010010 FENCE, REMOVE AND REINSTALL CHAIN LINK, 4,110.000 LF
49,678.85 9.00 47.00 12.09
AS PER PLAN

2519-1010020 REMOVAL OF CHAIN LINK FENCE, AS PER PLAN 17,850.000 LF
39,135.42 1.15 10.00 2.19

2519-2000010 FENCE, CHANNEL CROSSING, TYPE A 301.000 LF
3,125.50 10.00 11.75 10.38

2519-3280000 FENCE, FIELD 29,737.000 LF
123,687.10 0.00 25.00 4.16

2519-3280510 REMOVE AND REINSTALL FIELD FENCE 3,558.000 LF
27,654.15 3.80 32.15 7.77

2519-3300400 FIELD FENCE BRACE PANELS 265.000 EACH
36,319.64 101.00 309.66 137.06

2519-3300600 FENCE, SAFETY 23,444.000 LF
63,118.42 0.10 15.00 2.69

2519-3700000 GATE, AS PER PLAN 29.000 EACH
9,990.00 300.00 1,590.00 344.48

2519-3710014 GATE, SINGLE CHAIN LINK ASSEMBLY, 14 FT. 2.000 EACH
11.50 5.75 5.75 5.75

2519-3711600 GATE ASSEMBLY, CHAIN LINK, 16 FT. 2.000 EACH
1,434.00 717.00 717.00 717.00

2519-3750012 GATE, FIELD FENCE, 12 FT. 23.000 EACH
5,860.00 200.00 300.00 254.78

2519-3750016 GATE, FIELD FENCE, 16 FT. (RC-8A) 2.000 EACH
900.00 450.00 450.00 450.00

2519-3750017 GATE, FIELD FENCE, 16 FT. 15.000 EACH
4,475.00 275.00 300.00 298.33

2519-3750024 GATE, FIELD FENCE, 24 FT. 1.000 EACH
400.00 400.00 400.00 400.00

2519-3760000 ENTRANCE BOLLARD 28.000 EACH
9,060.00 200.00 430.00 323.57

2520-3350010 FIELD LABORATORY 18.000 EACH
68,182.00 500.00 10,000.00 3,787.89

2520-3350015 FIELD OFFICE 27.000 EACH
141,225.00 1,500.00 10,000.00 5,230.56

2522-8929100 LIGHTING TOWER, 100 FT. 5.000 EACH
120,000.00 24,000.00 24,000.00 24,000.00

2522-8930230 LUMINAIRE, TOWER FLOODLIGHTING 50.000 EACH
35,000.00 700.00 700.00 700.00

2523-0000100 LIGHTING POLES 518.000 EACH
1,279,277.96 656.00 5,426.00 2,469.65

2523-0000200 ELECTRICAL CIRCUITS 159,944.000 LF
1,363,167.34 4.14 87.00 8.52

2523-0000310 HANDHOLES AND JUNCTION BOXES 790.000 EACH
381,670.74 165.00 2,600.00 483.13

2523-0000400 CONTROL CABINET 46.000 EACH
217,092.18 2,829.00 6,515.00 4,719.40

2523-0000500 UNDER DECK LIGHTING (RM-41) 5.000 EACH
2,805.00 325.00 1,230.00 561.00

2523-6765009 REMOVE AND REINSTALL LIGHT POLE AND 40.000 EACH
66,810.85 720.00 5,000.00 1,670.27
LUMINAIRE

2524-6765010 REMOVE AND REINSTALL SIGN AS PER PLAN 296.000 EACH
61,826.60 70.00 720.00 208.87

2524-6765015 REMOVE AND REINSTALL DELINEATOR POSTS 17.000 EACH
1,301.35 76.55 76.55 76.55

2524-9081260 CONCRETE FOOTING FOR BREAKAWAY SIGN 236.000 EACH
108,540.30 250.00 798.38 459.92
POST, 2'-0" DIA. X 6'-0"

2524-9081275 CONCRETE FOOTING FOR BREAKAWAY SIGN 169.000 EACH
127,520.60 560.00 960.05 754.56
POST, 2'-8" DIA. X 7'-6"

2524-9081290 CONCRETE FOOTING FOR BREAKAWAY SIGN 139.000 EACH
123,563.20 635.00 1,212.00 888.94
POST, 2'-8" DIA. X 9'-0"

2524-9089100 DELINEATOR, RIGID - TYPE I 161.000 EACH
7,195.00 35.00 100.00 44.69

2524-9089110 DELINEATOR, RIGID - TYPE IA 567.000 EACH
25,144.76 42.00 45.23 44.35

2524-9089200 DELINEATOR, RIGID - TYPE II 72.000 EACH
3,040.00 40.00 80.00 42.22

2524-9090001 DELINEATORS, AS PER PLAN 16.000 EACH
1,447.50 52.50 120.00 90.47

2524-9090010 DELINEATORS, SINGLE WHITE (RE-7) 613.000 EACH
24,796.00 36.00 48.00 40.45

2524-9090011 DELINEATORS, DOUBLE WHITE (RE-7) 17.000 EACH
850.00 50.00 50.00 50.00

2524-9090021 DELINEATORS, DOUBLE YELLOW 22.000 EACH
946.00 43.00 43.00 43.00

2524-9100020 OBJECT MARKER, TYPE 2 90.000 EACH
6,750.40 40.00 170.00 75.00

2524-9100030 OBJECT MARKER, TYPE 3 24.000 EACH
3,970.76 85.00 300.00 165.45

2524-9130011 GUIDANCE MARKER, CHEVRON W1-8 (SPECIAL) 17.000 EACH
5,885.00 345.00 350.00 346.18

2524-9210005 MILEPOST MARKERS, D10-3A 69.000 EACH
8,775.00 120.00 150.00 127.17

2524-9265010 POSTS, STEEL, AS PER PLAN 238.000 EACH
40,167.59 100.00 575.00 168.77

2524-9275100 WOOD POSTS FOR TYPE A OR B SIGNS, 4 IN. 4,691.500 LF
50,181.45 3.50 33.33 10.70
X 4 IN.

2524-9275222 WOOD POSTS FOR TYPE A OR B SIGNS, 4 IN. 9,602.000 LF
72,286.82 3.50 12.29 7.53
X 6 IN.

2524-9281090 STEEL BREAKAWAY SIGN POSTS FOR TYPE A OR 30.000 LF
1,500.00 50.00 50.00 50.00
B SIGNS, W6 X 9

2524-9281121 STEEL BREAKAWAY SIGN POSTS FOR TYPE A OR 1,495.000 LF
33,936.50 22.70 22.70 22.70

B SIGNS, W6 X 12

2524-9281210 STEEL BREAKAWAY SIGN POSTS FOR TYPE A OR 1,350.152 LF
59,077.14 40.83 50.00 43.76
B SIGNS, W8 X 21

2524-9281426 STEEL BREAKAWAY SIGN POSTS FOR TYPE A OR 1,032.373 LF
53,887.92 50.00 75.75 52.20
B SIGNS, W12 X 26

2524-9290000 SIGNING 1.000 LS
8,200.00 8,200.00 8,200.00 8,200.00

2524-9290006 MODIFICATION OF EXISTING SIGNS 3.000 EACH
472.50 157.50 157.50 157.50

2524-9290009 SIGN MOUNTING BRACKETS, SPECIAL 2,511.000 EACH
34,705.06 13.55 128.00 13.82

2524-9325001 TYPE A SIGNS, SHEET ALUMINUM 4,055.250 SF
95,354.43 15.00 155.00 23.51

2524-9325005 TYPE A SIGNS, GALVANIZED STEEL 24.000 SF
660.00 27.50 27.50 27.50

2524-9380001 TYPE B SIGNS, EXTRUDED ALUMINUM 13,804.000 SF
244,369.04 15.00 31.50 17.70
STRUCTURAL PANEL

2524-9700000 SIGN, INSTALL ONLY 391.000 EACH
13,965.70 30.00 155.00 35.72

2525-0000100 TRAFFIC SIGNALIZATION 37.000 LS
5,879,541.37 300.00 530,740.22 158,906.52

2525-0000120 REMOVAL OF TRAFFIC SIGNALIZATION 13.000 LS
60,764.64 770.00 10,000.00 4,674.20

2525-0000200 LOOP DETECTORS (ADDITION OR REPLACEMENT 178.000 EACH
169,618.60 745.00 1,800.00 952.91
TO AN EXISTING TRAFFIC SIGNAL SYSTEM)

2526-8285000 CONSTRUCTION SURVEY 153.000 LS
1,109,173.93 100.00 75,000.00 7,249.50

2526-8286000 GLOBAL POSTIONING SYSTEM (GPS) MACHINE 2.000 LS
22,500.00 2,500.00 20,000.00 11,250.00
CONTROL GRADING

2527-8400065 TEMPORARY DELINEATORS 60.000 EACH
1,200.00 20.00 20.00 20.00

2527-9263005 RAISED PAVEMENT MARKERS 3,754.000 EACH
9,625.02 1.80 3.09 2.56

2527-9263109 PAINTED PAVEMENT MARKING, WATERBORNE OR 141,892.498 STA
1,931,826.23 6.25 700.00 13.61
SOLVENT-BASED

2527-9263112 PAINTED PAVEMENT MARKINGS, HIGHBUILD 1,498.100 STA
19,734.92 11.20 87.00 13.17
WATERBORNE

2527-9263117 PAINTED PAVEMENT MARKINGS, DURABLE 3,563.160 STA
298,499.50 32.47 2,390.00 83.77

2527-9263124 PERMANENT TAPE MARKINGS, PREFORMED 38.270 STA
16,722.72 416.85 470.80 436.97
POLYMER MARKING MATERIAL

2527-9263126 PERMANENT TAPE MARKINGS, PROFILED 580.801 STA
173,138.01 273.00 425.00 298.10
PAVEMENT MARKING TAPE

2527-9263128 PERMANENT TAPE MARKINGS, INTERSECTION 127.950 STA
47,698.45 315.00 407.00 372.79
MARKING TAPE

2527-9263130 REMOVABLE TAPE MARKINGS 2,329.360 STA
238,167.71 28.00 300.00 102.25

2527-9263137 PAINTED SYMBOLS AND LEGENDS, WATERBORNE 1,071.000 EACH
87,480.93 13.00 346.50 81.68
OR SOLVENT-BASED

2527-9263138 PAINTED SYMBOLS AND LEGENDS, HIGHBUILD 4.000 EACH
400.00 100.00 100.00 100.00
WATERBORNE

2527-9263143 PAINTED SYMBOLS AND LEGENDS, DURABLE 292.000 EACH
60,822.80 85.00 789.00 208.30

2527-9263152 PRE-CUT SYMBOLS AND LEGENDS, REGULAR 18.000 EACH
2,520.00 140.00 140.00 140.00
MARKING TAPE

2527-9263154 PRE-CUT SYMBOLS AND LEGENDS, PREFORMED 4.000 EACH
2,107.60 526.90 526.90 526.90
POLYMER MARKING MATERIAL

2527-9263156 PRE-CUT SYMBOLS AND LEGENDS, PROFILED 89.000 EACH
32,825.00 365.00 450.00 368.82
PAVEMENT MARKING TAPE

2527-9263158 PRE-CUT SYMBOLS AND LEGENDS, 111.000 EACH
46,639.50 335.00 478.50 420.18
INTERSECTION MARKING TAPE

2527-9263180 PAVEMENT MARKINGS REMOVED 16,054.010 STA
344,182.16 1.00 1,110.00 21.44

2527-9263190 SYMBOLS AND LEGENDS REMOVED 307.000 EACH
23,425.50 20.00 103.00 76.30

2527-9270111 GROOVES CUT FOR PAVEMENT MARKINGS 7,628.010 STA
131,891.24 13.81 35.00 17.29

2527-9270120 GROOVES CUT FOR SYMBOLS AND LEGENDS 104.000 EACH
9,442.00 60.00 125.00 90.79

2528-3800000 MODULAR GLARE SCREEN SYSTEM 91,373.500 LF
502,236.06 4.00 7.75 5.50

2528-4983200 MONITORING WITH INCIDENT RESPONSE 715.000 CDAY
710,510.00 909.00 1,100.00 993.72

2528-5160000 NO EXCUSE ROAD OPENING BONUS, 8.000 LS
1,295,000.00 20,000.00 450,000.00 161,875.00

2528-5160100 CRITICAL CLOSURE ACTIVITY INCENTIVE 60.000 CDAY
240,000.00 4,000.00 4,000.00 4,000.00
PAYMENT (OR DISINCENTIVE ASSESSMENT)

2528-8400048 TEMPORARY BARRIER RAIL, CONCRETE 314,184.400 LF
2,718,875.55 2.36 49.00 8.65

2528-8400049 TEMPORARY BARRIER RAIL, STEEL 1,800.000 LF
28,800.00 16.00 16.00 16.00

2528-8400055 TEMPORARY TO PERMANENT BARRIER 24.000 EACH
57,631.36 1,000.00 3,240.68 2,401.31
CONNECTION

2528-8400157 TEMPORARY FLOODLIGHTING LUMINAIRE 199.000 EACH
565,884.22 1,224.81 5,900.00 2,843.64

2528-8400256 TEMPORARY TRAFFIC SIGNALS 45.000 EACH
259,795.00 1,500.00 24,000.00 5,773.22

2528-8445110 TRAFFIC CONTROL 853.000 LS
5,265,424.86 0.00 115,000.00 6,172.83

2528-8445112 FLAGGERS 8,787.000 DAY
2,647,550.00 295.00 560.00 301.30

2528-8445113 FLAGGERS 7,620.000 EACH
2,257,050.00 295.00 600.00 296.20

2528-8445114 PILOT CARS 2,262.000 DAY
1,026,340.00 445.00 840.00 453.73

2528-8445115 PILOT CARS 1,630.000 EACH
729,900.00 445.00 900.00 447.79

2528-9109010 MODULAR LANE SEPARATOR SYSTEM 11,681.000 LF
146,636.25 8.25 16.25 12.55

2528-9109020 TEMPORARY LANE SEPARATOR SYSTEM 4,744.000 LF
38,284.00 6.60 11.00 8.07

2528-9290004 CHANGEABLE MESSAGE SIGNS, PORTABLE 490.000 CDAY
34,530.00 10.00 2,000.00 70.47

2529-0400057 HOT MIX ASPHALT (COMPOSITE SECTION) 214.400 TON
42,880.00 200.00 200.00 200.00

2529-2242304 CD JOINT ASSEMBLY 2,635.000 EACH
290,477.19 80.00 300.00 110.24

2529-2242320 CT JOINT 931.000 EACH
122,991.00 75.00 250.00 132.11

2529-5070110 PATCHES, FULL-DEPTH FINISH, BY AREA 120,015.870 SY
10,765,119.53 46.74 260.82 89.70

2529-5070120 PATCHES, FULL-DEPTH FINISH, BY COUNT 8,858.000 EACH
1,360,888.74 32.00 1,500.00 153.63

2529-8174010 SUBBASE (PATCHES) 27,401.390 SY

308,496.47 5.87 50.00 11.26

2529-8201000 JOINT ASSEMBLY, EF 174.000 EACH
78,865.00 250.00 630.00 453.25

2529-8202000 RUMBLE STRIP PANEL (IN FULL DEPTH PATCH) 25.000 EACH
11,200.00 350.00 600.00 448.00

2530-0400061 HOT MIX ASPHALT (PARTIAL DEPTH PATCH 13,718.460 TON
1,360,473.88 50.00 300.00 99.17
MATERIAL)

2530-5070210 PATCHES, PARTIAL-DEPTH P.C.C. FINISH 1,227.000 SF
28,758.00 22.00 50.00 23.44

2530-5070221 REGULAR PARTIAL DEPTH HOT MIX ASPHALT 44,269.940 SY
1,729,153.01 12.36 300.00 39.06
FINISH PATCHES, BY AREA

2530-5070231 IRREGULAR PARTIAL DEPTH HOT MIX ASPHALT 1,231.900 SY
84,528.25 48.75 133.00 68.62
FINISH PATCHES, BY AREA

2531-5200020 PAVEMENT SURFACE REPAIR (MILLING GRAVEL) 11,200.000 SY
28,000.00 2.50 2.50 2.50

2532-5200001 PAVEMENT SURFACE REPAIR (GRINDING 28,921.060 SY
97,765.91 1.85 4.55 3.38
LIMESTONE)

2533-4980005 MOBILIZATION 879.000 LS
26,455,190.31 0.00 1420000.00 30,096.92

2535-2000440 MODULAR BLOCK RETAINING WALL 12.580 SF
314.50 25.00 25.00 25.00

2535-2000460 SEGMENTAL RETAINING WALL 8,689.000 SF
142,327.09 15.49 20.30 16.38

2536-6745045 REMOVAL OF ASBESTOS 6.000 LS
106,600.00 1,500.00 95,000.00 17,766.67

2537-8900000 REMEDIATION OF PETROLEUM CONTAMINATED 90.000 CY
9,000.00 100.00 100.00 100.00
SOIL

2537-8900100 SAMPLING AND TESTING FOR PETROLEUM 6.000 EACH
3,000.00 500.00 500.00 500.00
CONTAMINATION (WATER AND SOIL SAMPLES
FOEDIATION OF PETROLEUM CONTAMINATED SOI

2537-8900500 AMENDED SOIL 1,182.000 CY
42,459.45 30.00 38.80 35.92

2538-6970000 SALVAGE, REMOVAL, AND DISPOSAL OF 48.000 LS
432,147.50 2,750.00 63,400.00 9,003.07
OBSTRUCTIONS ON PARCEL NO.

