GREENVALE TOWNSHIP ROAD IMPROVEMENT PROJECT SUMMARY AND REPORT FOR WORK COMPLETED IN THE 2013 CONSTRUCTION SEASON

PREPARED BY:
Gregory Langer
Greenvale Township Supervisor

March 9, 2014

Table of Contents

Greenvale Township Citizen Road Improvement Committee:

Jerry Bolton 507-291-0388
Mark Malecha 507-291-0320
Chuck Van Eeckhout 507-664-9387
Randy Delzer 507-645-5600
Helen Tuma 612-310-7388

March 21, 2013 Greenvale Town Board formally recognized committee.

Some items to consider:

- Elect a chairman, president, or such for the group
- Study roads and prioritize work
- Involve citizens and landowners when group decides appropriate
- Include citizens in plan creation
- Inform land owners before work begins.
- Post progress report as work is performed
- What details should be in plan?
- Regular progress report to citizens (semi-annually? Annually?)
- Formal written plan
- Post meeting schedule

April 26, 2013

Greenvale Township Road Improvement Committee

The Greenvale Township Road Improvement Committee, the Township Supervisors and our Road Maintenance Contractor toured the Township to view the roads and discuss the work to be done during the 2013 construction season.

Road Improvement Committee Members that attended:
Jerry Bolton, Mark Malecha and Chuck Van Eeckhout

Township Supervisors that attended:
Richard Moore, Gregory Langer and David Roehl

Road Maintenance Contractors:
Bryce Otte and Jason Otte of Otte Excavating

July 19, 2013

Greenvale Township Road Improvement Project
Surface Aggregate "Spot Load" locations

1. Jamaica Avenue: 4 loads applied to the north ¼ of the road length.
2. Holyoke Avenue: 4 loads applied on the north end, from the culvert south. 5 loads applied going south from the rise in the road at about the mid-point of the road length.
3. 285th Street: 3 loads from the west end to the low area near the cross road culverts. 4 loads from the low area east. 1 load in the staked area near the east end of the road.
4. 290th Street: 4 loads from the Foliage intersection east to the RR tracks.
5. 290th Street west of Foliage Avenue: 7 loads applied west of the Q. Moore home to the culvert area on the west end of 290th Street.

Other work needed...

- Jamaica Avenue: Clean culvert at the intersection of 320th Street.
  Culvert extensions at #30980 Jamaica Ave.
  Rip rap erosion control on the west side of the road by the creek.
  Trim Trees in ditches as needed.
- Contact Rice County to discuss maintenance of 55th Street West (The west end of 305th Street)
- Trim Trees on the west side of Dresden Avenue south of 320th Street.
- Trim Trees on the east side of the northern end of Idalia Avenue.
- Contact David and Lori Urke (31121 Idalia) about ditch work and driveway culvert.

July 19, 2013

Greenvale Township Road Improvement Project
Utility Location Directions

1. Jamaica Avenue, #30980 going north... both sides of the road (Kelly Jaekels place)
2. Jamaica Avenue, culvert by the creek
3. 305th Avenue, two tenths of a mile west of Isle Avenue. Both sides of the road. Stake at location.
4. Idalia Avenue, #31660, driveway area.
5. Idalia Avenue, #31121, driveway area.
6. 310th Street, #9260, driveway area. #9255, driveway area.
7. Iran Path, #31813, driveway area. (D. Prescott)
8. Isle Avenue, #30282, #30247 and #30241, driveway areas. (W. Peterson and M. Malecha)
9. Isle Avenue, #29876, East side... mailbox area south 200ft.
10. Isle Avenue, #29650, north to 295th Street, West side of road.
11. Isle Avenue, #29170, driveway area (Glen Nelson)
12. Isle Avenue, #29002, driveway area and south 200ft. south. (J. Berres)
13. Isle Avenue, 100ft. north of #28658... both sides of the road for 100ft.
14. Holyoke Avenue, #29456, driveway area. (Anfinson)
15. Garrett Avenue, culvert area at the intersection of 290th Street West.
16. Eveleth Avenue, #30251 driveway area. (R. Kluver)
17. Eveleth Avenue, intersection of 315th Street... south 100ft. on the east side.