2538-6970010 SALVAGE, REMOVAL, AND DISPOSAL OF 1.000 LS
15,000.00 15,000.00 15,000.00 15,000.00
OBSTRUCTIONS

2538-6975110 SEALING WELLS 2.000 EACH

650.00 325.00 325.00 325.00

2539-6500000 RAW POLYURETHANE MATERIAL 6,000.000 LB
36,000.00 6.00 6.00 6.00

2540-4480507 LONGITUDINAL JOINT REPAIR 65,159.000 LF
345,317.99 3.28 16.85 5.30

2541-1003001 SAWING AND SEALING JOINTS (HMA SURFACES) 3,642.600 LF
13,659.75 3.75 3.75 3.75

2541-1004011 CRACK AND JOINT CLEANING AND SEALING 340.630 MILE
345,103.32 337.57 10,967.61 1,013.13
(HMA SURFACES)

2541-1005001 SEALER MATERIAL (HMA SURFACES) 556,758.000 LB
556,758.00 1.00 1.00 1.00

2542-1006010 CRACK AND JOINT CLEANING AND SEALING 47.135 MILE
498,589.10 7,145.00 45,000.00 10,577.90
(PCC PAVEMENT)

2542-1007000 SEALER MATERIAL (PCC PAVEMENT) 71,183.110 LB
71,183.11 1.00 1.00 1.00

2543-1000000 TRANSVERSE JOINT REPAIR 156.160 TON
47,835.71 279.47 387.00 306.32

2543-1000110 TRANSVERSE JOINT CLEANING AND SEALING 18.490 MILE
73,364.80 3,343.00 7,964.09 3,967.81

2543-1000120 TRANSVERSE JOINT LEVELING 109,091.000 LB
68,991.65 0.52 0.65 0.63

2544-1001100 CLEANING AND FILLING CRACKS (PAVEMENT 347.628 MILE
830,719.63 498.00 8,926.95 2,389.68
MAINTENANCE)

2544-1001200 CLEANING AND FILLING CRACKS (SHOULDER 16.400 MILE
11,624.81 672.10 934.00 708.83
MAINTENANCE)

2544-1002010 HOT MIX ASPHALT FOR CRACK FILLING 46.700 TON
10,860.00 80.00 500.00 232.55

2544-1003000 FILLER MATERIAL (MAINTENANCE) 117,170.700 GAL
298,917.17 2.10 4.50 2.55

2546-1000100 GABIONS OR MATTRESSES 118.000 CY
10,186.60 48.60 285.00 86.33

2548-0000100 MILLED SHOULDER RUMBLE STRIPS, HMA 14,490.090 STA
186,156.63 6.00 2,449.61 12.85
SURFACE

2548-0000200 MILLED SHOULDER RUMBLE STRIPS, PCC 2,097.820 STA
38,396.12 12.50 1,000.00 18.30
SURFACE

2549-0001036 PIPE LINING, RESIN, CURED-IN-PLACE, LESS 321.200 LF
61,028.00 190.00 190.00 190.00
THAN OR EQUAL TO 36 IN. DIA. OR HEIGHT

2549-0001037	PIPE LINING, RESIN, CURED-IN-PLACE, GREATER THAN 36 IN. DIA. OR HEIGHT	250.00	250.00	250.00	150.700	LF
37,675.00						
2549-0004036	PIPE LINING, SLIPLINING, LESS THAN OR EQUAL TO 36 IN. DIA. OR HEIGHT	100.00	100.00	100.00	2,945.000	LF
294,500.00						
2549-0006100	BUILDING SANITARY SEWER SERVICE RECONNECTION	875.00	875.00	875.00	29.000	EACH
25,375.00						
2549-0006210	SPOT REPAIR BY PIPE REPLACEMENT, BY COUNT	1,800.00	1,800.00	1,800.00	2.000	EACH
3,600.00						
2549-0006220	SPOT REPAIR BY PIPE REPLACEMENT, BY LINEAR FOOT	180.00	180.00	180.00	20.000	LF
3,600.00						
2549-0006310	RUBBER CHIMNEY SEAL	550.00	630.00	561.43	14.000	EACH
7,860.00						
2551-0000110	TEMP CRASH CUSHION	855.00	3,250.00	1,659.08	205.000	EACH
340,112.26						
2551-0000120	TEMP CRASH CUSHION, REDIRECTIVE (R)	2,400.00	2,400.00	2,400.00	12.000	EACH
28,800.00						
2551-0000130	TEMP CRASH CUSHION, SEVERE USE (SU)	2,100.00	8,000.00	3,862.50	8.000	EACH
30,900.00						
2551-0000230	PERMANENT CRASH CUSHION, SEVERE USE (SU)	19,100.00	22,000.00	19,716.67	6.000	EACH
118,300.00						
2551-0000300	PERMANENT CRASH CUSHION SPARE PARTS KIT	500.00	1,800.00	833.33	6.000	EACH
5,000.00						
2552-0000140	ROCK EXCAVATION	60.00	60.00	60.00	127.000	CY
7,620.00						
2552-0000210	TRENCH FOUNDATION	15.78	19.87	17.25	156.000	TON
2,690.72						
2552-0000300	TRENCH COMPACTION TESTING	3,000.00	15,000.00	7,333.33	3.000	LS
22,000.00						
2554-0112004	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 4 IN.	34.95	34.95	34.95	90.000	LF
3,145.50						
2554-0112006	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 6 IN.	30.00	53.30	43.16	949.000	LF
40,961.38						
2554-0112008	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 8 IN.	36.82	100.00	44.42	2,744.000	LF
121,877.48						
2554-0112010	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 10 IN.	75.00	75.00	75.00	35.000	LF
2,625.00						

2554-0112012 WATER MAIN, TRENCHED, DUCTILE IRON PIPE 10,936.000 LF
594,045.90 39.48 100.10 54.32
(DIP), 12 IN.

2554-0112016 WATER MAIN, TRENCHED, DUCTILE IRON PIPE 65.000 LF
10,725.00 165.00 165.00 165.00
(DIP), 16 IN.

2554-0112020 WATER MAIN, TRENCHED, DUCTILE IRON PIPE 875.000 LF
65,625.00 75.00 75.00 75.00
(DIP), 20 IN.

2554-0114004 WATER MAIN, TRENCHED, POLYVINYL CHLORIDE 30.000 LF
897.00 29.90 29.90 29.90
PIPE (PVC), 4 IN.

2554-0114006 WATER MAIN, TRENCHED, POLYVINYL CHLORIDE 284.000 LF
10,784.00 19.00 120.00 37.97
PIPE (PVC), 6 IN.

2554-0114008 WATER MAIN, TRENCHED, POLYVINYL CHLORIDE 2,401.000 LF
78,534.00 13.00 95.00 32.71
PIPE (PVC), 8 IN.

2554-0114012 WATER MAIN, TRENCHED, POLYVINYL CHLORIDE 4,907.000 LF
129,073.50 18.50 88.37 26.30
PIPE (PVC), 12 IN.

2554-0114016 WATER MAIN, TRENCHED, POLYVINYL CHLORIDE 551.000 LF
29,536.00 38.00 320.00 53.60
PIPE (PVC), 16 IN.

2554-0124008 WATER MAIN, TRENCHLESS, POLYVINYL 1,329.000 LF
87,940.00 60.00 142.00 66.17
CHLORIDE PIPE (PVC), 8 IN.

2554-0134012 WATER MAIN WITH CASING PIPE, TRENCHED, 280.000 LF
36,820.00 131.50 131.50 131.50
POLYVINYL CHLORIDE PIPE (PVC), 12 IN.

2554-0142012 WATER MAIN WITH CASING PIPE, TRENCHLESS, 720.000 LF
152,820.00 212.25 212.25 212.25
DUCTILE IRON PIPE (DIP), 12 IN.

2554-0202200 FITTINGS BY COUNT, DUCTILE IRON, 53.000 EACH
31,555.00 300.00 1,440.00 595.38

2554-0203000 FITTINGS BY WEIGHT, DUCTILE IRON 27,956.000 LB
142,836.38 1.60 10.00 5.11

2554-0204107 WATER SERVICE STUB, COPPER, 3/4 IN. 78.000 EACH
98,473.33 942.61 2,015.00 1,262.48

2554-0204110 WATER SERVICE STUB, COPPER, 1 IN. 45.000 EACH
61,547.20 715.00 3,800.00 1,367.72

2554-0204115 WATER SERVICE STUB, COPPER, 1-1/2 IN. 11.000 EACH
19,750.00 1,600.00 2,400.00 1,795.45

2554-0204120 WATER SERVICE STUB, COPPER, 2 IN. 3.000 EACH
5,978.20 1,689.10 2,600.00 1,992.73

2554-0207004 VALVE, GATE, DIP, 4 IN. 8.000 EACH

5,505.50	600.00	765.50	688.19		
2554-0207006	VALVE, GATE, DIP, 6 IN.			32.000	EACH
27,112.68	805.68	1,055.00	847.27		
2554-0207008	VALVE, GATE, DIP, 8 IN.			41.000	EACH
40,728.73	775.00	1,450.00	993.38		
2554-0207010	VALVE, GATE, DIP, 10 IN.			1.000	EACH
1,500.00	1,500.00	1,500.00	1,500.00		
2554-0207012	VALVE, GATE, DIP, 12 IN.			52.000	EACH
90,085.76	865.00	2,000.00	1,732.42		
2554-0208006	TAPPING VALVE ASSEMBLY, 6 IN.			5.000	EACH
15,080.00	2,815.00	3,100.00	3,016.00		
2554-0208008	TAPPING VALVE ASSEMBLY, 8 IN.			3.000	EACH
5,875.00	1,200.00	3,475.00	1,958.33		
2554-0208012	TAPPING VALVE ASSEMBLY, 12 IN.			1.000	EACH
4,304.40	4,304.40	4,304.40	4,304.40		
2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201			50.000	EACH
138,943.83	1,715.00	4,725.00	2,778.88		
2554-0211000	FLUSHING DEVICE (BLOWOFF),			9.000	EACH
5,400.00	600.00	600.00	600.00		
2554-0212020	VALVE BOX EXTENSION			7.000	EACH
700.00	100.00	100.00	100.00		
2554-0212030	VALVE BOX REPLACEMENT			42.000	EACH
18,586.54	160.00	695.00	442.54		
2554-0214000	FIRE HYDRANT ADJUSTMENT			17.000	EACH
13,125.00	425.00	2,000.00	772.06		
2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS			11.000	LS
202,146.05	1,000.00	77,000.00	18,376.91		
2594-8995030	BENCHES			4.000	EACH
8,000.00	2,000.00	2,000.00	2,000.00		
2594-8996187	AIR RELEASE VALVES			1.000	EACH
750.00	750.00	750.00	750.00		
2595-0000010	RAILROAD INSURANCE PROVISIONS			5.000	LS
28,900.00	3,100.00	10,000.00	5,780.00		
2595-0000100	UPRR INSURANCE PROVISIONS			21.000	LS
130,240.70	750.00	20,000.00	6,201.94		
2595-0000105	BNSFRR INSURANCE PROVISIONS			3.000	LS
45,500.00	3,000.00	39,000.00	15,166.67		
2595-0450079	RAILROAD SUBBALLAST, FURNISH AND PLACE			1,585.000	TON
22,903.25	14.45	14.45	14.45		
2595-0450081	RAILROAD BALLAST			58.000	TON
1,528.30	26.35	26.35	26.35		
2595-7400100	REMOVAL OF RAILROAD CROSSING			1.000	LS

4,500.00 4,500.00 4,500.00 4,500.00

2595-7400200 REMOVAL OF RAILROAD TRACK 280.000 TLF
8,058.75 14.25 53.00 28.78

2598-3380010 FIRE HYDRANT ASSEMBLIES 14.000 EACH
44,000.00 3,000.00 3,250.00 3,142.86

2598-3380040 RELOCATE FIRE HYDRANT 3.000 EACH
4,200.00 1,400.00 1,400.00 1,400.00

2598-3778004 GATE VALVE AND VALVE BOX, 4 IN. 3.000 EACH
2,100.00 700.00 700.00 700.00

2598-3778008 GATE VALVE AND VALVE BOX, 8 IN. 20.000 EACH
20,000.00 1,000.00 1,000.00 1,000.00

2598-8805606 WATER MAIN, DUCTILE IRON, 6 IN. 215.000 LF
7,447.50 28.50 45.00 34.64

2598-8805608 WATER MAIN, DUCTILE IRON, 8 IN. 1,968.000 LF
67,020.00 33.50 40.00 34.05

2598-8805612 WATER MAIN, DUCTILE IRON, 12 IN. 1,642.000 LF
68,964.00 42.00 42.00 42.00

2598-8805808 WATER MAIN, PVC, 8 IN. DIA. 1,680.000 LF
26,880.00 16.00 16.00 16.00

2598-8810000 WATER MAIN ENCASEMENT 131.000 LF
34,060.00 260.00 260.00 260.00

2598-8810200 WATER MAIN FITTINGS 2,865.000 LB
5,730.00 2.00 2.00 2.00

2598-8821010 NEW WATER SERVICE 8.000 EACH
16,080.00 2,010.00 2,010.00 2,010.00

2598-8821100 WATER SERVICE PIPE, COPPER, 1 INCH 240.000 LF
9,600.00 40.00 40.00 40.00

2601-2632110 FERTILIZING 8.340 ACRE
2,579.00 150.00 750.00 309.23

2601-2633100 MOWING 2,115.340 ACRE
87,673.00 30.00 100.00 41.45

2601-2634100 MULCHING 908.078 ACRE
635,654.60 700.00 700.00 700.00

2601-2634105 MULCHING, BONDED FIBER MATRIX 102.070 ACRE
300,808.78 690.00 10,000.00 2,947.08

2601-2634150 MULCHING, WOOD CELLULOSE FIBER 25.480 ACRE
36,331.64 480.00 3,300.00 1,425.89

2601-2634450 COMPOST 3.000 ACRE
6,750.00 2,250.00 2,250.00 2,250.00

2601-2634500 OVERSEEDING AND FERTILIZING 39.000 ACRE
33,300.00 850.00 1,000.00 853.85

2601-2636015 NATIVE GRASS SEEDING 261.920 ACRE

142,592.80 150.00 5,000.00 544.41

2601-2636018 WETLAND GRASS SEEDING 1.930 ACRE
5,055.00 1,800.00 3,500.00 2,619.17

2601-2636041 SEEDING AND FERTILIZING 19.350 ACRE
23,389.50 450.00 6,000.00 1,208.76

2601-2636043 SEEDING AND FERTILIZING (RURAL) 590.375 ACRE
372,957.48 275.00 30,000.00 631.73

2601-2636044 SEEDING AND FERTILIZING (URBAN) 198.109 ACRE
271,650.62 700.00 30,765.00 1,371.22

2601-2636045 SEEDING SPECIAL AREAS 4.740 ACRE
2,568.00 450.00 700.00 541.77

2601-2636054 WILDFLOWER SEEDING 0.680 ACRE
3,340.00 2,000.00 13,000.00 4,911.76

2601-2638105 SLOPE PROTECTION, BONDED FIBER MATRIX 22.000 SQ
550.00 25.00 25.00 25.00

2601-2638351 SLOPE PROTECTION, WOOD EXCELSIOR MAT 9,824.480 SQ
144,213.78 2.00 105.00 14.68
(RC-14)

2601-2638352 SLOPE PROTECTION, WOOD EXCELSIOR MAT 3,210.500 SQ
37,318.90 9.45 20.00 11.62

2601-2638620 MACADAM STONE SLOPE PROTECTION 23,932.400 SY
727,838.30 20.00 73.00 30.41

2601-2638900 SLOPE RESHAPING 359.000 SQ
6,780.00 10.00 20.00 18.89

2601-2639010 SODDING 9,205.850 SQ
334,843.34 22.00 500.00 36.37

2601-2640251 SPECIAL DITCH CONTROL, JUTE MESH (RC-13) 35.000 SQ
630.00 18.00 18.00 18.00

2601-2640350 SPECIAL DITCH CONTROL, WOOD EXCELSIOR 7,151.200 SQ
103,246.75 12.00 37.80 14.44
MAT

2601-2642100 STABILIZING CROP - SEEDING AND 642.892 ACRE
166,064.42 51.50 4,500.00 258.31
FERTILIZING

2601-2642120 STABILIZING CROP - SEEDING AND 50.000 ACRE
25,024.80 100.00 2,200.00 500.50
FERTILIZING (URBAN)

2601-2643110 WATERING FOR SOD, SPECIAL DITCH CONTROL, 6,418.100 MGAL
317,118.00 30.00 60.00 49.41
OR SLOPE PROTECTION

2601-2643300 MOBILIZATION FOR WATERING 22.000 EACH
7,700.00 350.00 350.00 350.00

2601-2643400 TURF REINFORCED MAT 2.400 SQ
720.00 300.00 300.00 300.00

2601-2643401 TURF REINFORCEMENT MAT 1,192.150 SQ
79,893.52 11.25 300.00 67.02

2601-2700010 OUTLET OR CHANNEL SCOUR PROTECTION 3,080.000 SF
51,509.44 12.00 50.00 16.72

2602-0000010 SILT DITCHES 2,010.000 LF
4,233.00 1.25 5.00 2.11

2602-0000020 SILT FENCE 586,288.950 LF
1,035,793.55 1.00 40.00 1.77

2602-0000030 SILT FENCE FOR DITCH CHECKS 53,860.000 LF
119,782.68 0.85 19.00 2.22

2602-0000040 SILT DIKES 3,538.000 LF
5,338.00 1.00 4.00 1.51

2602-0000050 SILT BASINS 97.000 EACH
20,624.00 75.00 512.00 212.62

2602-0000060 REMOVAL OF SILT FENCE 286,016.100 LF
96,006.31 0.02 3.00 0.34

2602-0000070 REMOVAL OF SILT FENCE FOR DITCH CHECKS 25,580.000 LF
8,871.35 0.02 2.00 0.35

2602-0000090 CLEAN-OUT OF SILT FENCE 342,093.300 LF
136,330.41 0.03 5.00 0.40

2602-0000100 CLEAN-OUT OF SILT FENCE FOR DITCH CHECK 27,473.000 LF
20,162.42 0.05 10.00 0.73

2602-0000110 BALES FOR DITCH CHECKS 49.000 EACH
817.00 7.00 25.00 16.67

2602-0000210 FLOATING SILT CURTAIN, MOVING WATER 240.000 LF
8,000.00 32.00 40.00 33.33
(RC-18)

2602-0000221 FLOATING SILT CURTAIN, STILL WATER 300.000 LF
7,500.00 25.00 25.00 25.00

2602-0000312 PERIMETER AND SLOPE SEDIMENT CONTROL 1,040.000 LF
4,090.00 2.25 4.00 3.93
DEVICE, 12 IN. DIA.

2602-0000320 PERIMETER AND SLOPE SEDIMENT CONTROL 3,709.000 LF
13,949.20 2.90 6.00 3.76
DEVICE, 20 IN. DIA.

2610-0000110 SHRUBS 102.000 EACH
3,003.90 29.45 29.45 29.45

2610-0000120 TREES 63.000 EACH
14,166.03 159.53 1,250.00 224.86

2610-0000130 VINES 146.000 EACH
2,190.00 15.00 15.00 15.00

2610-0000150 TREE, TRANSPLANTING 79.000 EACH
29,625.00 375.00 375.00 375.00

2610-0000180	FLOWERS, AS PER PLAN				2.000	LS
6,349.00	840.00	5,509.00	3,174.50			
2610-0000200	MULCH				185.000	CY
6,274.25	26.75	38.80	33.91			
2610-0000212	MULCH, SHREDDED BARK				10.000	CY
300.00	30.00	30.00	30.00			
2610-0000214	MULCH, WOOD CHIPS				110.000	CY
5,342.72	33.60	53.44	48.57			
2610-0000400	WATERING FOR PLANTS				74.000	MGAL
6,480.00	60.00	90.00	87.57			
2610-0000600	TILLAGE				6.000	LS
20,160.00	500.00	6,430.00	3,360.00			
2611-0000100	SHRUBS, FURNISHED AND INSTALLED (WITH				8,690.000	EACH
298,746.42	11.00	58.00	34.38			
	WARRANTY)					
2611-0000200	TREES, FURNISHED AND INSTALLED (WITH				2,813.000	EACH
536,826.68	140.00	315.00	190.84			
	WARRANTY)					
2612-0000500	ROADSIDE SPRAYING				177.360	ACRE
23,308.65	70.00	350.00	131.42			
2612-0000520	ROADSIDE SPRAY FOR WEED CONTROL				64.250	ACRE
19,825.00	300.00	500.00	308.56			

Eola Yard Improvements Cost Estimate

EOLA YARD IMPROVEMENTS COST ESTIMATE						
ITEM	***QTY***	***UNIT***	***UNIT COST***	***TOTAL COST***	***APPLICATION CATEGORY***	***UNIT COST DOCUMENTATION***
TRACK	14510	TF	$230	$3,337,300	10.09	12" Track Ballast ($31/TF); Wood RR Ties 24" OC ($60 each); Rail #115 RE (CWR) ($105/TF); OTM ($5/TF); 6" Subballast ($29/TF)
TURNOUT (#11)	4	EA	$160,000	$640,000	10.14	IAIS historical typical cost. Material Cost: no. 11 - $40,000, no. 15 - $54,000, no. 20 - $65,000. Plus railroad freight, site preparation, installation, power operation equipment, contractors expenses and railroad signaling and commissioning costs.
TURNOUT (#24)	14	EA	$300,000	$4,200,000	10.14	
EARTHWORK (1.75 CY/FT)	36407	CY	$16	$582,500	10.06	prior experience for a project of this size
SUBBALLAST (0.9 CY/FT)	18723.6	CY	$40	$749,000	10.06	prior experience for a project of this size
CULVERT EXTENSION	50	LF	$50	$2,500	10.04	prior experience
TRACKWORK SUBTOTAL				**$9,511,300**		
TRACKWORK CONTIGENCY	**1**	**LS**	**20%**	**$ 1,902,300**		
TRACK REMOVAL	9750	TF	$25	$243,750	40.01	prior experience
TURNOUT REMOVAL	15	EA	$10,000	$150,000	40.01	prior experience
REMOVE CROSSING	2	EA	$10,000	$20,000	40.01	prior experience
UTILITY RELOCATION	1	LS	$500,000	$500,000	40.02	prior experience
PERMITTING / MITIGATION (WATERWAY IMPACTS)	1	LS	$1,800,000	$1,800,000	40.04	NEPA-Environmental
SITEWORK SUBTOTAL				**$2,713,750**		
SITEWORK CONTINGENCY	**1**	**LS**	**30%**	**$ 814,125**		
SIGNAL	1	LS	$13,160,000	$13,160,000	50.01	Signal Cost Estimate
SIGNAL SUBTOTAL				**$13,160,000**		
SIGNAL CONTINGENCY	**1**	**LS**	**20%**	**$ 2,632,000**		
PROJECT CONSTRUCTION SUBTOTAL				**$ 30,733,475**		
DESIGN:						
NEPA	1	LS	$500,000	$500,000	80.02	NEPA-Environmental
PRELIMINARY DESIGN (2% W/OUT SIGNAL)	1	LS	2%	29882950%	80.02	typical industry averages based on a percentage of total construction costs
FINAL DESIGN (4% W/OUT SIGNAL)	1	LS	4%	59765900%	80.03	typical industry averages based on a percentage of total construction costs
SIGNAL DESIGN	1	LS	$840,000	$840,000	80.03	Signal Cost Estimate
PROJECT MANAGEMENT (5% W/OUT SIGNAL)	1	LS	5%	74707375%	80.04	typical industry averages based on a percentage of total construction costs
CONSTRUCTION MANAGEMENT (4% W/OUT SIGNAL)	1	LS	4%	59765900%	80.05	typical industry averages based on a percentage of total construction costs
PROJECT DESIGN SUBTOTAL				**$ 3,581,200**		
PROJECT DESIGN CONTINGENCY	**1**	**LS**	**5%**	**$ 179,100**		
UNALLOCATED CONTINGENCY	**1**	**LS**	**5%**	**$ 1,724,700**		
TOTAL				**$36,218,475**		

HDR | ONE COMPANY *Many Solutions*

Project: ELOA YARD | Computed: MCW | Date: 8-5-10
Subject: | Checked: | Date:
Task: Rough Signal Est. | Page: | of:
Job #: | No:

Milepost		
36.54	RETIRE SIGNAL BRIDGE	80,000
36.80	Install New SIGNAL BRIDGE	250,000
36.70	Hi Hat. BEARRANGE X'ING	500,000
36.31	WOOD ST BEARRANGE X'ING	500,000
36.10	OHIO ST BEARRANGE X'ING	500,000
35.72 To 35.00	CP WEST EOLA POWER OPERATED TURNOUTS 22 ea @ $120,000 Control Signals 14 ea @ $46,000	2,640,000 644,000
34.8	CP with 1 PO TO & 3 Signals	800,000
33.59 To 33.27	CP EOLA POWER OPERATED TURNOUTS 34 ea @ $120,000 Control Signals 24 ea @ $46,000	4,080,000 1,104,000
33.51	EOLA RD BEARRANGE X'ING	500,000
32.96	CP ON EJ&E	800,000
	Total	$12,398,000
	20% Contingency	2,479,600
		14,877,600

EOLA YARD IMPROVEMENTS COST ESTIMATE						
ITEM	***QTY***	***UNIT***	***UNIT COST***	***TOTAL COST***	***APPLICATION CATEGORY***	***UNIT COST DOCUMENTATION***
TRACK	14510	TF	$230	$3,337,300	10.09	12" Track Ballast ($31/TF); Wood RR Ties 24" OC ($60 each); Rail #115 RE (CWR) ($105/TF); OTM ($5/TF); 6" Subballast ($29/TF)
TURNOUT (#11)	4	EA	$160,000	$640,000	10.14	IAIS historical typical cost. Material Cost: no. 11 - $40,000, no. 15 - $54,000, no. 20 - $65,000. Plus railroad freight, site preparation, installation, power operation equipment, contractors expenses and railroad signaling and commissioning costs.
TURNOUT (#24)	14	EA	$300,000	$4,200,000	10.14	
EARTHWORK (1.75 CY/FT)	36407	CY	$16	$582,500	10.06	prior experience for a project of this size
SUBBALLAST (0.9 CY/FT)	18723.6	CY	$40	$749,000	10.06	prior experience for a project of this size
CULVERT EXTENSION	50	LF	$50	$2,500	10.04	prior experience
TRACKWORK SUBTOTAL				**$9,511,300**		
TRACKWORK CONTIGENCY	**1**	**LS**	**20%**	**$ 1,902,300**		
TRACK REMOVAL	9750	TF	$25	$243,750	40.01	prior experience
TURNOUT REMOVAL	15	EA	$10,000	$150,000	40.01	prior experience
REMOVE CROSSING	2	EA	$10,000	$20,000	40.01	prior experience
UTILITY RELOCATION	1	LS	$500,000	$500,000	40.02	prior experience
PERMITTING / MITIGATION (WATERWAY IMPACTS)	1	LS	$1,800,000	$1,800,000	40.04	NEPA-Environmental
SITEWORK SUBTOTAL				**$2,713,750**		
SITEWORK CONTINGENCY	**1**	**LS**	**30%**	**$ 814,125**		
SIGNAL	1	LS	$13,160,000	$13,160,000	50.01	Signal Cost Estimate
SIGNAL SUBTOTAL				**$13,160,000**		
SIGNAL CONTINGENCY	**1**	**LS**	**20%**	**$ 2,632,000**		
PROJECT CONSTRUCTION SUBTOTAL				**$ 30,733,475**		
DESIGN:						
NEPA	1	LS	$500,000	$500,000	80.02	NEPA-Environmental
PRELIMINARY DESIGN (2% W/OUT SIGNAL)	1	LS	2%	29882950%	80.02	typical industry averages based on a percentage of total construction costs
FINAL DESIGN (4% W/OUT SIGNAL)	1	LS	4%	59765900%	80.03	typical industry averages based on a percentage of total construction costs
SIGNAL DESIGN	1	LS	$840,000	$840,000	80.03	Signal Cost Estimate
PROJECT MANAGEMENT (5% W/OUT SIGNAL)	1	LS	5%	74707375%	80.04	typical industry averages based on a percentage of total construction costs
CONSTRUCTION MANAGEMENT (4% W/OUT SIGNAL)	1	LS	4%	59765900%	80.05	typical industry averages based on a percentage of total construction costs
PROJECT DESIGN SUBTOTAL				**$ 3,581,200**		
PROJECT DESIGN CONTINGENCY	**1**	**LS**	**5%**	**$ 179,100**		
UNALLOCATED CONTINGENCY	**1**	**LS**	**5%**	**$ 1,724,700**		
TOTAL				**$36,218,475**		

Wyanet Connection Cost Estimate

Cost Estimate for Wyanet Connection

A design for the Wyanet Connection was completed by Design Nine, Inc. in 2001. The Conceptual Engineering Plans submitted with this application vary by the degree of curve and superelevation from the Design Nine, Inc. design. The differences in the designs are minimal, so the detailed cost estimate produced by Design Nine, Inc. has been used as a basis for the cost estimate for the Wyanet Connection for this application.

Design Nine, Inc. Project Cost = $3,989,581
With Escalation from 2001 to 2010 (4.5%) = $5,928,897

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
3,989,581	4,169,112	4,356,722	4,552,775	4,757,650	4,971,744	5,195,472	5,429,269	5,673,586	5,928,897

Contingency (20%) = $1,185,779

Total Cost = $7,114,676

For the cost estimate, the Total Cost is $7,200,000 based on rounding up to the nearest $100,000.

DESIGN NINE, INC.	ILLINOIS DEPARTMENT OF TRANSPORTATION
	PRELIMINARY COST ESTIMATE
ENGINEERING SERVICES FOR RAILROADS AND INDUSTRY	Project Description and Location Amtrak Service Chicago to Quad Cities, IL via Burlington Northern Santa Fe
	between Chicago and Wyanet, IL and Iowa Interstate Railroad
11166 TESSON FERRY ROAD - SUITE 100 ST. LOUIS, MO (314) 729-7600	between Wyanet and the Quad Cities, IL
	Connection Track between BNSF/IAIS, Crossover and Turnout on BNSF
	and Turnout on IAIS

Project Number: 158	Prepared by: G.T. Hay	Checked by:	Date: July 27, 2001	Sheet: 1 of: 1

ITEM AND DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	TOTAL
LABOR AND EQUIPMENT					
Clearing and grubbing	Acre	11	$3,000.00	$33,000	
Excavation to embankment and waste	C.Y.	103,762	$3.50	$363,167	
Subballast	N.T.	8,060	$8.50	$68,510	
Construct Dbl 10'x9' box culvert with wingwalls	L.F.	112	$900.00	$100,800	
Construct 10'x10' box culvert with wingwalls	L.F.	100	$475.00	$47,500	
Place rip rap around box culvert	N.T.	1,300	$25.00	$32,500	
Construct property fencing	L.F.	4,500	$3.00	$13,500	
Unload rail and OTM	L.F.	7,968	$2.50	$19,920	
Unload cross ties	Each	2,452	$1.00	$2,452	
Construct and place BNSF No. 24 turnouts	Each	3	$90,000.00	$270,000	
Construct and place IAIS No. 24 turnout	Each	1	$45,000.00	$45,000	
Construct track	T.F.	3,984	$20.00	$79,680	
Unload ballast	N.T.	4,300	$1.50	$6,450	
Surface, line and dress track and turnouts	T.F.	6,600	$3.50	$23,100	
Construct timber/asphalt grade crossing	T.F.	16	$100.00	$1,600	
BNSF flagging	Day	35	$500.00	$17,500	
IAIS flagging	Day	35	$500.00	$17,500	
Thermite welds	Each	112	$350.00	$39,200	
Utility/fiber optic adjustments	L.S.	1	$35,000.00	$35,000	
Construct walkways	N.T.	1,900	$2.50	$4,750	
Permitting	%	1,221,129	5%	$61,056	
Contingencies	%	1,282,185	15%	$192,328	
Engineering	%	1,474,513	15%	$221,177	
Total Labor and Equipment					$1,695,690
MATERIAL					
Property acquistion	Acre	7	$7,500.00	$52,500	
Subballast	N.T.	8,060	$15.00	$120,900	
7"x9"x9' Cross ties	Each	2,462	$40.00	$98,480	
CWR (136#)	N.T.	179	$600.00	$107,400	
Ballast	N.T.	4,300	$12.00	$51,600	
Walkway ballast	N.T.	1,900	$10.00	$19,000	
Tie plates	Each	4,904	$5.00	$24,520	
Spikes	Keg	81	$65.00	$5,265	
Thermite welds	Each	112	$150.00	$16,800	
Rail anchors	Each	8,024	$1.50	$12,036	
Timber grade crossings with timber screws	T.F.	16	$60.00	$960	
Asphalt paving	N.T.	16	$50.00	$800	
No. 24 136# turnout complete	Each	4	$175,000.00	$700,000	
Concrete with reinforcement, Dbl box culvert	L.F.	112	$820.00	$91,840	
Concrete with reinforcement, box culvert	L.F.	100	$435.00	$43,500	
Rip rap	N.T.	1,300	$10.00	$13,000	
Contingencies	%	1,358,601	15%	$203,790	
Total Material					$1,562,391
SIGNALS					
BBRS Signal Costs	L.S.	1	$731,500.00	$731,500	
Total Signals					$731,500
PROJECT TOTAL					**$3,989,581**

No rehabilitation work included on BNSF double track mainlines north of new connection located south of Wyanet

Colona Junction Cost Estimate

COLONA JUNCTION COST ESTIMATE						
ITEM	***QTY***	***UNIT***	***UNIT COST***	***TOTAL COST***	***APPLICATION CATEGORY***	***UNIT COST DOCUMENTATION***
TRACK	2388	TF	$230	$549,240	10.15	12" Track Ballast ($31/TF); Wood RR Ties 24" OC ($60 each); Rail #115 RE (CWR) ($105/TF); OTM ($5/TF); 6" Subballast ($29/TF)
TURNOUT (#20 POTO)	2	EA	$275,000	$550,000	10.15	IAIS historical typical cost. Material Cost: no. 11 - $40,000, no. 15 - $54,000, no. 20 - $65,000. Plus railroad freight, site preparation, installation, power operation equipment, contractors expenses and railroad signaling and commissioning costs.
TRACK SHIFT	655	TF	$60	$39,300	10.15	prior experience
36" CMP (860 LF)	1	LS	$91,300	$91,300	10.15	IaDOT Bid Tab Reference # 2416-1180036 with 10% allowance for excavation, backfill, compaction and granular bedding
TRACKWORK SUBTOTAL				**$1,229,840**		
TRACK REMOVAL	2356	TF	$25	$58,900	10.15	prior experience
TURNOUT REMOVAL	2	EA	$10,000	$20,000	10.15	prior experience
SITE GRADING	1	LS	$50,000	$50,000	10.15	prior experience
MISCELLANEOUS SITEWORK	1	LS	$200,000	$200,000	10.15	prior experience
SITEWORK SUBTOTAL				**$328,900**		
PROJECT CONSTRUCTION SUBTOTAL				**$ 1,558,740**		
			USE	**$ 1,600,000**		
PROJECT CONSTRUCTION CONTINGENCY			**20%**	**$ 320,000**		
TOTAL				**$1,878,740**		

Station Cost Estimates

Chicago to Iowa City Intercity Passenger Rail

Geneseo, IL Passenger Station Conceptual Cost Estimate

8/6/2010

Conceptual Cost Estimate - Geneseo Station - Minimum Build Out						
ITEMS	Unit	Quantity	Qty Total	Unit Cost *	Total Cost	Application Category
Platform Construction Incl. Tactile	LF	600	600	$ 650	$ 390,000	20.03
Relocate Station Away From Track	L Sum	1	1	$ 150,000	$ 150,000	20.01
Utility/Fiber Optic Relocation	L Sum	1	1	$ 100,000	$ 100,000	40.02
Rennovate Station Building	L Sum	-	-	$ 500,000	$ -	-
Canopy (25' Long)	L Sum	1	1	$ 50,000	$ 50,000	20.03
Platform & Parking Lighting	L Sum	1	1	$ 80,000	$ 80,000	20.03
PA System/Passenger Information Display	L Sum	1	1	$ 20,000	$ 20,000	20.03
Electrical Service	L Sum	1	1	$ 25,000	$ 25,000	40.02
Wheel Chair Lift & Storage Enclosure	Each	1	1	$ 12,000	$ 12,000	20.03
Flagging	Day	60	60	$ 1,000	$ 60,000	20.03
QuickTrak ticketing kiosks	Each	1	1	$ 26,000	$ 26,000	20.08
Acquisition of Depot Property	Allow	1	1	$ 500,000	$ 500,000	40.07
Warming Shelter	L Sum	1	1	$ 40,000	$ 40,000	20.03
New signage	L Sum	1	1	$ 25,000	$ 25,000	20.03
New sidewalk + landscape	SQ FT	10 x 560	5600	$ 10	$ 56,000	20.06
Surface parking construction	Stall	20	20	$ 7,000	$ 140,000	20.06
Roadway Improvements (E 1st St)	LS	1	1	$ 20,000.0	$ 20,000.0	20.07

** See Station Cost Estimate Justification for unit cost documentation*

Chicago to Iowa City Intercity Passenger Rail
Geneseo, IL Passenger Station Conceptual Cost Estimate
8/6/2010