August 20, 2013

Greenvale Township and Telecom Service Provider Information Gathering

Greenvale Township Road Improvement Committee Members:

Jerry Bolton 507-291-0388
Mark Malecha 507-291-0320
Chuck Van Eeckhout 507-664-9387
Randy Delzer 507-645-5600
Helen Tuma 612-310-7388
Richard Moore, Township Supervisor 612-290-7529

Greenvale Township Road Construction Contractor:
Otte Excavating c/o Bryce Otte 612-282-8437 and Jason Otte 507-291-0198

Mary Smith, Century Link 612-798-2580
Sheila Straka, Century Link
Don Barlage, Integra Telecom 952-226-7064

Gathering arranged by: Gregory Langer, Greenvale Township Supervisor

Greenvale Township Road Improvement Project

Road Aggregate Material Delivery Information Summary

August 27, 2013: South ¾ mile of Idalia Avenue, 33-loads, ...775.800 tons.

August 27, 2013: North ¼ of Idalia Avenue 6-loads, ... 159.600 tons.

August 28, 2013: North ¼ of Idalia Avenue, 37-loads, ... 859.300 tons.

August 29, 2013: 310th Street and Iran Path to 305th Street, 36-loads, ... 843.650 tons.

August 30, 2013: Isle Avenue, area north of 305th Street to area 100 yards north of address #30247, 29-loads, ... 675.800 tons

September 3, 2013: Isle Avenue, area ¾ mile south of 295th St. W. to 295th St. W., 39-loads, ... 928.600 tons.

September 4, 2013: 305th Street, Rice Co. #55 W., traveling east, 28-loads, ... 648.450 tons.

September 4, 2013: 305th Street, east end, 8-loads, ... 185.700 tons.

September 4, 2013: Holyoke Avenue, south end area, 4-loads, ... 93.050 tons.

September 5, 2013: 305th Street, east end, 6-loads, ... 136.600 tons.

September 5, 2013: Holyoke Avenue, 5-loads,..... 116.200 tons.

September 5, 2013: Holyoke Avenue, south end areas, 15-loads,..... 348.050 tons.

September 13, 2013: Holyoke Avenue, north end areas, 18 loads,..... 418.700 tons.

September 13, 2013: Guam Avenue, north end, 6-loads, ... 144.750 tons.

September 13, 2013: 290th Street and Garrett Avenue, 1-load, ... 24.100 tons.

September 13, 2013: 300th Street West, 11-loads, ... 256.600 tons.

Total tons: 6,614,950 tons

Greenvale Township Road Improvement Project

Road Aggregate Material Delivery Information Summary

October 10, 2013: West end of 290th Street West, 6-loads,.....141,850 tons.

October 10, 2013: " Turn around area" on the west end of 300th St. W., 12-loads....."unknown"

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No: Greenvale	Date: 8/27/2013	Test No: 1 This seems more like a CL2 than CL5 looks like Dak Co. specs.
Material Type: CL-5 Mod.	Station: Cannon Falls (Anderson)	Depth From Grading Grade:
Total Wt. of Sample: 26.2 lbs (kg)	Tester Name or Certification No: Chris Anderson	

Coarse Sieves:

				(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass	Sieve, Ret.	1 1/2"	Sieve	0.0		25.9	100%	
*Pass 1 1/2"	Sieve, Ret.	1"	Sieve	0.0	1 1/2"	25.9	100%	
*Pass 1"	Sieve, Ret.	3/4"	Sieve	0.0	1"	25.9	100%	100%
*Pass 3/4"	Sieve, Ret.	1/2"	Sieve	3.6	3/4"	25.9	100%	90-100%
*Pass 1/2"	Sieve, Ret.	3/8"	Sieve	3.5	1/2"	22.4	86%	
*Pass 3/8"	Sieve, Ret.	#4	Sieve	7.1	3/8"	18.9	73%	50-90%
*Pass #4	Sieve, Ret. Bottom			11.8	#4	11.8	46%	35-70%
			Check Total -	25.9	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 636.0
(C) Wash and dry other sample and record weight. 480.2
(D) Loss in washing (B-C) (Enter Below) 155.8