Subtotal		**$**	**1,694,000**
Contingency	30%	$	508,200
Subtotal		$	2,202,200
NEPA		$	150,000
Preliminary Design (4%)		$	88,088
Final Design (6%)		$	132,132
Proj. Mgmt- Design/Const (5%)		$	110,110
Const. Admin/Mgmt(4%)		$	88,088
5% Mgmt. Contingency		$	28,421
5% Unallocated Contingency		$	139,952
Total Cost		**$**	**2,938,991**

NOTES:

1. Cost of railroad signalization, crossing signals, and track reconstruction is not included
   These costs are assumed to be part of track and signal design/construction
2. Cost of QuickTrak ticketing kiosks are initial costs (from Amtrak) only and do not include monthly fees of $800
3. City plans to buy station and property. This cost is a placeholder only, no appraisals have been done to date.
4. Relocation is required to obtain Amtrak-required 600' platform.
5. Rennovation of the station building is not included. A partial renovation may be less expenssive than a separate, new waiting shelter
6. Assumes existing storm drainage system can accommodate additional flow
7. Given ridership and ready access between parking and platform, one 25' canopy, separate from the station/warming shelter, is included
8. Evaluate cost of warming shelter vs rennovating one portion of the station building
9. If tenants are allowed to stay in the building, income from tenants has not been included as a credit

Chicago to Iowa City Intercity Passenger Rail
Moline, IL Passenger Station Conceptual Cost Estimate
8/6/2010

Conceptual Cost Estimate - Moline Station - Minimum Build Out						
ITEMS	Unit	Quantity	Qty Total	Unit Cost *	Total Cost	Application Category
Platform Construction Incl. Tactile	LF	600	600	$ 650	$ 390,000	20.03
Platform Lighting	L Sum	1	1	$ 100,000	$ 100,000	20.03
Canopy	L Sum	1	1	$ 100,000	$ 100,000	20.03
Utility/Fiber Optic Relocation	Allow	1	1	$ 75,000	$ 75,000	40.02
PA System/Passenger Information Display	L Sum	1	1	$ 20,000	$ 20,000	20.03
Wheel Chair Lift & Storage Enclosure	Each	1	1	$ 12,000	$ 12,000	20.03
Electrical/Water/Data Service	L Sum	1	1	$ 40,000	$ 40,000	40.02
Flagging	Day	60	60	$ 1,000	$ 60,000	20.03
O'Rourke Bldg Renovation	L Sum	1	1	$ 185,000	$ 185,000	20.02
QuickTrak ticketing kiosks	Each	3	3	$ 26,000	$ 78,000	20.08
Concrete Sidewalk	SQ FT	2,000	2,000	$ 5	$ 10,000	20.06
Landscaping	L Sum	1	1	$ 25,000	$ 25,000	20.06
Exterior Signage	L Sum	1	1	$ 25,000	$ 25,000	20.03
New pickup/dropoff w/parking	SQ FT	75 x 400	30,000	$ 11	$ 330,000	20.07
New walkway/entryway to station	SQ FT	40 x 115	4,600	$ 50	$ 230,000	20.06
Property Acquisition (O'Rourke Bldg)	Allow	1	1	$ 900,000.00	$ 900,000.00	40.07

** See Station Cost Estimate Justification for unit cost documentation*

Chicago to Iowa City Intercity Passenger Rail
Moline, IL Passenger Station Conceptual Cost Estimate
8/6/2010

Subtotal	$	2,580,000
30% Contingency	$	774,000
Subtotal	$	3,354,000
NEPA	$	100,000
Preliminary Design (4%)	$	134,160
Final Design (6%)	$	201,240
Proj. Mgmt- Design/Const (5%)	$	167,700
Const. Admin/Mgmt(4%)	$	134,160
5% Design Contingency	$	36,863
5% Unallocated Contingncy	$	206,406
Total Cost	**$**	**4,334,529**

NOTES:

1. Cost of railroad signalization, crossing signals, and track reconstruction is not included
   These costs are assumed to be part of track and signal design/construction
2. Cost of QuickTrak ticketing kiosks are initial costs only and do not include monthly fees of $800
3. City plans to buy O'Rourke Building at a cost of approximately $900,000. Property includes two adjacent
4. The City has access to additional parking within a block of the station
5. If tenants are allowed to stay in the building, income from tenants has not been included as a credit
6. The City plans to renovate the first floor of the O'Rourke Building for use as a waiting area and ticketing facility
7. A $75k allowance has been made for buried utility relocation (fiber optic, gas, etc)

Chicago to Iowa City Intercity Passenger Rail

Iowa City, IA Passenger Station Conceptual Cost Estimate

8/6/2010

Conceptual Cost Estimate - Iowa City Station - Minimum Build Out						
ITEMS	Unit	Quantity	Qty Total	Unit Cost *	Total Cost	Application Category
Platform Construction Incl. Tactile	LF	600	600	$ 650	$ 390,000	20.03
Platform Lighting	L Sum	1	1	$ 100,000	$ 100,000	20.03
PA System/Passenger Information Display	L Sum	1	1	$ 20,000	$ 20,000	20.03
Electrical/Water/Data Service	L Sum	1	1	$ 25,000	$ 25,000	40.02
Wheel Chair Lift & Storage Enclosure	Each	1	1	$ 12,000	$ 12,000	20.03
Retaining Wall for East End of Platform	SF	20 x 200	4,000	$ 100	$ 400,000	40.05
Platform Pedestrian Handrail/Guardrail	LF	300	300	$ 150	$ 45,000	20.03
Canopies (50' long)	Each	1	1	$ 100,000	$ 100,000	20.03
Utility/Fiber Optic Relocation	LS	1	1	$ 75,000	$ 75,000	40.02
Flagging	Day	75	75	$ 1,000	$ 75,000	20.03
QuickTrak ticketing kiosks	Each	3	3	$ 26,000	$ 78,000	20.08
Acquisition of Depot Property	Allow	1	1	$ 700,000	$ 700,000	40.07
Tennant Relocation costs	Allow	-	-	$ 50,000	$ -	-
Rennovation of Depot	Allow	-	-	$ 1,000,000	$ -	-
Warming Shelter	L Sum	1	1	$ 100,000	$ 100,000	20.03
Exterior signage	L Sum	1	1	$ 30,000	$ 30,000	20.03
New pickup + dropoff area (Wright St)	SQ FT	65 x 300	19,500	$ 10	$ 195,000	20.07
Concrete Sidewalk	SQ FT	1,200	1,200	$ 5.5	$ 6,600.0	20.06
Roadway Closure (Dubuque St)	L Sum	1	1	$ 50,000	$ 50,000	20.07
Landscaping	L Sum	1	1	$ 35,000	$ 35,000	20.06
Parking (Surface), Prop. Acquis., Const. & Reloc.	Allow	1	1	$ 700,000	$ 700,000	20.06
Parking Structure (per space provided)	Space	-	-	$ 25,000	$ -	-
Ped Grade Separation to Parking South of Trks.	L Sum	-	-	$ 1,000,000	$ -	-
Pedestrian Protection - chainlink fence	L Sum	1	1	$ 10,000	$ 10,000	20.06

** See Station Cost Estimate Justification for unit cost documentation*

Chicago to Iowa City Intercity Passenger Rail
Iowa City, IA Passenger Station Conceptual Cost Estimate
8/6/2010

Subtotal		**$**	**3,146,600**
Contingency	30%	$	943,980
Subtotal		$	4,090,580
NEPA		$	200,000
Preliminary Design (4%)		$	163,623
Final Design (6%)		$	245,435
Proj. Mgmt- Design/Const (5%)		$	204,529
Const. Admin/Mgmt(4%)		$	163,623
5% Mgmt. Contingency		$	48,861
5% Unallocated Contingency		$	255,833
Total Cost		**$**	**5,372,483**

NOTES:

1. Cost of railroad signalization, crossing signals, and track reconstruction is not included
   These costs are assumed to be part of track and signal design/construction
2. Cost of QuickTrak ticketing kiosks are initial costs only and do not include monthly fees of $800
3. City plans to buy station and property at a cost of approximately $700,000. Property includes two adjacent parking lots with space for 18 vehicles (to be used for ADA parking)
4. An allowance of $700k has been provided to acquire additional property and construct surface parking on the north side of the tracks
5. The City has access to additional parking at the County lot 1 block away
6. Platform is lengthened across Dubuque Street, retaining wall is constructed adjacent to IAIS tracks to suport platform
   Dubuque Street is closed at tracks
7. Evaluate cost of warming shelter vs rennovating one portion of the station building
8. If tenants are allowed to stay in the building, income from tenants has not been included as a credit
9. Warming shelter serves in lieu of one canopy
10. A $75k allowance has been made for buried utility relocation (fiber optic, gas, etc)
11. Retaining wall to support east end of platform is assumed to be a combination concrete cantilever and soldier pile wall

Station Cost Estimate Background

Platform Construction Including Tactile (Linear Foot, $650/LF): Includes forming and pouring a reinforced concrete platform and footing with cantilevered edge, typically 15' wide, with detectable warning tile edging. The unit cost is based on typical unit costs for structural concrete, adjusted for the difficulty of constructing a platform within the railroad operating envelope, which will require cessation of all construction activities whenever a train is approaching. This unit cost has also been verified by recent station construction experience and review of associated bids.

Platform Lighting (LS, typically $75-$100K): Includes luminaires along the platform and at approaches to the platform. The cost assumes approximately 20 luminaires and associated conduits and wiring along the platform and at approach walkways or adjacent passenger drop-off area. Exact illumination requirements will need to be determined based on a photometric study of each site that identifies ambient light levels that may increase or decrease the amount of new illumination required. Recent construction costs also informed this unit cost.

PA System/Passenger Information Display (LS, typically $20,000): Assumes ADA compliant PIDS signs at one or two locations along platform where passengers are likely to congregate (eg, at shelter/station building and at canopy). Estimate based on off the shelf components linked to Amtrak's back-office systems installed at other Amtrak stations.

Electrical/Water/Data Service (LS, typically $25,000): Assumes all utilities are available immediate vicinity of station. This item brings these utilities to the station site. Data and phone line service entrances are assumed to already exist. Water and electrical cost based on assumed connection costs to adjacent street or overhead line poles. Cost based on experience from recent, similar projects.

Wheel Chair Lift and Enclosure: Assumed cost based on commercially available lift. Enclosure adjacent to or combined with shelter.

Canopy (LS, unit cost typically about $100,000 for approximately 50' canopy): Based on relatively simple structure, with concrete and/or steel columns and metal roofing system. Assumed cost based on recent cost experience for shelter fabrication and typical costs for structural concrete and steel fabrication, adjusted for small quantities.

Utility/Fiber Optic Relocation (Allowance, typically $75,000 to $100,000): Cost based on assumed utility relocation costs. Fiber is known to exist in R/W, but exact location is unknown. Other utility locations are unknown. Historically, there is some utility relocation associated with many station projects.

Flagging ($1000/day): Based on typical wages for M/W employees for 10-hour day, plus markup for vehicles, tools, etc.

Quick Track Ticket Vending Machine Kiosks ($26,000 Each): Cost provided by Amtrak during hi-rail trip June 22.

Property Acquisition (costs vary): At Iowa City and Moline, estimated property acquisition costs were provided by the Cities based on their experience. However, appraisals were not always available. At Geneseo, an assumed cost was used.

Tenant Relocation (varies): An assumed cost was used.

Relocate Station Away from Track (LS $150,000): Involves moving the Geneseo station building approximately 10' away from track. Cost developed by architects with similar experience. Assumes relocation of only the historic structure.

Renovation of Existing Structure or Depot (varies): At Iowa City and Geneseo, this cost was based on a brief site review by architects. At Moline, this cost is an assumed cost for renovating a portion of the interior of the O'Rourke Building (based on conversations with the City, the entire building does not require renovation).

Warming Shelter (varies, $40,000 at Geneseo and $100,000 at Iowa City): Assumes stock shelter at Geneseo, based on ridership estimates. Shelter at Iowa City would be more elaborate, with cost based on recent costs for customized transit waiting shelters.

Exterior Signage ($25,000 to $30,000): Based on recent cost experience with signage at Amtrak stations.

New Pickup/Drop-off Area ($10/SF to $11/SF): Cost for paving, striping, curb and gutter, minor landscaping to improve roadway vicinity of station. Based on typical unit costs for roadway excavation, granular backfill, asphalt paving, and curb and gutter.

Sidewalk ($5/SF to $10/SF): Assumes typical concrete sidewalk construction costs, with allowance for "decorative" joint pattern. The higher number ($10/SF) allows for sidewalk and landscaping. Also includes cost for curb cuts.

Roadway Closure (Dubuque Street) ($50,000): Assumes closure of the grade crossing at Dubuque Street to provide a 600' long platform at Iowa City station. Allows for sawcutting, removal of crossing at track, new curb and gutter, minor paving at curb and gutter, striping, and signage on either side of the tracks. Based on typical unit costs for small quantities of each of these items.

Landscaping (LS, $25,000 to $35,000): Provides for landscaping and site plantings. Based on assumed quantity of landscaping along site.

Surface parking Construction ($7000/Stall): Geneseo only) Conceptual cost number supported by bid tabs for projects of similar size. Accounts for relatively small quantity of work.

NEPA-Environmental Cost Estimate

Cost Estimate - Eola Main Line Improvements Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	8	16	80	24	16	**144**
1.2 Data Collection	4	24	80	80	0	**188**
1.3 Technical Memorandum	4	24	120	24	24	**196**
	16	**64**	**280**	**128**	**40**	**528**
2. Agency and Public Invovlement						
2.1 Agency Coordination	40	24	80	40		184
2.2 Public Involvement	24	16	120	24		184
	64	**40**	**200**	**64**	**0**	**368**
3. TIER 2 EA						
3.1 Introduction	4	4	16		8	32
3.2 Purpose and need	32	40	80		8	160
3.3 Alternatives	40	80	24	80	8	232
3.4 Affected Environment and Environmental Consequences	4	8	24		26	62
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation		32	80	32		144
3.4.3 Noise and Vibration		6	72			78
3.4.4 Air Quality		4	10			14
3.4.5 Hazardous Materials			40	4		44
3.4.6 Cultural Resources			40			40
3.4.7 Section 4(f) Resources			32			32
3.4.8 Waterways (Stream Relocation)	24	40	120	80	4	268
3.4.9 Wetlands	24	40	120	80		264
3.4.10 Water Quality			8			8
3.4.11 Floodplains		24	32	8		64
3.4.12 Construction Impacts	12	24	40	40	16	132
3.4.13 Irreversible and Irretrievable Commitment of Resources		4	16			20
3.4.14 Indirect and Cumulative Impacts	4	12	24			40
3.4.15 Summary of Impacts of Eola Yard		12	40	40		92
3.5 Comments and Coordination	40	24	80	160	120	424
3.6 Mitigation	24	40	120	120	80	384
3.7 TOC, A/A, References		1			8	9
3.8 Appendices			120		1	121
3.9 FONSI	24	12	40		6	82
	232	**407**	**1182**	**648**	**285**	**2754**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	24	0	0	0	8	**32**
4.2 DOT Coordination	40	4	12	8	0	**64**
4.3 Quality Review of Project Deliverables	40	80	4	0	0	**124**
	104	**84**	**16**	**8**	**8**	**220**
TOTAL HOURS	**416**	**595**	**1678**	**848**	**333**	**3870**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	416	$68.00	$28,288
Senior Engr.	595	$79.00	$47,005
Design Engineer / Planner / Env Scientist	1678	$34.00	$57,052
Designer / CADD	848	$25.00	$21,200
Clerical	333	$20.00	$6,660
TOTAL DIRECT LABOR COST	3870		$160,205

II. Payroll Burden and OH Costs	Overhead =	157.76%			$252,739
III. Direct Project Expenses					
Travel - Rental Car	12	Days	at	$100.00	$1,200
Travel - Meals	32	Meals	at	$6.00	$192
Travel - Airfare	6	Roundtrip	at	$600.00	$3,600
Travel - Hotel	12	Days	at	$75.00	$900
Specialty Support Staff	0	hours	at	$150.00	$0
Technology Charge	3870	Hours	at	$3.70	$14,319
General Photocopies	500	Sheets	at	$0.07	$35
Telephone - Conference Calls	4	each	at	$30.00	$120
Shipping	3	mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE					$20,426
IV. Subconsultant Expenses					
A. n/a					$0
TOTAL SUBCONSULTANT EXPENSES					$0
IV. Estimated Actual Costs (I + II + III), Rounded					$433,370
V. FIXED FEE	**13% x (I + II)**				$53,683
VII. Unauthorized Contingency	**0% x (I + II + III)**				$0
VIII. Cost Plus Fixed Fees					$487,053
Cost Estimate For HSIPR Grant Application				**Use**	**$500,000**

Cost Estimate - Wyanet Connection Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	1	1	8	8	16	**34**
1.2 Data Collection	4	12	12	12	0	**40**
1.3 Technical Memorandum	4	24	24	12	24	**88**
	9	**37**	**44**	**32**	**40**	**162**
2. Agency and Public Invovlement						
2.1 Agency Coordination	12	12	24	24		72
2.2 Public Involvement	8	12	0	0		20
	20	**24**	**24**	**24**	**0**	**92**
3. TIER 2 EA						
3.1 Introduction	4	4	16		8	32
3.2 Purpose and need	1	4	4		8	17
3.3 Alternatives	24	40	24	80	8	176
3.4 Affected Environment and Environmental Consequences	4	8	12		26	50
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation		4	4	4		12
3.4.3 Noise and Vibration		4	24			28
3.4.4 Air Quality		4	10			14
3.4.5 Hazardous Materials			40	4		44
3.4.6 Cultural Resources			8			8
3.4.7 Section 4(f) Resources	4	4	4			12
3.4.8 Waterways (Stream Relocation)	24	40	80	60	4	208
3.4.9 Wetlands	16	24	80	60		180
3.4.10 Water Quality			8			8
3.4.11 Floodplains		12	24	8		44
3.4.12 Construction Impacts	4	4	8	8	16	40
3.4.13 Irreversible and Irretrievable Commitment of Resources		4	12			16
3.4.14 Indirect and Cumulative Impacts	4	4	8			16
3.4.15 Summary of Impacts Wyanet Connection			24	16		40
3.5 Comments and Coordination	4	4	12	12	12	44
3.6 Mitigation	16	24	40	24	32	136
3.7 TOC, A/A, References		1			8	9
3.8 Appendices			40		1	41
3.9 FONSI	12	12	24		6	54
	117	**201**	**510**	**280**	**129**	**1237**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	12	0	0	0	8	**20**
4.2 DOT Coordination	2	4	12	8	0	**26**
4.3 Quality Review of Project Deliverables	12	16	4	0	0	**32**
	26	**20**	**16**	**8**	**8**	**78**
TOTAL HOURS	**172**	**282**	**594**	**344**	**177**	**1569**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	172	$68.00	$11,696
Senior Engr.	282	$79.00	$22,278
Design Engineer / Planner / Env Scientist	594	$34.00	$20,196
Designer / CADD	344	$25.00	$8,600
Clerical	177	$20.00	$3,540
TOTAL DIRECT LABOR COST	1569		$66,310

II. Payroll Burden and OH Costs Overhead = 157.76% $104,611

III. Direct Project Expenses

Travel - Rental Car	2 Days	at	$100.00	$200
Travel - Meals	12 Meals	at	$6.00	$72
Travel - Airfare	2 Roundtrip	at	$600.00	$1,200
Travel - Hotel	12 Days	at	$75.00	$900
Specialty Support Staff	0 hours	at	$150.00	$0
Technology Charge	1569 Hours	at	$3.70	$5,805
General Photocopies	500 Sheets	at	$0.07	$35
Telephone - Conference Calls	4 each	at	$30.00	$120
Shipping	3 mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE				$8,392

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $179,313

V. FIXED FEE **13% x (I + II)** $22,220

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $201,533

Cost Estimate For HSIPR Grant Application **Use** **$200,000**

Cost Estimate - Moline Station Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	1	2	24	0	0	**27**
1.2 Data Collection	1	2	16	0	0	**19**
1.3 Technical Memorandum	1	2	24	4	8	**39**
	3	**6**	**64**	**4**	**8**	**85**
2. Agency and Public Invovlement						
2.1 Agency Coordination	12	12	24	24		72
2.2 Public Involvement	24	24	40	24	12	124
	36	**36**	**64**	**48**	**12**	**196**
3. TIER 2 EA						
3.1 Introduction	1	1	8		2	12
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	2	1	4	8	2	17
3.4 Affected Environment and Environmental Consequences	4	8			26	38
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation			4			4
3.4.3 Noise and Vibration		6	72			78
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials			20	4		24
3.4.6 Cultural Resources	24	40	120	40		224
3.4.7 Section 4(f) Resources			4			4
3.4.8 Waterways (Stream Relocation)			4	4	4	12
3.4.9 Wetlands			4	4		8
3.4.10 Water Quality			8			8
3.4.11 Floodplains			12	8		20
3.4.12 Construction Impacts		1	8			9
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts		1	4			5
3.4.15 Summary of Impacts		1	8			9
3.5 Comments and Coordination	1	1	8		1	11
3.6 Mitigation	1	1	4		1	7
3.7 TOC, A/A, References		1			8	9
3.8 Appendices			4		1	5
3.9 FONSI	1	8	40		6	55
	38	**73**	**352**	**72**	**53**	**588**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0	8	**12**
4.2 DOT Coordination	4	4	12	8	0	**28**
4.3 Quality Review of Project Deliverables	4	4	4	0	0	**12**
	12	**8**	**16**	**8**	**8**	**52**
TOTAL HOURS	**65**	**99**	**456**	**108**	**69**	**797**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	65	$68.00	$4,420
Senior Engr.	99	$79.00	$7,821
Design Engineer / Planner / Env Scientist	456	$34.00	$15,504
Designer / CADD	108	$25.00	$2,700
Clerical	69	$20.00	$1,380
TOTAL DIRECT LABOR COST	797		$31,825

II. Payroll Burden and OH Costs Overhead = 157.76% $50,207

III. Direct Project Expenses

Travel - Rental Car	2 Days	at	$100.00	$200
Travel - Meals	12 Meals	at	$6.00	$72
Travel - Airfare	2 Roundtrip	at	$600.00	$1,200
Travel - Hotel	6 Days	at	$75.00	$450
Specialty Support Staff	0 hours	at	$150.00	$0
Technology Charge	797 Hours	at	$3.70	$2,949
General Photocopies	500 Sheets	at	$0.07	$35
Telephone - Conference Calls	4 each	at	$30.00	$120
Shipping	3 mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE				$5,086

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $87,118

V. FIXED FEE **13% x (I + II)** $10,664

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $97,782

Cost Estimate For HSIPR Grant Application **Use** **$100,000**

Cost Estimate - Rock Island Yard Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	1	12	12	0	0	**25**
1.2 Data Collection	1	8	8	0	0	**17**
1.3 Technical Memorandum	1	2	24	4	8	**39**
	3	**22**	**44**	**4**	**8**	**81**
2. Agency and Public Invovlement						
2.1 Agency Coordination	12	12	24	24		72
2.2 Public Involvement	4	8	8	8	12	40
	16	**20**	**32**	**32**	**12**	**112**
3. TIER 2 EA						
3.1 Introduction	1	1	8		2	12
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	32	56	80	40	2	210
3.4 Affected Environment and Environmental Consequences	4	8			26	38
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation	12	12	24	24		72
3.4.3 Noise and Vibration	6	12	60	40		118
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials	12	24	40	40		116
3.4.6 Cultural Resources		4	12	40		56
3.4.7 Section 4(f) Resources			4			4
3.4.8 Waterways (Stream Relocation)			4	4	4	12
3.4.9 Wetlands			4	4		8
3.4.10 Water Quality			8			8
3.4.11 Floodplains	4	8	24	8		44
3.4.12 Construction Impacts	12	24	24	24		84
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts	4	4	24			32
3.4.15 Summary of Impacts		1	8			9
3.5 Comments and Coordination	1	1	8		1	11
3.6 Mitigation	1	1	4		1	7
3.7 TOC, A/A, References		1			8	9
3.8 Appendices			4		1	5
3.9 FONSI	1	8	40		6	55
	94	**168**	**396**	**228**	**53**	**939**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0	8	**12**
4.2 DOT Coordination	4	4	12	8	0	**28**
4.3 Quality Review of Project Deliverables	4	4	4	0	0	**12**
	12	**8**	**16**	**8**	**8**	**52**
TOTAL HOURS	**121**	**210**	**480**	**264**	**69**	**1144**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	121	$68.00	$8,228
Senior Engr.	210	$79.00	$16,590
Design Engineer / Planner / Env Scientist	480	$34.00	$16,320
Designer / CADD	264	$25.00	$6,600
Clerical	69	$20.00	$1,380
TOTAL DIRECT LABOR COST	1144		$49,118

II. Payroll Burden and OH Costs Overhead = 157.76% $77,489

III. Direct Project Expenses

Travel - Rental Car	2 Days	at	$100.00	$200
Travel - Meals	12 Meals	at	$6.00	$72
Travel - Airfare	2 Roundtrip	at	$600.00	$1,200
Travel - Hotel	6 Days	at	$75.00	$450
Specialty Support Staff	0 hours	at	$150.00	$0
Technology Charge	1144 Hours	at	$3.70	$4,233
General Photocopies	500 Sheets	at	$0.07	$35
Telephone - Conference Calls	4 each	at	$30.00	$120
Shipping	3 mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE				$6,370

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $132,977

V. FIXED FEE **13% x (I + II)** $16,459

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $149,436

Cost Estimate For HSIPR Grant Application **Use** **$150,000**

Cost Estimate - Geneseo Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	1	2	24	0	0	**27**
1.2 Data Collection	1	2	16	0	0	**19**
1.3 Technical Memorandum	1	2	24	4	8	**39**
	3	**6**	**64**	**4**	**8**	**85**
2. Agency and Public Invovlement						
2.1 Agency Coordination	12	12	24	24		72
2.2 Public Involvement	24	24	40	24	12	124
	36	**36**	**64**	**48**	**12**	**196**
3. TIER 2 EA						
3.1 Introduction	1	1	8		2	12
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	32	56	80	40	2	210
3.4 Affected Environment and Environmental Consequences	4	8			26	38
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation			4			4
3.4.3 Noise and Vibration		6	72			78
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials			20	4		24
3.4.6 Cultural Resources	12	40	80	40		172
3.4.7 Section 4(f) Resources			4			4
3.4.8 Waterways (Stream Relocation)			4	4	4	12
3.4.9 Wetlands			4	4		8
3.4.10 Water Quality			8			8
3.4.11 Floodplains			12	8		20
3.4.12 Construction Impacts	32	24	60	24		140
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts	4	4	24			32
3.4.15 Summary of Impacts		1	8			9
3.5 Comments and Coordination	1	1	8		1	11
3.6 Mitigation	1	1	4		1	7
3.7 TOC, A/A, References		1			8	9
3.8 Appendices			4		1	5
3.9 FONSI	1	8	40		6	55
	92	**154**	**460**	**128**	**53**	**887**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0	8	**12**
4.2 DOT Coordination	4	4	12	8	0	**28**
4.3 Quality Review of Project Deliverables	4	4	4	0	0	**12**
	12	**8**	**16**	**8**	**8**	**52**
TOTAL HOURS	**119**	**180**	**564**	**164**	**69**	**1096**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	119	$68.00	$8,092
Senior Engr.	180	$79.00	$14,220
Design Engineer / Planner / Env Scientist	564	$34.00	$19,176
Designer / CADD	164	$25.00	$4,100
Clerical	69	$20.00	$1,380
TOTAL DIRECT LABOR COST	1096		$46,968

II. Payroll Burden and OH Costs	Overhead =	157.76%			$74,097
III. Direct Project Expenses					
Travel - Rental Car	2	Days	at	$100.00	$200
Travel - Meals	12	Meals	at	$6.00	$72
Travel - Airfare	2	Roundtrip	at	$600.00	$1,200
Travel - Hotel	6	Days	at	$75.00	$450
Specialty Support Staff	0	hours	at	$150.00	$0
Technology Charge	1096	Hours	at	$3.70	$4,055
General Photocopies	500	Sheets	at	$0.07	$35
Telephone - Conference Calls	4	each	at	$30.00	$120
Shipping	3	mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE					$6,192
IV. Subconsultant Expenses					
A. n/a					$0
TOTAL SUBCONSULTANT EXPENSES					$0
IV. Estimated Actual Costs (I + II + III), Rounded					$127,257
V. FIXED FEE	**13% x (I + II)**				$15,738
VII. Unauthorized Contingency	**0% x (I + II + III)**				$0
VIII. Cost Plus Fixed Fees					$142,995
Cost Estimate For HSIPR Grant Application				**Use**	**$150,000**

Cost Estimate - Illinois Track Improvements Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	1	2	24	0	0	**27**
1.2 Data Collection	1	2	16	0	0	**19**
1.3 Technical Memorandum	1	2	24	4	8	**39**
	3	**6**	**64**	**4**	**8**	**85**
2. Agency and Public Invovlement						
2.1 Agency Coordination	4	4	8	8		24
2.2 Public Involvement	4	8	12	12	12	48
	8	**12**	**20**	**20**	**12**	**72**
3. TIER 2 EA						
3.1 Introduction	1	1	8		2	12
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	4	24	24	24	2	78
3.4 Affected Environment and Environmental Consequences	4	8			26	38
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation	24	32	40	40		136
3.4.3 Noise and Vibration	24	24	80	32		160
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials			20	4		24
3.4.6 Cultural Resources	2	4	24	12		42
3.4.7 Section 4(f) Resources	12	12	24	24		72
3.4.8 Waterways (Stream Relocation)	4	8	12	12	4	40
3.4.9 Wetlands	4	12	12	24		52
3.4.10 Water Quality			8			8
3.4.11 Floodplains			12	8		20
3.4.12 Construction Impacts	12	12	40	24		88
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts	4	4	24			32
3.4.15 Summary of Impacts		1	8			9
3.5 Comments and Coordination	1	1	8		1	11
3.6 Mitigation	1	1	4		1	7
3.7 TOC, A/A, References		1			8	9
3.8 Appendices			4		1	5
3.9 FONSI	1	8	40		6	55
	102	**156**	**408**	**208**	**53**	**927**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0	8	**12**
4.2 DOT Coordination	4	4	12	8	0	**28**
4.3 Quality Review of Project Deliverables	4	4	4	0	0	**12**
	12	**8**	**16**	**8**	**8**	**52**
TOTAL HOURS	**121**	**174**	**496**	**228**	**69**	**1088**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	121	$68.00	$8,228
Senior Engr.	174	$79.00	$13,746
Design Engineer / Planner / Env Scientist	496	$34.00	$16,864
Designer / CADD	228	$25.00	$5,700
Clerical	69	$20.00	$1,380
TOTAL DIRECT LABOR COST	1088		$45,918

II. Payroll Burden and OH Costs Overhead = 157.76% $72,440

III. Direct Project Expenses

Travel - Rental Car	2 Days	at	$100.00	$200
Travel - Meals	12 Meals	at	$6.00	$72
Travel - Airfare	2 Roundtrip	at	$600.00	$1,200
Travel - Hotel	6 Days	at	$75.00	$450
Specialty Support Staff	0 hours	at	$150.00	$0
Technology Charge	1088 Hours	at	$3.70	$4,026
General Photocopies	500 Sheets	at	$0.07	$35
Telephone - Conference Calls	4 each	at	$30.00	$120
Shipping	3 mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE				$6,163

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $124,521

V. FIXED FEE **13% x (I + II)** $15,387

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $139,908

Cost Estimate For HSIPR Grant Application **Use** **$140,000**

Cost Estimate - Iowa Track Improvements Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	8	8	24	0	0	**40**
1.2 Data Collection	1	2	16	0	0	**19**
1.3 Technical Memorandum	1	2	24	4	8	**39**
	10	**12**	**64**	**4**	**8**	**98**
2. Agency and Public Invovlement						
2.1 Agency Coordination	4	4	8	8		24
2.2 Public Involvement	4	8	12	12	12	48
	8	**12**	**20**	**20**	**12**	**72**
3. TIER 2 EA						
3.1 Introduction	1	1	8		2	12
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	4	24	24	24	2	78
3.4 Affected Environment and Environmental Consequences	4	8			26	38
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation	24	32	40	40		136
3.4.3 Noise and Vibration	32	32	80	40		184
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials	4	24	20	4		52
3.4.6 Cultural Resources	2	4	24	12		42
3.4.7 Section 4(f) Resources	12	12	24	24		72
3.4.8 Waterways (Stream Relocation)	4	8	12	12	4	40
3.4.9 Wetlands	4	12	12	24		52
3.4.10 Water Quality			8			8
3.4.11 Floodplains			12	8		20
3.4.12 Construction Impacts	12	12	40	24		88
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts	4	4	24			32
3.4.15 Summary of Impacts		1	8			9
3.5 Comments and Coordination	1	1	8		1	11
3.6 Mitigation	1	1	4		1	7
3.7 TOC, A/A, References		1			8	9
3.8 Appendices			4		1	5
3.9 FONSI	1	8	40		6	55
	114	**188**	**408**	**216**	**53**	**979**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0	8	**12**
4.2 DOT Coordination	4	4	12	8	0	**28**
4.3 Quality Review of Project Deliverables	4	4	4	0	0	**12**
	12	**8**	**16**	**8**	**8**	**52**
TOTAL HOURS	**140**	**212**	**496**	**236**	**69**	**1153**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	140	$68.00	$9,520
Senior Engr.	212	$79.00	$16,748
Design Engineer / Planner / Env Scientist	496	$34.00	$16,864
Designer / CADD	236	$25.00	$5,900
Clerical	69	$20.00	$1,380
TOTAL DIRECT LABOR COST	1153		$50,412

II. Payroll Burden and OH Costs Overhead = 157.76% $79,530

III. Direct Project Expenses

Travel - Rental Car	2 Days	at	$100.00	$200
Travel - Meals	12 Meals	at	$6.00	$72
Travel - Airfare	2 Roundtrip	at	$600.00	$1,200
Travel - Hotel	6 Days	at	$75.00	$450
Specialty Support Staff	0 hours	at	$150.00	$0
Technology Charge	1153 Hours	at	$3.70	$4,266
General Photocopies	500 Sheets	at	$0.07	$35
Telephone - Conference Calls	4 each	at	$30.00	$120
Shipping	3 mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE				$6,403

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $136,345

V. FIXED FEE **13% x (I + II)** $16,892

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $153,237

Cost Estimate For HSIPR Grant Application **Use** **$160,000**

Cost Estimate - Iowa City Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	8	8	24	0	0	**40**
1.2 Data Collection	8	8	32	16	4	**68**
1.3 Technical Memorandum	4	4	40	32	8	**88**
	20	**20**	**96**	**48**	**12**	**196**
2. Agency and Public Invovlement						
2.1 Agency Coordination	12	12	24	24		72
2.2 Public Involvement	24	24	40	24	12	124
	36	**36**	**64**	**48**	**12**	**196**
3. TIER 2 EA						
3.1 Introduction	1	1	8		2	12
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	12	24	40	32	2	110
3.4 Affected Environment and Environmental Consequences	4	8			26	38
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation	4	24	24			52
3.4.3 Noise and Vibration	4	12	80	32		128
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials			20	4		24
3.4.6 Cultural Resources	24	40	120	40		224
3.4.7 Section 4(f) Resources	4	24	24	12		64
3.4.8 Waterways (Stream Relocation)			4	4	4	12
3.4.9 Wetlands			4	4		8
3.4.10 Water Quality			8			8
3.4.11 Floodplains			12	8		20
3.4.12 Construction Impacts		1	8			9
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts		1	4			5
3.4.15 Summary of Impacts		4	16		16	36
3.5 Comments and Coordination	8	12	24	24	8	76
3.6 Mitigation	12	24	40	40	8	124
3.7 TOC, A/A, References		1			8	9
3.8 Appendices	12	24	40	80	24	180
3.9 FONSI	1	8	40		6	55
	90	**211**	**532**	**284**	**106**	**1223**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0	8	**12**
4.2 DOT Coordination	4	4	12	8	0	**28**
4.3 Quality Review of Project Deliverables	4	4	4	0	0	**12**
	12	**8**	**16**	**8**	**8**	**52**
TOTAL HOURS	**134**	**251**	**668**	**364**	**126**	**1543**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	134	$68.00	$9,112
Senior Engr.	251	$79.00	$19,829
Design Engineer / Planner / Env Scientist	668	$34.00	$22,712
Designer / CADD	364	$25.00	$9,100
Clerical	126	$20.00	$2,520
TOTAL DIRECT LABOR COST	1543		$63,273