				(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass #4	Sieve, Ret.	#10	Sieve	179.2	#4	635.7	100.0%	46%	35-70%
*Pass #10	Sieve, Ret.	#16	Sieve	81.5	#10	456.5	71.8%	33%	20-55%
*Pass #16	Sieve, Ret.	#30	Sieve	79.2	#16	375.0	59.0%	27%	
*Pass #30	Sieve, Ret.	#40	Sieve	35.9	#30	295.8	46.5%	21%	
*Pass #40	Sieve, Ret.	#50	Sieve	26.5	#40	259.9	40.9%	19%	15-35%
*Pass #50	Sieve, Ret.	#100	Sieve	33.5	#50	233.4	36.7%	17%	
*Pass #100	Sieve, Ret.	#200	Sieve	24.8	#100	199.9	31.4%	14%	
*Pass #200	Sieve, Ret. Bottom			19.3	#200	175.1	27.5%	12.7%	10-15%
			Loss by washing-	155.8					
			Check Total -	635.7	- Shall Check total Wt. Within 5.0 grams				
				Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)					

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:
Greenvale	8/27/2013	2
Material Type:	Station:	Depth From Grading Grade:
CL-5 Mod.	Cannon Falls (Anderson)	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:	
25.6	Chris Anderson	

Coarse Sieves:

				(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass	Sieve, Ret.	1 1/2"	Sieve	0.0		25.4	100%	
*Pass 1 1/2"	Sieve, Ret.	1"	Sieve	0.0	1 1/2"	25.4	100%	
*Pass 1"	Sieve, Ret.	3/4"	Sieve	0.0	1"	25.4	100%	100%
*Pass 3/4"	Sieve, Ret.	1/2"	Sieve	1.8	3/4"	25.4	100%	90-100%
*Pass 1/2"	Sieve, Ret.	3/8"	Sieve	2.1	1/2"	23.6	93%	
*Pass 3/8"	Sieve, Ret.	#4	Sieve	5.2	3/8"	21.5	85%	50-90%
*Pass #4	Sieve, Ret. Bottom			16.3	#4	16.3	64%	35-70%
			Check Total -	25.4	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 565.3
(C) Wash and dry other sample and record weight. 437.6
(D) Loss in washing (B-C) (Enter Below) 127.7

				(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass #4	Sieve, Ret.	#10	Sieve	173.0	#4	565.1	100.0%	64%	35-70%
*Pass #10	Sieve, Ret.	#16	Sieve	85.6	#10	392.1	69.4%	44%	20-55%
*Pass #16	Sieve, Ret.	#30	Sieve	74.2	#16	306.5	54.2%	35%	
*Pass #30	Sieve, Ret.	#40	Sieve	30.8	#30	232.3	41.1%	26%	
*Pass #40	Sieve, Ret.	#50	Sieve	20.9	#40	201.5	35.7%	23%	15-35%
*Pass #50	Sieve, Ret.	#100	Sieve	25.9	#50	180.6	32.0%	20%	
*Pass #100	Sieve, Ret.	#200	Sieve	18.8	#100	154.7	27.4%	18%	
*Pass #200	Sieve, Ret. Bottom			8.2	#200	135.9	24.0%	15.4%	10-15%
			Loss by washing-	127.7					
			Check Total -	565.1	- Shall Check total Wt. Within 5.0 grams				
			Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:
Greenvale	8/28/2013	3
Material Type:	Station:	Depth From Grading Grade:
CL-5 Mod.	Cannon Falls (Anderson)	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:	
32.3	Greg Viall	

Coarse Sieves:

				(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass	Sieve, Ret.	1 1/2"	Sieve	0.0		32.2	100%	
*Pass 1 1/2"	Sieve, Ret.	1"	Sieve	0.0	1 1/2"	32.2	100%	
*Pass 1"	Sieve, Ret.	3/4"	Sieve	0.0	1"	32.2	100%	100%
*Pass 3/4"	Sieve, Ret.	1/2"	Sieve	2.6	3/4"	32.2	100%	90-100%
*Pass 1/2"	Sieve, Ret.	3/8"	Sieve	2.6	1/2"	29.7	92%	
*Pass 3/8"	Sieve, Ret.	#4	Sieve	7.3	3/8"	27.1	84%	50-90%
*Pass #4	Sieve, Ret. Bottom			19.8	#4	19.8	61%	35-70%
			Check Total -	32.2	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 580.0
(C) Wash and dry other sample and record weight. 459.9
(D) Loss in washing (B-C) (Enter Below) 120.1