II. Payroll Burden and OH Costs Overhead = 157.76% $99,819

III. Direct Project Expenses

Travel - Rental Car	2 Days	at	$100.00	$200
Travel - Meals	12 Meals	at	$6.00	$72
Travel - Airfare	2 Roundtrip	at	$600.00	$1,200
Travel - Hotel	6 Days	at	$75.00	$450
Specialty Support Staff	0 hours	at	$150.00	$0
Technology Charge	1543 Hours	at	$3.70	$5,709
General Photocopies	500 Sheets	at	$0.07	$35
Telephone - Conference Calls	4 each	at	$30.00	$120
Shipping	3 mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE				$7,846

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $170,938

V. FIXED FEE **13% x (I + II)** $21,202

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $192,140

Cost Estimate For HSIPR Grant Application **Use** **$200,000**

Cost Estimate - Iowa City Layover Facility Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	8	8	24	0	0	**40**
1.2 Data Collection	8	8	32	16	4	**68**
1.3 Technical Memorandum	4	4	40	32	8	**88**
	20	**20**	**96**	**48**	**12**	**196**
2. Agency and Public Invovlement						
2.1 Agency Coordination	12	12	24	24		72
2.2 Public Involvement	24	24	40	24	12	124
	36	**36**	**64**	**48**	**12**	**196**
3. TIER 2 EA						
3.1 Introduction	1	1	8		2	12
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	12	24	40	32	2	110
3.4 Affected Environment and Environmental Consequences	4	8			26	38
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation	4	24	24			52
3.4.3 Noise and Vibration	4	12	80	32		128
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials			20	4		24
3.4.6 Cultural Resources	4	4	32	12		52
3.4.7 Section 4(f) Resources	4	24	24	12		64
3.4.8 Waterways (Stream Relocation)			4	4	4	12
3.4.9 Wetlands			4	4		8
3.4.10 Water Quality			8			8
3.4.11 Floodplains			12	8		20
3.4.12 Construction Impacts	4	12	24	12		52
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts		1	4			5
3.4.15 Summary of Impacts		4	16		16	36
3.5 Comments and Coordination	8	12	24	24	8	76
3.6 Mitigation	12	24	40	40	8	124
3.7 TOC, A/A, References		1			8	9
3.8 Appendices	12	24	40	80	24	180
3.9 FONSI	1	8	40		6	55
	74	**186**	**460**	**268**	**106**	**1094**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0	8	**12**
4.2 DOT Coordination	4	4	12	8	0	**28**
4.3 Quality Review of Project Deliverables	4	4	4	0	0	**12**
	12	**8**	**16**	**8**	**8**	**52**
TOTAL HOURS	**118**	**226**	**596**	**348**	**126**	**1414**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	118	$68.00	$8,024
Senior Engr.	226	$79.00	$17,854
Design Engineer / Planner / Env Scientist	596	$34.00	$20,264
Designer / CADD	348	$25.00	$8,700
Clerical	126	$20.00	$2,520
TOTAL DIRECT LABOR COST	1414		$57,362

II. Payroll Burden and OH Costs Overhead = 157.76% $90,494

III. Direct Project Expenses

Travel - Rental Car	2	Days	at	$100.00	$200
Travel - Meals	12	Meals	at	$6.00	$72
Travel - Airfare	2	Roundtrip	at	$600.00	$1,200
Travel - Hotel	6	Days	at	$75.00	$450
Specialty Support Staff	0	hours	at	$150.00	$0
Technology Charge	1414	Hours	at	$3.70	$5,232
General Photocopies	500	Sheets	at	$0.07	$35
Telephone - Conference Calls	4	each	at	$30.00	$120
Shipping	3	mailings	at	$20.00	$60
TOTAL ESTIMATED DIRECT EXPENSE					$7,369

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $155,225

V. FIXED FEE **13% x (I + II)** $19,221

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $174,446

Cost Estimate For HSIPR Grant Application **Use** **$180,000**

Cost Estimate - Colona Junction Tier 2 NEPA
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

Professional Staff Hour Tabulation

TASK	Prin. PM	Sr. NEPA Sr. Rail	Env. Planner/ Rail Eng.	Designer/ GIS/ CADD	Acctg/ Editor	Labor TOTAL
1. Site Visits and Data Collection						
1.1 Site Visit	1	2	4	0	0	**7**
1.2 Data Collection	1	2	4	0	0	**7**
1.3 Technical Memorandum	1	2	4	4	0	**11**
	3	**6**	**12**	**4**	**0**	**25**
2. Agency and Public Invovlement						
2.1 Agency Coordination	2	4	4	4		14
2.2 Public Involvement			2		2	4
	2	**4**	**6**	**4**	**2**	**18**
3. TIER 2 EA						
3.1 Introduction	1	1	4		2	8
3.2 Purpose and need	4	1	4		2	11
3.3 Alternatives	2	1	4	4	2	13
3.4 Affected Environment and Environmental Consequences	2	2			4	8
3.4.1 Introduction/Tier 1 EA cross reference			4	4		8
3.4.2 Transportation			4			4
3.4.3 Noise and Vibration		4	8			12
3.4.4 Air Quality		1	4			5
3.4.5 Hazardous Materials			8			8
3.4.6 Cultural Resources			4			4
3.4.7 Section 4(f) Resources			4			4
3.4.8 Waterways (Stream Relocation)			8	4		12
3.4.9 Wetlands			4	4		8
3.4.10 Water Quality			4			4
3.4.11 Floodplains			4			4
3.4.12 Construction Impacts		1	4			5
3.4.13 Irreversible and Irretrievable Commitment of Resources		1	4			5
3.4.14 Indirect and Cumulative Impacts		1	4			5
3.4.15 Summary of Impacts		1	4			5
3.5 Comments and Coordination	1	1	4		1	7
3.6 Mitigation	1	1	4		1	7
3.7 TOC, A/A, References		1			4	5
3.8 Appendices			2		1	3
3.9 FONSI	1	4	4		4	13
	12	**21**	**98**	**16**	**21**	**168**
4. TASK ORDER MANAGEMENT						
4.1 Management, Coordination, and Liaison	4	0	0	0		**4**
4.2 DOT Coordination	4				0	**4**
4.3 Quality Review of Project Deliverables	4	4	0	0	0	**8**
	12	**4**	**0**	**0**	**0**	**16**
TOTAL HOURS	**29**	**35**	**114**	**24**	**21**	**223**

FEE SUMMARY

I. Estimated Direct Labor Costs

CLASSIFICATION	TOTAL HOURS	HOURLY RATE	DIRECT LABOR COST
Principal / Project Manager	29	$68.00	$1,972
Senior Engr.	35	$79.00	$2,765
Design Engineer / Planner / Env Scientist	114	$34.00	$3,876
Designer / CADD	24	$25.00	$600
Clerical	21	$20.00	$420
TOTAL DIRECT LABOR COST	223		$9,633

II. Payroll Burden and OH Costs Overhead = 157.76% $15,197

III. Direct Project Expenses

Travel - Rental Car	1	Days	at	$100.00	$100
Travel - Meals	6	Meals	at	$6.00	$36
Travel - Airfare	1	Roundtrip	at	$600.00	$600
Travel - Hotel	1	Days	at	$75.00	$75
Specialty Support Staff	0	hours	at	$150.00	$0
Technology Charge	223	Hours	at	$3.70	$825
General Photocopies	500	Sheets	at	$0.07	$35
Telephone - Conference Calls	2	each	at	$30.00	$60
Shipping	1	mailings	at	$20.00	$20
TOTAL ESTIMATED DIRECT EXPENSE					$1,751

IV. Subconsultant Expenses

A. n/a	$0
TOTAL SUBCONSULTANT EXPENSES	$0

IV. Estimated Actual Costs (I + II + III), Rounded $26,581

V. FIXED FEE **13% x (I + II)** $3,228

VII. Unauthorized Contingency **0% x (I + II + III)** $0

VIII. Cost Plus Fixed Fees $29,809

Cost Estimate For HSIPR Grant Application **Use** **$30,000**

Cost Estimate for Eola Yard Permitting and Mitigation
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

	Number	Units	Unit Cost		Total
Mitigation Concept Development					
Field Work	200	hours	$ 110.00	$	22,000.00
Prepare Design	320	hours	$ 110.00	$	35,200.00
Section 404 Permit Application					
Prepare Individual Permit Appl	240	Hours	$ 90.00	$	21,600.00
Coordination With Corps of Engineers	240	Hours	$ 120.00	$	28,800.00
Mitigation Final Design					
Final Design	240	Hours	$ 110.00	$	26,400.00
Negotiate Conservcation Easements	180	Hours	$ 125.00	$	22,500.00
Total					
Mitigation Construction					
Construction	4900	LF	$250	$	1,225,000.00
Monitoring and Obervation	600	Hours	$ 90.00	$	54,000.00
Contingency	25	Percent		$	306,250.00
Total Permitting and Mitigation Cost				**$**	**1,741,750.00**
			use	**$**	**1,800,000.00**

Cost Estimate for Wyanet Connection Permitting and Mitigation
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

	Number	Units	Unit Cost		Total
Mitigation Concept Development					
Field Work	40	hours	$ 110.00	$	4,400.00
Prepare Design	240	hours	$ 110.00	$	26,400.00
Section 404 Permit Application					
Prepare Individual Permit Appl	120	Hours	$ 90.00	$	10,800.00
Coordination With Corps of Engineers	80	Hours	$ 120.00	$	9,600.00
Mitigation Final Design					
Final Design	160	Hours	$ 110.00	$	17,600.00
Negotiate Conservcation Easements	80	Hours	$ 125.00	$	10,000.00
Total					
Mitigation Construction					
Construction	2070	LF	$250	$	517,500.00
Monitoring and Obervation	500	Hours	$ 90.00	$	45,000.00
Contingency	25	Percent		$	129,375.00
Total Permitting and Mitigation Cost				**$**	**770,675.00**
				use $	**900,000.00**

Iowa City Layover Facility Cost Estimate

IOWA CITY LAYOVER FACILITY						
ITEM	***QTY***	***UNIT***	***UNIT COST***	***TOTAL COST***	***APPLICATION CATEGORY***	***UNIT COST DOCUMENTATION***
TRACK	1312	TF	$230	$301,760	30.02	12" Track Ballast ($31/TF); Wood RR Ties 24" OC ($60 each); Rail #115 RE (CWR) ($105/TF); OTM ($5/TF); 6" Subballast ($29/TF)
TURNOUT (#15 POTO)	1	EA	$200,000	$200,000	30.02	IAIS historical typical cost. Material Cost: no. 11 - $40,000, no. 15 - $54,000, no. 20 - $65,000. Plus railroad freight, site preparation, installation, power operation equipment, contractors expenses and railroad signaling and commissioning costs.
TURNOUT (#15 HTTO)	1	EA	$180,000	$180,000	30.02	
HAND THROWN DOUBLE SWITCH POINT DERAIL	2	EA	$25,000	$50,000	30.02	prior experience
GRADING AND SUBBALLAST	2200	CY	$64	$140,800	30.02	earthwork (1.75 CY/FT at $16/CY); subballast (0.9 CY/FT at $40CY)
DRAINAGE	100	LF	$140	$14,000	30.02	prior experience
TRACKWORK SUBTOTAL				**$886,560**		
			USE	**$900,000**		
BUILDING	2000	SF	$200	$400,000	30.02	prior experience
SHED	1000	SF	$100	$100,000	30.02	prior experience
MISCELLANEOUS FACITILITIES	1	LS	$250,000	$250,000	30.02	prior experience
FACILITIES SUBTOTAL			**USE**	**$750,000**		
PARKING	6400	SF	$10	$64,000	30.02	prior experience
ACCESS ROAD	1300	SF	$10	$13,000	30.02	prior experience
MISCELLANEOUS PAVING (SIDEWALKS, ETC.)	5000	SF	$5	$25,000	30.02	prior experience
SITE LIGHTING	15	EA	$5,000	$75,000	30.02	prior experience
FENCING	2000	LF	$30	$60,000	30.02	prior experience
DETENTION POND	1	LS	$150,000	$150,000	30.02	prior experience
UTILITY SERVICE	1	LS	$250,000	$250,000	30.02	prior experience
AGGREGATE TRACK ACCESS PAD	755	CY	$40	$30,200	30.02	prior experience
DRIP PANS	400	TF	$100	$40,000	30.02	prior experience
LANDSCAPING	1	LS	$50,000	$50,000	30.02	prior experience
SITE GRADING	3025	CY	$10	$30,250	30.02	prior experience
MISCELLANEOUS SITEWORK	1	LS	$50,000	$50,000	30.02	prior experience
SITEWORK SUBTOTAL				**$837,450**		
			USE	**$900,000**		
PROJECT CONSTRUCTION SUBTOTAL				**$ 2,550,000**		
PROJECT CONSTRUCTION CONTINGENCY			**30%**	**$ 765,000**		
TOTAL				**$3,315,000**		

Cost Estimate for Eola Yard Permitting and Mitigation
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

	Number	Units	Unit Cost		Total
Mitigation Concept Development					
Field Work	200	hours	$ 110.00	$	22,000.00
Prepare Design	320	hours	$ 110.00	$	35,200.00
Section 404 Permit Application					
Prepare Individual Permit Appl	240	Hours	$ 90.00	$	21,600.00
Coordination With Corps of Engineers	240	Hours	$ 120.00	$	28,800.00
Mitigation Final Design					
Final Design	240	Hours	$ 110.00	$	26,400.00
Negotiate Conservcation Easements	180	Hours	$ 125.00	$	22,500.00
Total					
Mitigation Construction					
Construction	4900	LF	$250	$	1,225,000.00
Monitoring and Obervation	600	Hours	$ 90.00	$	54,000.00
Contingency	25	Percent		$	306,250.00
Total Permitting and Mitigation Cost				**$**	**1,741,750.00**
				use **$**	**1,800,000.00**

Cost Estimate for Wyanet Connection Permitting and Mitigation
High- Speed Intercity Passenger Chicago to Iowa City Tier 2 NEPA Complaince

	Number	Units	Unit Cost		Total
Mitigation Concept Development					
Field Work	40	hours	$ 110.00	$	4,400.00
Prepare Design	240	hours	$ 110.00	$	26,400.00
Section 404 Permit Application					
Prepare Individual Permit Appl	120	Hours	$ 90.00	$	10,800.00
Coordination With Corps of Engineers	80	Hours	$ 120.00	$	9,600.00
Mitigation Final Design					
Final Design	160	Hours	$ 110.00	$	17,600.00
Negotiate Conservcation Easements	80	Hours	$ 125.00	$	10,000.00
Total					
Mitigation Construction					
Construction	2070	LF	$250	$	517,500.00
Monitoring and Obervation	500	Hours	$ 90.00	$	45,000.00
Contingency	25	Percent		$	129,375.00
Total Permitting and Mitigation Cost				**$**	**770,675.00**
				use $	**900,000.00**

Signal Cost Estimate

IAIS Signal Cost Estimate (Without PTC Interface Costs)

Illinois

M.P.	Location	Estimate Type	Labor	Material	Design	Total
128.78	Distant Signal	Install Active Distant Signal & Sign 1Trk	$ 43,000	$ 51,000	$ 5,000	$ 99,000
128.78	Distant Signal	AC Power Feed	$ 7,000	$ 10,000	$ 1,000	$ 18,000
128.78	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
130.25	CP 130 WYANET	1 POTO #24 w/ PO Derail & 3 Signals	$ 255,000	$ 314,000	$ 33,000	$ 602,000
130.25	CP 130 WYANET	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
130.25	CP 130 WYANET	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
132.22	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
134.19	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
136.36	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
136.37	4X4 Remote for Main & Reed	Install Remote 1 Trk GCP	$ 33,000	$ 44,000	$ 8,000	$ 85,000
136.4	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
138.64	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
138.64	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
140.96	CP 141 MINERAL HOLD	DATA Radio, & HVLC Equipment	$ 25,000	$ 40,000	$ 4,000	$ 69,000
140.96	CP 141 MINERAL HOLD	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
143.21	Remote GCP for Patroit Way	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
143.22	CP 143 EAST ANNAWAN	1 POTO #11 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
143.22	CP 143 EAST ANNAWAN	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
143.22	CP 143 EAST ANNAWAN	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
145.04	CP 145 WEST ANNAWAN	1 POTO #11 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
145.04	CP 145 WEST ANNAWAN	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
145.04	CP 145 WEST ANNAWAN	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
147.5	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
147.5	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
149.98	CP 150 EAST ATKINSON	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
149.98	CP 150 EAST ATKINSON	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
149.98	CP 150 EAST ATKINSON	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
151.07	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
151.94	Remote GCP for Xings East	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
151.95	CP 152 WEST ATKINSON	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
151.95	CP 152 WEST ATKINSON	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
151.95	CP 152 WEST ATKINSON	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
154.24	Signal Intermediate Back to Back	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
156.54	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
158.4	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
158.8	GENESEO Leaving Signal EB	Install Station Leaving Signal 1Trk	$ 43,000	$ 51,000	$ 5,000	$ 99,000
159.38	GENESEO Leaving Signal WB	Install Station Leaving Signal 1Trk	$ 43,000	$ 51,000	$ 5,000	$ 99,000
159.38	Remote for Xings West & East	Install Additional DAX Cable to 159.04 to.68	$ 12,000	$ 12,000	$ 1,000	$ 25,000
159.38	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
161.54	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
163.7	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
165.86	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
168.02	CP 168 COLONA HOLD	DATA Radio, & HVLC Equipment	$ 25,000	$ 40,000	$ 4,000	$ 69,000
168.02	CP 168 COLONA HOLD	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
169.95	COLONA BNSF Interlocker	Rearrange Circuits in Interlocker	$ 300,000	$ 400,000	$ 50,000	$ 750,000
171.78	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
171.82	CP 172 EAST SILVIS	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
171.82	CP 172 EAST SILVIS	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
171.82	CP 172 EAST SILVIS	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
171.9	East End SilvisYard	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
172.6	Silvis Electric Lock X-Over	Electric Lock Crossover	$ 132,000	$ 118,000	$ 14,000	$ 264,000
173.4	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
174.1	West End Silvis Yard	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
174.2	CP 174 WEST SILVIS	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
174.2	CP 174 WEST SILVIS	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
174.2	CP 174 WEST SILVIS	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
174.21	Remote GCP for Xings East	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
174.25	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
175.46	CP 175 7TH AVE.	6ea #15 POTO'sw/ 1PO Derails& 5 Signals	$ 394,000	$ 445,000	$ 41,000	$ 880,000
175.46	CP 175 7TH AVE.	7 ea Switch Heater	$ 110,000	$ 190,000	$ 1,000	$ 301,000
175.46	CP 175 7TH AVE.	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
177.12	Signal Intermediate Back to Back	2 Trk Back to Back w/ DED	$ 78,000	$ 71,000	$ 11,000	$ 160,000
177.12	Remote GCP for Xings East	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
177.37	East End Scrap Yard	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
177.66	East End BN Siding	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
178.02	West End Scrap Yard	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
178.25	West End BN Siding	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
178.76	Circus Ramp Sw (Do Not Clear)	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
179	Signal Intermed Leaving Station	Install Station Leaving Signal 1Trk	$ 43,000	$ 51,000	$ 5,000	$ 99,000
179.61	CP 179 MOLINE	4 POTO #15 w/ PO Derail & 4 Signals	$ 335,000	$ 357,000	$ 44,000	$ 736,000
179.61	CP 179 MOLINE	5 ea Switch Heater	$ 70,000	$ 90,000	$ 1,000	$ 161,000
179.61	CP 179 MOLINE	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
180.38	Distant Signal	Install Active Distant Signal & Sign 1Trk	$ 43,000	$ 51,000	$ 5,000	$ 99,000
180.38	Distant Signal	AC Power Feed	$ 7,000	$ 10,000	$ 1,000	$ 18,000
181.37	Distant Signal	Retire existing equip	$ 4,000	$ 1,000	$ 1,000	$ 6,000
181.56	CP 181 WEST ROCK ISLAND	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
181.56	CP 181 WEST ROCK ISLAND	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
181.56	CP 181 WEST ROCK ISLAND	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
181.8	Arsenal Lead Track	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000