				(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass #4	Sieve, Ret.	#10	Sieve	203.6	#4	579.3	100.0%	61%	35-70%
*Pass #10	Sieve, Ret.	#16	Sieve	82.4	#10	375.7	64.9%	40%	20-55%
*Pass #16	Sieve, Ret.	#30	Sieve	69.6	#16	293.3	50.6%	31%	
*Pass #30	Sieve, Ret.	#40	Sieve	30.4	#30	223.7	38.6%	24%	
*Pass #40	Sieve, Ret.	#50	Sieve	20.6	#40	193.3	33.4%	20%	15-35%
*Pass #50	Sieve, Ret.	#100	Sieve	25.2	#50	172.7	29.8%	18%	
*Pass #100	Sieve, Ret.	#200	Sieve	19.0	#100	147.5	25.5%	16%	
*Pass #200	Sieve, Ret. Bottom			8.4	#200	128.5	22.2%	13.5%	10-15%
			Loss by washing-	120.1					
			Check Total -	579.3	- Shall Check total Wt. Within 5.0 grams				
			Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:
Greenvale	8/28/2013	4
Material Type:	Station:	Depth From Grading Grade:
CL-5 Mod.	Cannon Falls (Anderson)	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:	
38.2	Chris Anderson	

Coarse Sieves:

		(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve		0.0		38.0	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve		0.0	1 1/2"	38.0	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve		0.1	1"	38.0	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve		3.9	3/4"	37.9	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve		3.4	1/2"	34.1	90%	
*Pass 3/8" Sieve, Ret. #4 Sieve		8.3	3/8"	30.7	81%	50-90%
*Pass #4 Sieve, Ret. Bottom		22.4	#4	22.4	59%	35-70%
Check Total -		38.0	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 498.2
(C) Wash and dry other sample and record weight. 387.7
(D) Loss in washing (B-C) (Enter Below) 110.5

		(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass #4 Sieve, Ret. #10 Sieve		149.0	#4	498.5	100.0%	59%	35-70%
*Pass #10 Sieve, Ret. #16 Sieve		73.5	#10	349.5	70.1%	41%	20-55%
*Pass #16 Sieve, Ret. #30 Sieve		65.5	#16	276.0	55.4%	33%	
*Pass #30 Sieve, Ret. #40 Sieve		28.4	#30	210.5	42.2%	25%	
*Pass #40 Sieve, Ret. #50 Sieve		19.7	#40	182.1	36.5%	22%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve		25.0	#50	162.4	32.6%	19%	
*Pass #100 Sieve, Ret. #200 Sieve		18.7	#100	137.4	27.6%	16%	
*Pass #200 Sieve, Ret. Bottom		8.2	#200	118.7	23.8%	14.0%	10-15%
Loss by washing-		110.5					
Check Total -		498.5	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)							

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:
Greenvale	8/29/2013	5
Material Type:	Station:	Depth From Grading Grade:
CL-5 Mod.	Cannon Falls (Anderson)	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:	
31.9	Chris Anderson	

Coarse Sieves:

		(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve		0.0		31.9	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve		0.0	1 1/2"	31.9	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve		0.1	1"	31.9	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve		3.5	3/4"	31.8	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve		4.3	1/2"	28.3	89%	
*Pass 3/8" Sieve, Ret. #4 Sieve		11.8	3/8"	24.1	76%	50-90%
*Pass #4 Sieve, Ret. Bottom		12.3	#4	12.3	39%	35-70%
Check Total -		31.9	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 806.9
(C) Wash and dry other sample and record weight. 576.5
(D) Loss in washing (B-C) (Enter Below) 230.4