IAIS Signal Cost Estimate (Without PTC Interface Costs)						
181.89	East End Arsenal Siding HTTO	Install Electric Lock w/Bridge Locking	$ 58,000	$ 49,000	$ 8,000	$ 115,000
181.93	East End Arsenal Siding Derail	Install Electric Lock w/Bridge Locking	$ 58,000	$ 49,000	$ 8,000	$ 115,000
182.23	West End Arsenal Siding Derail	Install Electric Lock w/Bridge Locking	$ 58,000	$ 49,000	$ 8,000	$ 115,000
182.45	West End Arsenal Siding HTTO	Install Electric Lock w/Bridge Locking	$ 58,000	$ 49,000	$ 8,000	$ 115,000
182.2	BRIDGE 1882 Swingspan *	New Bridge Interlocking Controls,POderails	$ 1,000,000	$ 1,000,000	$ 200,000	$ 2,200,000
			$ 6,948,000	**$ 8,411,000**	**$ 954,000**	**$ 16,313,000**
		Additive for Wayside Signal Equipment 20%				**$ 3,262,600**
	** previous documentation used as information only for assisting in developing this cost (COE - Govt Br Cost Est)*					
		Total Wayside Signal Estimate in Illinois without PTC Costs				**$ 19,575,600**

IAIS Signal Cost Estimate (Without PTC Interface Costs)

Iowa

M.P.	Location	Estimate Type	Labor	Material	Design	Total
183.7	CP 184 MO DIV JCT	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
183.7	CP 184 MO DIV JCT	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
183.7	CP 184 MO DIV JCT	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
185.75	CP 186 FARNUM HOLD	DATA Radio, & HVLC Equipment	$ 25,000	$ 40,000	$ 4,000	$ 69,000
185.75	CP 186 FARNUM HOLD	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
185.75	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
186.17	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
186.2	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
186.29	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
187.58	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
189.41	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
191.08	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
192.65	Remote GCP for Xings East	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
192.66	CP 193 EAST WALCOTT	1 POTO #10 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
192.66	CP 193 EAST WALCOTT	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
192.66	CP 193 EAST WALCOTT	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
194.36	CP 194 WEST WALCOTT	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
194.36	CP 194 WEST WALCOTT	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
194.36	CP 194 WEST WALCOTT	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
194.9	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
194.91	1 Trk Regen Repeater		$ 26,000	$ 34,000	$ 4,000	$ 64,000
196.33	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
198.39	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
198.39	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
200.45	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
201.9	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
202.4	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
202.61	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
203.1	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
203.5	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
204.5	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
204.51	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
206.58	CP 207 TWIN STATES HOLD	DATA Radio, & HVLC Equipment	$ 25,000	$ 40,000	$ 4,000	$ 69,000
206.58	CP 207 TWIN STATES HOLD	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
207.68	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
208.06	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
208.19	Remote GCP for Xings East	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
208.2	CP 208 EAST WILTON	POTO #15 X-Over & 4 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
208.2	CP 208 EAST WILTON	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
208.2	CP 208 EAST WILTON	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
208.83	J M Spur	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
209.4	North Star	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
209.81	2 Trk Regen Repeater		$ 39,000	$ 49,000	$ 7,000	$ 95,000
210.9	CP 211 WEST WILTON	1 POTO #10 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
210.9	CP 211 WEST WILTON	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
210.9	CP 211 WEST WILTON	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
210.91	Remote GCP for Xings East	Install Remote 2 Trk GCP	$ 42,000	$ 64,000	$ 8,000	$ 114,000
212.3	Electric Lock or Leaving Signal	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
212.5	606836W Public (X-Bucks)	1 GCP & 4 Gates (Must Be Steel House)	$ 82,000	$ 207,000	$ 16,000	$ 305,000
213.27	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
213.27	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
215.18	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
216.3	Atalissa Elevator Trk	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
216.47	1 Trk Regen Repeater		$ 26,000	$ 34,000	$ 4,000	$ 64,000
217.1	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
219	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
220.9	CP 221 E LIBERTY HOLD	DATA Radio, & HVLC Equipment	$ 25,000	$ 40,000	$ 4,000	$ 69,000
220.9	CP 221 E LIBERTY HOLD	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
221.3	East End East Liberty	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
222.2	West End East Liberty	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
222.6	East End West Liberty	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
222.9	West End West Liberty	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
222.95	CP 223 W LIBERTY HOLD	DATA Radio, & HVLC Equipment	$ 25,000	$ 40,000	$ 4,000	$ 69,000
222.95	CP 223 W LIBERTY HOLD	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
225.27	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
225.27	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
226.85	Downey Elevator Track	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
227.6	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
229.98	CP 230 EAST AMERICAN	1 POTO #10 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
229.98	CP 230 EAST AMERICAN	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
229.98	CP 230 EAST AMERICAN	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
232.3	CP 232WEST AMERICAN	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
232.3	CP 232WEST AMERICAN	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
232.3	CP 232WEST AMERICAN	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
233.75	Industry Track	Install Electric Lock or Leaving Signal	$ 58,000	$ 49,000	$ 8,000	$ 115,000
233.56	CP 234 SCOTT BLVD	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
233.56	CP 234 SCOTT BLVD	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
233.56	CP 234 SCOTT BLVD	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
235.07	2 Trk Regen Repeater	Install 2 Trk Regen Repeater	$ 39,000	$ 49,000	$ 7,000	$ 95,000

IAIS Signal Cost Estimate (Without PTC Interface Costs)						
236.2	#11 HT X-Over	Install Switch Circuit Controler HT X-Over	$ 48,000	$ 32,000	$ 3,000	$ 83,000
236.3	East End North Siding	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
236.6	West End North Siding	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
236.78	#11 HT X-Over	Install Switch Circuit Controler HT X-Over	$ 48,000	$ 32,000	$ 3,000	$ 83,000
236.8	Iowa City Leaving Signal EB	Install Station Leaving Signal 1Trk	$ 43,000	$ 51,000	$ 5,000	$ 99,000
236.99	CP 237 WEST IOWA CITY	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
236.99	CP 237 WEST IOWA CITY	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
236.99	CP 237 WEST IOWA CITY	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
238.37	Detector HBD/DED	1 Trk HBD/DED	$ 52,000	$ 146,000	$ 8,000	$ 206,000
238.37	CP 238 HAWKEYE HOLD	DATA Radio, & HVLC Equipment	$ 25,000	$ 40,000	$ 4,000	$ 69,000
238.37	CP 238 HAWKEYE HOLD	1 Tk Back - Back (Begin CTC&Begin TWC)	$ 45,000	$ 53,000	$ 5,000	$ 103,000
238.37	CP 238 HAWKEYE HOLD	AC Power Feed - Rearrange Existing	$ 1,000	$ 1,000	$ 1,000	$ 3,000
239.58	Signal Intermediate Back to Back	1 Trk Back to Back w/ DED	$ 45,000	$ 53,000	$ 5,000	$ 103,000
240.72	1 Trk Regen Repeater	Install 1 Track Regen Repeater	$ 26,000	$ 34,000	$ 4,000	$ 64,000
240.74	Industry Track (Do Not Clear)	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
241.62	CP 241 CORALVILLE	1 POTO #15 w/ PO Derail & 3 Signals	$ 230,000	$ 284,000	$ 30,000	$ 544,000
241.62	CP 241 CORALVILLE	2 ea Switch Heater	$ 35,000	$ 50,000	$ 1,000	$ 86,000
241.62	CP 241 CORALVILLE	AC Power Feed, DATA Radio, & TAW's	$ 30,000	$ 35,000	$ 6,000	$ 71,000
241.62	Remote GCP for Xings East	Install Remote 2 Trk GCP	$ 44,000	$ 66,000	$ 8,000	$ 118,000
241.84	East End CORALVILLE HT Derail	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
241.89	East End CORALVILLE #15HTTO	Install Switch Circuit Controler NWTPR	$ 19,000	$ 11,000	$ 1,000	$ 31,000
242.64	Distant Signal	Install Active Distant Signal & Sign 1Trk	$ 43,000	$ 51,000	$ 5,000	$ 99,000
242.64	Distant Signal	AC Power Feed - Rearrange Existing	$ 1,000	$ 1,000	$ 1,000	$ 3,000
			$ 6,062,000	**$ 7,521,000**	**$ 781,000**	**$ 14,364,000**
		Additive for Wayside Signal Equipment 20%				**$ 2,872,800**
		Total Wayside Signal Estimate in Iowa				**$ 17,236,800**

November 19, 2001

Corp of Engineers
Attn: Perry Hubert PM-M
P.O. Box 2004
Rock Island, IL 61204-2004
RE: Arsenal Bridge

Dear Mr. Hubert,

The following is a preliminary range of magnitude outlining possible scenarios to address the signaling on the Mississippi Arsenal Bridge. These scenarios are based on comments and concerns addressed during a meeting and preliminary site investigation on July 31, 2001 with all applicable parties in attendance.

The concerns addressed were rail shorting, wire and cable condition, condition of plans, etc., as well as other miscellaneous conditions observed. These conditions were used as the basis to develop this response.

Scenario 1

1. Install a vital microprocessor on the bridge with vital radio (spread spectrum) links to secondary microprocessors (2) located on either side of the bridge.

2. Install a new control panel in the operator's room.

3. Renew cabling to existing functions located on the bridge.

4. Interface to existing equipment located on the bridge.

5. Remove DC Track Circuits and replace with vital wheel counters.

6. Renew signals and cable at the home signal locations.

Estimated Cost: $1,911,454.85

Scenario 2

1. Install vital microprocessors (2) at the interlocking limits, either side of the bridge.

2. Install a new control panel in the operator's room.

3. Retain DC Track Circuits.

4. Communications between the tower and microprocessor locations will be via vital radio (spread spectrum) links

5. Renew signals and cable at the home signal locations.

Estimated Cost: $1.787,409.81

Scenario 3

1. Maintain the existing technology, renew the components, e.g. commutator rings, cable, etc.

2. Renew signals and cable at the home signal locations.

   Estimated Cost: $776,791.40

These estimates are strictly preliminary and shouldn't be considered detailed estimates. If you would like detailed estimates we can do that, but it will take at least three working days to accomplish, provided funding is in place to cover our costs. By providing these preliminary estimates perhaps the Army Corp can choose one scenario or combination of scenarios for us to prepare a final detailed estimate. Please let us know how you would like us to proceed.

The three- (3) scenarios do not include any bridge, electrical, track or airline work and does not include any work to the approach signals to the bridge. The estimates also do not entail any changes in bridge or train operation, which are items that you may want to visit to ensure future expandability of the signaling system.

Cost for further site investigation to develop one of these scenarios hasn't been included in any of the three scenarios.

Very Truly Yours
Balfour Beatty Rail Systems, INC.

Rick Brown
Director Business Development

CC: Pat Sheldon(IAIS)

IAIS Grade Crossing Signal Estimate (Without PTC Interface Costs)

Illinois

M.P.	Location	Signal Estimate Type	Sig Labor	Sig Material	Sig Design	Signal Total
130.78	863562D Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
133.04	863564? Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
133.86	863565Y Public Xing (6X6w/Gates	Add GCP,Shunts,Batt,Rect,LED Lights	$ 22,000	$ 56,000	$ 3,000	$ 81,000
134.84	863566F Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
136.34	863568U Mason St (FlashersNow	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
136.48	863569B Main St (Old Gates Ect	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
136.82	863570V Reed St (Flashers Now)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
137.32	863572J Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
140.26	606928J Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
140.98	606929R Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
141.88	606930K Lincoln St (Flashers)	Close Crossing and retire existing equip	$ 8,000	$ 1,000	$ 1,000	$ 10,000
142.8	Patroit Way (New w/CWT	Adjust for new train speed	$ 2,000	$ 2,000	$ 1,000	$ 5,000
142	606931S Center St (Flashers)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
145.12	Private (New Xing)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
145.64	606938P East St (6X6 wFlashers)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
145.78	606939W Main St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
145.9	606940R State St (Flashers)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
147.22	606942E Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
148.28	606945A Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
149.96	606948V Industrial Xing	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
151.36	606949C Spring St. (6X6w/Gates	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
151.56	606950W School St. (Flashers)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
151.76	606951D Church St. (6X6w/Gates	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
152.94	606952K Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
153.94	606953S Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
154.48	606954Y Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
155.48	606956M Public Xing (6X6w/Gates	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
156.52	606957U Public Xing (X-Bucks)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
157.02	606958B Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
157.3	606959H Ind Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
157.68	606960C Public (6X6w/Gates)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
158.62	606962R Chicago St(6X6w/Gates)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
159.04	606963X Spring St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
159.18	606964E Oakwood St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
159.28	606965L State St (Flashers)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
159.36	606966T Center St (Flashers)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
159.68	606968G Stewart St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
160.7	606969N Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
161.76	606970H Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
163.34	606971P Public Xing (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
164.8	606972W Public Xing (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
168	606974K Public Xing (Old Equip)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
169.72	606976Y Broadway (Old Equip)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
170	606977F Cleveland (4X6w/Gates)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
171.8	916106D N First Ave. (Old Equip)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
174.32	605942B 19th St. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
174.48	605941Y 17th St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
174.74	605940M 13th St. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
175.04	605939T 10th St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
175.16	605938L 9th St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
175.34	605937E 7th St (Old Equip)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
175.76	605935R 3rd St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
176.12	605934J 1st St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
177.1	605933C 41st St (Old Equip)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
177.6	605932V 34th St (Old Equip)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
178.7	605930G 23rd St. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
178.92	605930G 19th St. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
178.98	605929M 17th St (Good Equip)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
179.14	604314S 15th St. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
179.4	604316F 12th St. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
179.76	604319B 6th St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
180.24	604322J 1ST St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
180.36	604324X 44th St. (Good Eqiup)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
			$ 4,135,000	**$ 5,383,000**	**$ 430,000**	**$ 9,948,000**
		Additive for Grade Crossing Signal Equipment 20%				**$ 1,989,600**

Note the grade crossing changes from Rock Island to 7th Ave in Moline are covered by changing the additive from 10% to 20%.

Illinois Total Grade Crossing Signal Estimate **$ 11,937,600**

IAIS Grade Crossing Signal Estimate (Without PTC Interface Costs)

Iowa

M.P.	Location	Signal Estimate Type	Sig Labor	Sig Material	Sig Design	Signal Total
183.08	604341N Western St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
183.16	604342V Gaines St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
183.24	604342C Brown St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
183.31	604344J Warren St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
183.57	603892T Marquette St (Old Equip	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
183.65	603893A Taylor St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
185.87	606780E Central Pk (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
186.5	606781L PRIVATE RES XING	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
186.93	393008N Fairmont St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
189.18	606787C Utah Ave. (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
190.28	606792Y 110th St. (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
191.24	606794M Public (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
192.33	606797H Public (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
192.65	606798P Public (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
194.38	606803J 70th St (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
194.8	606804R Henry St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
194.93	606803Y Main St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
196.35	606807L Public (X-Bucks)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
199.25	606808T Iowa St (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
200.43	606809A Public (X-Bucks)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
201.45	606811B 14th Ave (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
201.88	606812H 8th Ave. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
202.03	606813P 6th Ave. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
202.13	606814W 5th Ave. (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
202.6	917612H (PTMW 6X6&FL	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
203.3	Consilidate Industry Priv. Xings	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
204.53	606818Y Trall Ave (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
205.53	606819F Thayer Ave (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
206.6	606821G Public (X-Bucks)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
207.35	606822N Cypress St(Good Eqiup	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
207.57	606824C Chestnut (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
207.8	939007G W 1st St (verify)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
208	606828E Liberty St (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
209.83	606832U Public (Good Eqiup)	Install 4 Trk GCP & 2 Gates	$ 99,000	$ 145,000	$ 12,000	$ 256,000
211	606834H 6th St (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
211.15	606835P 4th St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
212.5	606836W Public (X-Bucks)	1 GCP & 2 Gates (Must Be Steel House)	$ 80,000	$ 95,000	$ 8,000	$ 183,000
213.25	606838K Public (X-Bucks)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
215.33	606839S Public (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
215.83	606840L Lundy St (Good Equip)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
215.87	606841T Cherry St (Old Equip)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
216.05	606842A Oak St (Old Equip)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
216.45	606843G Hwy 6 (Good Eqiup)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
217.75	606839S Iron City Ave (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
219.97	606849X Green Ave (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
220.97	606850S Columbus St (FLS only)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
221.02	606851Y Calhoun St (FLS only)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
221.25	606852F Priarie St (FLS only)	1 GCP & 2 Gates (Need to Verify)	$ 80,000	$ 95,000	$ 8,000	$ 183,000
222.52	606854U Hwy 6 (4X6 Cants only)	1 GCP & 2 Gates use existing Cants	$ 80,000	$ 95,000	$ 8,000	$ 183,000
226.57	606860X Baker St (FLS only)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
226.82	606861E Adams Sy (X-Bucks)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
228.55	606863T Oasis Rd (X-Bucks)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
232.52	606869J 420th St (FLS only)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
232.75	606870D Taft Ave (X-Bucks)	1 GCP & 2 Gates	$ 80,000	$ 95,000	$ 8,000	$ 183,000
233.9	606872S Scott Blvd (Good Eqiup)	Install 2 Trk GCP & 2 Gates	$ 87,000	$ 125,000	$ 9,000	$ 221,000
235.07	606873Y First Ave. (Double Trk)	Install 4 Trk GCP & 2 Gates	$ 99,000	$ 145,000	$ 12,000	$ 256,000
236.82	606878H Dubuque St (Double Trk	4 Trk GCP & 2 Gates Cohab w/ Wayside	$ 74,000	$ 78,000	$ 12,400	$ 164,400
236.92	606879P Clinton St (Double Trk)	4 Trk GCP & 2 Gates Cohab w/ Wayside	$ 74,000	$ 78,000	$ 12,400	$ 164,400
237.5	606882X Greenwood Dr (FLS only	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
238.35	914517C Finkbine Dr (FLS only)	Add 2 Trk GCP	$ 28,000	$ 73,000	$ 4,000	$ 105,000
239.6	606885T 10th St (Good Equip)	Add 2 Trk GCP	$ 28,000	$ 73,000	$ 4,000	$ 105,000
240.7	606887G 22nd Ave (Good Equip)	Add 2 Trk GCP	$ 28,000	$ 73,000	$ 4,000	$ 105,000
241.18	917610U 25th Ave (Good Equip)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
241.58	New Xing to Coralville Station	4 Trk GCP & 2 Gates Cohab w/ Wayside	$ 74,000	$ 78,000	$ 12,400	$ 164,400
242.02	608006A 340th St (Old Equip)	Add GCP	$ 21,000	$ 43,000	$ 3,000	$ 67,000
242.5	917609A Westcor Dr.	Add 2 Trk GCP	$ 28,000	$ 73,000	$ 4,000	$ 105,000
			$ 4,402,000	**$ 5,885,000**	**$ 479,200**	**$ 10,766,200**
		Additive for Grade Crossing Signal Equipment 20%				**$ 2,153,240**
		Iowa Total Grade Crossing Signal Estimate				**$ 12,919,440**