		(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass #4 Sieve, Ret. #10 Sieve		177.8	#4	805.6	100.0%	39%	35-70%
*Pass #10 Sieve, Ret. #16 Sieve		96.5	#10	627.8	77.9%	30%	20-55%
*Pass #16 Sieve, Ret. #30 Sieve		102.2	#16	531.3	66.0%	26%	
*Pass #30 Sieve, Ret. #40 Sieve		49.1	#30	429.1	53.3%	21%	
*Pass #40 Sieve, Ret. #50 Sieve		36.7	#40	380.0	47.2%	18%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve		49.5	#50	343.3	42.6%	17%	
*Pass #100 Sieve, Ret. #200 Sieve		36.2	#100	293.8	36.5%	14%	
*Pass #200 Sieve, Ret. Bottom		27.2	#200	257.6	32.0%	12.5%	10-15%
Loss by washing-		230.4					
Check Total -		805.6	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)							

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:
Greenvale	9/3/2013	6
Material Type:	Station:	Depth From Grading Grade:
CL-5 Mod.	Cannon Falls (Anderson)	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:	
31.8	Greg Viall	

Coarse Sieves:

		(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve		0.0		31.5	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve		0.0	1 1/2"	31.5	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve		0.0	1"	31.5	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve		2.2	3/4"	31.5	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve		2.1	1/2"	29.3	93%	
*Pass 3/8" Sieve, Ret. #4 Sieve		6.5	3/8"	27.2	86%	50-90%
*Pass #4 Sieve, Ret. Bottom		20.7	#4	20.7	66%	35-70%
Check Total -		31.5	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 593.2
(C) Wash and dry other sample and record weight. 467.5
(D) Loss in washing (B-C) (Enter Below) 125.7

		(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass #4 Sieve, Ret. #10 Sieve		182.4	#4	592.9	100.0%	66%	35-70%
*Pass #10 Sieve, Ret. #16 Sieve		90.6	#10	410.5	69.2%	46%	20-55%
*Pass #16 Sieve, Ret. #30 Sieve		79.9	#16	319.9	54.0%	36%	
*Pass #30 Sieve, Ret. #40 Sieve		33.7	#30	240.0	40.5%	27%	
*Pass #40 Sieve, Ret. #50 Sieve		22.7	#40	206.3	34.8%	23%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve		28.1	#50	183.6	31.0%	20%	
*Pass #100 Sieve, Ret. #200 Sieve		21.6	#100	155.5	26.2%	17%	
*Pass #200 Sieve, Ret. Bottom		8.2	#200	133.9	22.6%	14.9%	10-15%
Loss by washing-		125.7					
Check Total -		592.9	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)							

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

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TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:
Greenvale	9/3/2013	9
Material Type:	Station:	Depth From Grading Grade:
CL-5 Mod.	Cannon Falls (Anderson)	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:	
31.5	Greg Viall	

Coarse Sieves:

		(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve		0.0		31.5	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve		0.0	1 1/2"	31.5	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve		0.0	1"	31.5	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve		3.7	3/4"	31.5	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve		4.5	1/2"	27.9	88%	
*Pass 3/8" Sieve, Ret. #4 Sieve		11.3	3/8"	23.4	74%	50-90%
*Pass #4 Sieve, Ret. Bottom		12.1	#4	12.1	38%	35-70%
Check Total -		31.5	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 800.1
(C) Wash and dry other sample and record weight. 581.0
(D) Loss in washing (B-C) (Enter Below) 219.1

	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass #4 Sieve, Ret. #10 Sieve	177.8	#4	799.2	100.0%	38%	35-70%
*Pass #10 Sieve, Ret. #16 Sieve	97.4	#10	621.4	77.8%	30%	20-55%
*Pass #16 Sieve, Ret. #30 Sieve	103.2	#16	524.0	65.6%	25%	
*Pass #30 Sieve, Ret. #40 Sieve	53.7	#30	420.8	52.7%	20%	
*Pass #40 Sieve, Ret. #50 Sieve	36.2	#40	367.1	45.9%	17%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	48.8	#50	330.9	41.4%	16%	
*Pass #100 Sieve, Ret. #200 Sieve	36.1	#100	282.1	35.3%	13%	
*Pass #200 Sieve, Ret. Bottom	26.9	#200	246.0	30.8%	11.7%	10-15%
Loss by washing-	219.1					
Check Total -	799.2	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