Crossing Improvements

Iowa Interstate MP 130 - 237

M.P.	FRA I.D.	Street	Location	Existing Signals	Existing Surface	Ex Status	Status
130.78	863562D	1200 St E		Crossbucks			improve - local
132.68	863563?	Private - Farm				Closed	gone
133.04	863564?	CR-975 E		Crossbucks			okay
133.86	863565Y	900 St E (IL-40)		6x6 w/ Gates	Concrete		okay
134.84	863566F	800 St E		Crossbucks	Gravel		improve - local
135.51	863567M	Private - Farm					improve - farm
136.34	863568U	N Mason St (US-6/34)	Sheffield, IL	Flashers	Concrete		okay
136.48	863569B	N Main St	Sheffield, IL	Old Gates Ect	Rubber / Asphalt		improve - local
136.82	863570V	N Reed St	Sheffield, IL	Flashers	Timber		reprofile - local
137.32	863572J	550 St E		Crossbucks			improve - local
137.78	863573R	Private - Farm				Closed	gone
138.14	863574X	Private - Farm				Closed	gone
138.42	863575E	Private - Residence					reprofile - farm
139.24	863576L	Private - Residence					reprofile - farm
139.85		300 St E ?					reprofile - farm
140.26	606928J	270 St E		Crossbucks			improve - local
140.98	606929R	200 St E		Crossbucks			improve - local
141.88	606930K	Lincoln St	Mineral, IL	Flashers			okay
142.00	606931S	N Central St	Mineral, IL	Flashers	Timber		okay
142.80		Patriot Way		New Crossing	Concrete		okay
142.92	606932Y	Private - Residence				Closed	gone
143.30	606933F	Private - Residence				Closed	gone
143.58	606934M	Private - Residence				Closed	gone
144.08	606935U	E 2900 St		Crossbucks		Closed	gone
144.60	606936B	Private - Residence			Gravel		improve - home
145.12		Private - Industrial		New Crossing		???	improve - local
145.64	606938P	East St (IL-78)	Annawan, IL	6x6 w/ Flashers	Concrete		okay
145.78	606939W	Main St	Annawan, IL	Old Equipment	Timber		okay
145.90	606940R	State St	Annawan, IL	Flashers	Timber		okay
146.08	606941X	West St	Annawan, IL			Closed	gone
147.22	606942E	E 2600 St		Crossbucks	Asphalt		reprofile - local
147.70	606943L	Private - Residence			Gravel		reprofile - farm
148.04	606944T	Private - Farm			Gravel		reprofile - farm
148.28	606945A	E 2500 St		Crossbucks	Timber		reprofile - local
149.30	606947N	Private - Farm			Gravel		reprofile - farm
149.96	606948V	Private - Industrial			Gravel		improve - local
151.36	606949C	Spring St	Atkinson, IL	6x6 w/ Gates	Asphalt		improve - local x
151.56	606950W	School St	Atkinson, IL	Flashers	Asphalt		improve - local x
151.76	606951D	Church St	Atkinson, IL	6x6 w/ Gates	Asphalt		improve - local x
152.94	606952K	E 2050 St		Crossbucks			reprofile - local
153.75		Private - Farm					okay
153.94	606953S	E 1950 St		Crossbucks	Timber		okay
154.48	606954Y	E 1900 St		Crossbucks			okay
154.78	606955F	Private - Farm				Closed	gone
155.48	606956M	E 1800 St		6x6 w/ Gates			okay
156.52	606957U	E 1700 St		Crossbucks			okay
157.02	606958B	E 1650 St		Crossbucks			improve - local
157.30	606959H	Private - Industrial		Crossbucks			improve - local
157.68	606960C	Ford Rd		6x6 w/ Gates	Timber		okay
157.82	606961J	Private - Farm				Closed	gone
158.62	606962R	S Chicago St	Geneseo, IL	6x6 w/ Gates	Timber		okay
159.04	606963X	S Spring St	Geneseo, IL	Old Equipment	Metal / Timber		okay
159.18	606964E	N Oakwood Ave	Geneseo, IL	Old Equipment	Metal / Timber		okay
159.28	606965L	N State St	Geneseo, IL	Flashers	Metal / Timber		okay
159.36	606966T	N Center St	Geneseo, IL	Flashers	Metal / Timber		okay
159.68	606968G	N Stewart St	Geneseo, IL	Old Equipment			okay
160.70	606969N	E 1300 St		Crossbucks			okay
161.76	606970H	Hazelwood West Rd		Crossbucks	Asphalt / Timber		okay
163.34	606971P	E 1050 St		Crossbucks			improve - local
164.80	606972W	Potters Bridge Rd (IL-13)		Old Equipment	Timber		okay
167.86	606973D	Private - Residence					improve - farm
168.00	606974K	Bridge St (IL-15)	Green River, IL	Old Equipment	Timber		okay
169.72	606976Y	Broadway St	Colona, IL	Old Equipment	Asphalt		improve - local
170.00	606977F	Cleveland Rd	Colona, IL	4x6 w/ Gates	Concrete		improve - local
170.08	863563?	Private - Farm	Colona, IL		Gravel		improve - farm
171.80	916106D	N 1st Ave	Carbon Cliff, IL	Old Equipment	Timber		improve - urban x
172.88	605934H	IL-5/92 Overpass	Silvis, IL	Overpass			bridge
173.80		Private - Industrial	Silvis, IL			Closed	gone
174.32	605942B	19th St	East Moline, IL	Good Equipment	Concrete		improve - urban x
174.48	605941Y	17th St	East Moline, IL	Old Equipment	Timber		improve - urban x
174.74	605940M	13th St	East Moline, IL	Good Equipment	Metal / Timber		improve - urban x
175.04	605939T	10th St	East Moline, IL	Old Equipment	Metal / Timber		improve - urban x
175.16	605938L	9th St	East Moline, IL	Old Equipment	Concrete		improve - urban x
175.34	605937E	7th St	East Moline, IL	Old Equipment	Timber		improve - urban x
175.56	605936X	5th St	East Moline, IL			Closed	gone
175.76	605935R	3rd St	East Moline, IL	Old Equipment	Asphalt		okay
176.12	605934J	1st St	East Moline, IL	Old Equipment	Concrete		okay
177.10	605933C	41st St	Moline, IL	Old Equipment	Metal / Timber		okay
177.60	605932V	34th St	Moline, IL	Old Equipment	Metal / Timber		okay
178.70	605930G	23rd St	Moline, IL	Good Equipment	Metal / Timber		improve - urban x
178.92	605930G	19th St	Moline, IL	Good Equipment	Metal / Timber		improve - urban x
178.98	605929M	17th St	Moline, IL	Good Equipment	Metal / Timber		improve - urban x
179.14	604314S	15th St	Moline, IL	Good Equipment	Metal / Timber		improve - urban x
179.40	604316F	12th St	Moline, IL	Good Equipment	Metal / Timber		improve - urban x

Crossing Improvements							
Iowa Interstate MP 130 - 237							
M.P.	**FRA I.D.**	**Street**	**Location**	**Existing Signals**	**Existing Surface**	**Ex Status**	**Status**
179.50	604317M	11th St	Moline, IL			Closed	gone
179.62	604318U	8th St	Moline, IL			Closed	gone
179.76	604319B	6th St	Moline, IL	Old Equipment	Concrete		improve - urban x
179.82	604320V	5th St	Moline, IL			Closed	gone
180.06	604321C	3rd St	Moline, IL			Closed	gone
180.24	604322J	1st St	Moline, IL	Old Equipment	Asphalt		improve - urban x
180.30	604323R	45th St	Rock Island, IL			Closed	gone
180.36	604324X	44th St	Rock Island, IL	Good Equipment	Concrete		improve - urban x
180.60	604325E	Private - Industrial	Rock Island, IL		Metal / Timber		okay
183.08	604341N	Western Ave	Davenport, IA	Old Equipment	Asphalt		okay
183.16	604342V	Gaines St	Davenport, IA	Old Equipment	Concrete		okay
183.24	604343C	Brown St	Davenport, IA	Old Equipment	Concrete		okay
183.31	604344J	Warren St	Davenport, IA	Old Equipment	Timber		okay
183.47	603891L	Myrtle St	Davenport, IA			Closed	gone
183.57	603892T	Marquette St	Davenport, IA	Old Equipment	Concrete		okay
183.65	603893A	Taylor St	Davenport, IA	Old Equipment	Asphalt / Timber		okay
185.87	606780E	W Central Park Ave	Davenport, IA	Good Equipment	Concrete		okay
186.50	606781L	Private - Residence	Davenport, IA		Timber		improve - local
186.93	393008N	Fairmont St	Davenport, IA	Old Equipment	Concrete		improve - urban
187.73	606784G	Private - Farm			Gravel		improve - farm
188.85	606786V	Private - Farm					improve - farm
189.18	606787C	Utah Ave		Crossbucks	Asphalt / Timber		reprofile - local
189.70	606788J	Private - Farm			Gravel		improve - farm
189.98	606790K	Private - Farm			Gravel		improve - farm
190.15	606791S	Private - Farm				Closed	gone
190.28	606792Y	110th Ave		Crossbucks	Asphalt / Timber		okay
191.08	606794M	Private - Farm			Gravel	Closed	gone
191.24	606794M	100th Ave		Crossbucks	Asphalt / Timber		improve - local
191.63	606795U	Private - Farm			Gravel		improve - farm
191.98	606796B	Private - Farm				Closed	gone
192.33	606797H	90th Ave		Crossbucks	Timber		improve - local
192.65	606798P	190th St		Crossbucks	Timber		improve - local
192.68	606799W	Private - Residence			Timber		improve - home
192.88	606800N	Private - Farm			Gravel		improve - farm
193.13	606801V	Private - Farm			Timber		improve - farm
193.60	606802C	Private - Farm			Timber		improve - farm
194.38	606803J	70th Ave	Walcott, IA	Good Equipment	Concrete		okay
194.80	606804R	S Henry St	Walcott, IA	Old Equipment	Timber		okay
194.93	606803Y	S Main St	Walcott, IA	Old Equipment	Rubber / Timber		okay
195.88	606806C	Private - Farm			Gravel		improve - farm
196.35	606807L	York Ave		Crossbucks	Timber		improve - local
199.25	606808T	Iowa St	Stockton, IA	Crossbucks	Asphalt / Timber		okay
200.43	606809A	Verde Ave		Crossbucks	Timber		improve - local
201.45	606811B	14th Ave	Durant, IA	Old Equipment	Concrete		okay
201.88	606812H	8th Ave	Durant, IA	Good Equipment	Concrete		okay
202.03	606813P	6th Ave	Durant, IA	Good Equipment	Concrete		okay
202.13	606814W	5th Ave	Durant, IA	Good Equipment	Concrete		okay
202.60	917612H	W 2nd Ave		PTM w/ 6x6 & FL	Concrete		okay
203.23	606815D	Private - Industrial		Crossbucks	Asphalt / Timber		improve - local
203.48	606600E	Private - Industrial		Crossbucks	Asphalt / Timber		improve - local
203.93	606817S	Private - Industrial		Crossbucks	Timber		improve - local
204.53	606818Y	Trail Ave		Crossbucks	Timber		improve - local
205.53	606819F	Thayer Ave		Crossbucks	Timber		improve - local
205.93	606820A	Private - Farm					improve - farm
206.60	606821G	Taylor Ave		Crossbucks	Timber		okay
207.35	606822N	Cypress St	Wilton, IA	Good Equipment	Timber		okay
207.57	606824C	Chestnut St	Wilton, IA	Good Equipment	Timber		okay
207.83	606827X	Cherry St	Wilton, IA		Timber		okay
208.00	606828E	Liberty St	Wilton, IA	Good Equipment	Timber		okay
208.45	606829L	Private - Farm			Gravel		improve - farm
209.83	606832U	N Isett Ave		Good Equipment	Timber		okay
211.00	606834H	6th St	Moscow, IA	Crossbucks	Timber		okay
211.15	606835P	4th St (Moscow Rd)	Moscow, IA	Old Equipment	Timber		reprofile - local
212.50	606836W	Hinkeyville Ave		Crossbucks	Timber		improve - local
212.97	606837D	Private - Farm			Gravel		improve - farm
213.25	606838K	Mohawk Ave		Crossbucks	Timber		improve - local
215.33	606839S	Penn Ave Rd		Crossbucks			improve - local
215.83	606840L	Lundy St	Atalissa, IA	Good Equipment	Asphalt / Timber		improve - local
215.87	606841T	Cherry St	Atalissa, IA	Old Equipment	Asphalt / Timber		improve - local
216.05	606842A	Oak St	Atalissa, IA	Old Equipment	Asphalt / Timber		improve - local
216.45	606843G	US-6		Good Equipment	Concrete		okay
217.00	606844N	Private - Farm			Timber		reprofile - farm
217.75	606839S	Iron City Ave		Crossbucks	Timber		improve - local
218.83	606846C	Private - Farm					improve - farm
219.18	606847J	Private - Farm				Closed	gone
219.48	606848R	Private - Farm			Timber		improve - farm
219.97	606849X	Green Ave		Crossbucks	Timber		improve - local
220.97	606850S	N Columbus St	West Liberty, IA	Flashers	Concrete		improve - local
221.02	606851Y	N Calhoun St	West Liberty, IA	Flashers	Concrete		improve - local
221.25	606852F	W Prarie St	West Liberty, IA	Flashers	Concrete		improve - local
222.42	606853M	Private - Farm				Closed	gone
222.52	606854U	US-6		Good Equipment	Concrete		okay
223.60	606855B	Private - Farm					improve - farm
224.67	606856H	Private - Farm					improve - farm

Crossing Improvements							
Iowa Interstate MP 130 - 237							
M.P.	**FRA I.D.**	**Street**	**Location**	**Existing Signals**	**Existing Surface**	**Ex Status**	**Status**
225.42	606858W	Private - Farm					improve - farm
226.22	606859D	Private - Farm				Closed	gone
226.57	606860X	Baker St	Downey, IA	Flashers			okay
226.82	606861E	Adams St	Downey, IA	Crossbucks			improve - local
227.50		Private - Farm					improve - farm
228.55	606863T	Oasis Rd SE		Crossbucks			improve - local
230.10	606865G	Private - Farm					improve - farm
231.55	606866N	Private - Farm					improve - farm
232.32	606868C	Private - Farm					improve - farm
232.52	606869J	420th St SE		Flashers			improve - local
232.75	606870D	Taft Ave SE		Crossbucks			improve - local
233.10	606871K	Private - Farm					improve - farm
233.90	606872S	S Scott Blvd	Iowa City, IA	Good Equipment	Concrete		okay
235.07	606873Y	S 1st Ave	Iowa City, IA	Good Equipment	Concrete		improve - urban x
236.82	606878H	S Dubuque St	Iowa City, IA	Flashers	Concrete		improve - urban x
236.92	606879P	S Clinton St	Iowa City, IA	Flashers	Concrete		improve - urban x
237.50	606882X	Greenwood Dr	Iowa City, IA	Flashers			
238.35	914517C	Finkbine Commuter Dr	Iowa City, IA	Flashers			
239.60	606885T	10th Ave (Industry)	Coralville, IA				
240.70	606887G	22nd Ave	Coralville, IA				
241.18	917610U	25th Ave	Coralville, IA				
241.53		Private - Residence	Coralville, IA				
241.75		Private - Residence	Coralville, IA				
241.90	607997V	Private - Farm	Coralville, IA				

PTC Unit Cost Documentation

Positive Train Control (PTC) and PTC communications systems cost estimates are necessarily high-level as this technology is not yet implemented under 49 CFR 236 Subpart I, beyond a prototype basis. Cost knowledge is accordingly uncertain. Certain aspects of the technology are at this time have fairly well known probable costs, such as locomotive hardware, backoffice servers, computer-aided aided dispatching consoles, and wayside interface units. The principle unknown hardware cost is the communications backbone; the amount of bandwidth requirement and communications connectivity is increasing. Initial communications design definitions are pointing toward a requirement for much greater bandwidth, reduction in message latency periods, and encryption strength than was anticipated at the beginning of PTC exploratory designs. The largest single factor in cost is software development, systems management and requirements development, testing and validation of system vitality, and fulfilling regulatory requirements.

Cost information used to develop the estimates were drawn from BNSF Railway's Beardstown Subdivision ETMS prototype system, foreign installations of Wabtec CBTC systems; Union Pacific Railroad's PTC development team, and discussions with the AAR and TTCI. Costs for the communications backbone, software, systems management, and testing and validation at this time remain a significant unknown.