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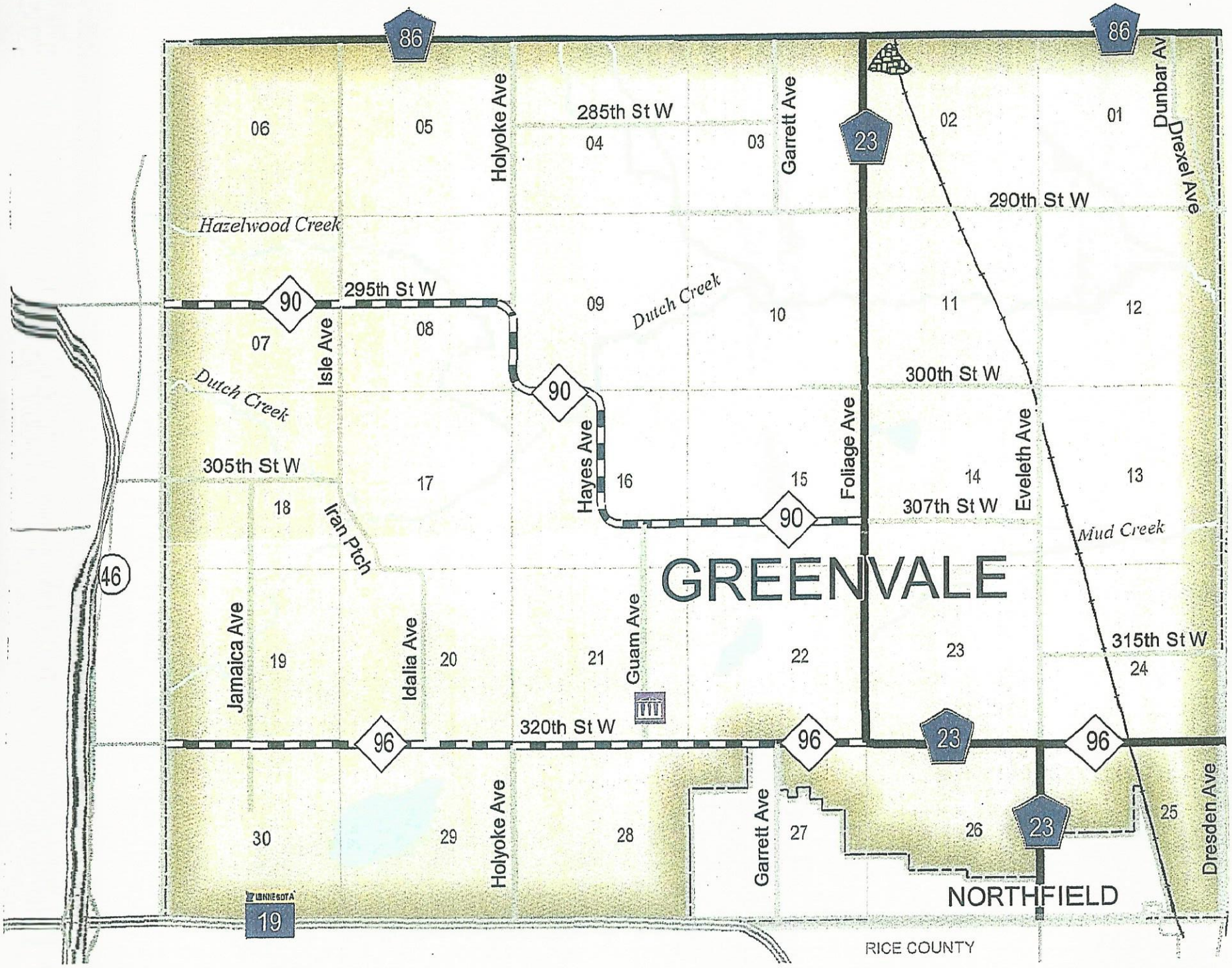
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RICE COUNTY
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290th St W
295th St W
300th St W
305th St W
307th St W
315th St W
320th St W
Hazelwood Creek
Dutch Creek
Mud Creek
Holyoke Ave
Garrett Ave
Dunbar Av
Drexel Ave
Isle Ave
Hayes Ave
Foliage Ave
Eveleth Ave
Iran Ptch
Jamaica Ave
Idalia Ave
Guam Ave
Dresden Ave
MINNESOTA
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