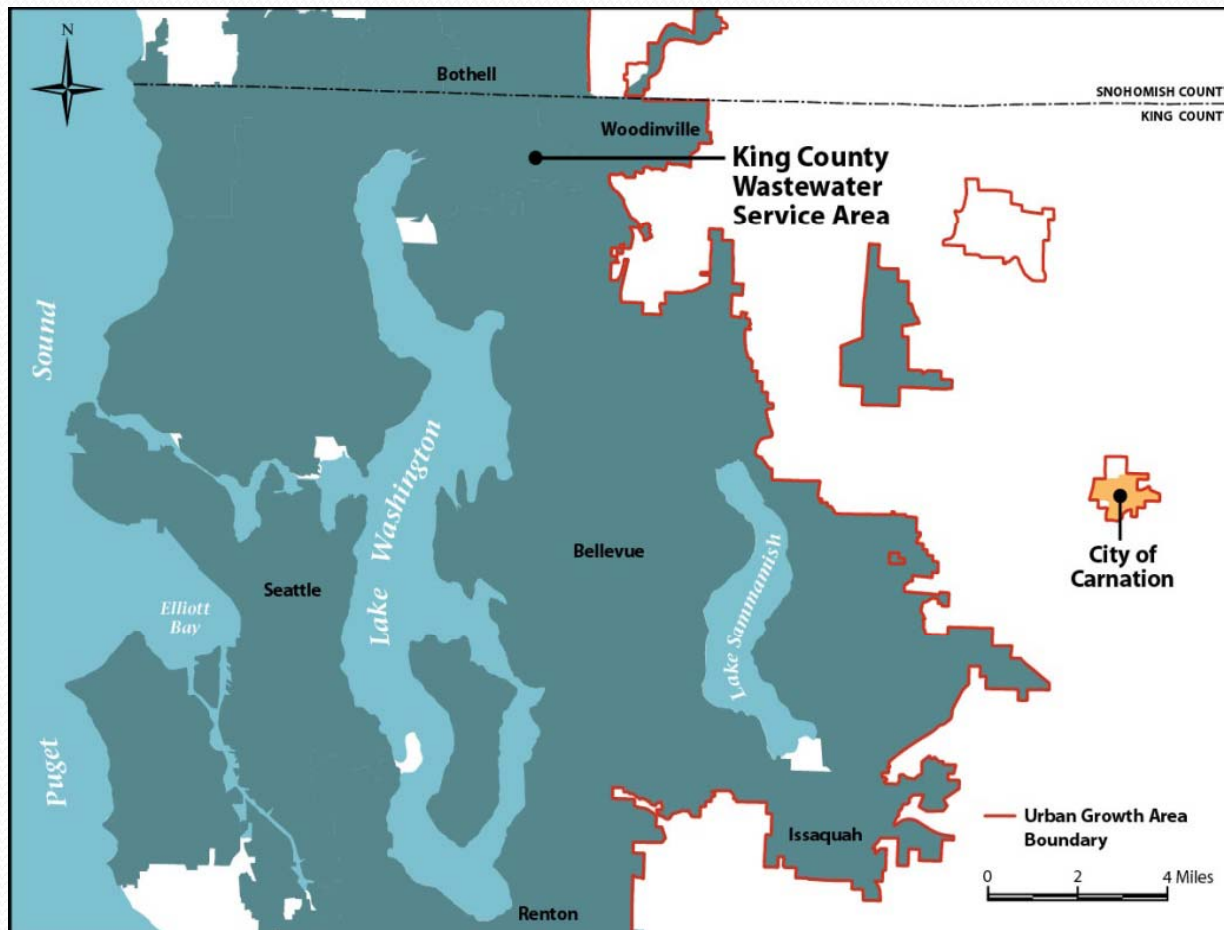




City of Carnation Sewer Installation Project Efficiently Managing Data

Presented by Roth Hill Engineering Partners, LLC
Paul S. Weller, AICP

Where is Carnation?



- 1905 Residents
- 1.1 square miles
- 30 mile drive east of Seattle



Roth Hill Engineering

- City Engineer for Carnation
- Program and Project manager for all aspects of the sewer installation project, including:
 - Planning
 - Survey
 - Design
 - Funding
 - Permitting
 - ROW Acquisition
 - Public Involvement



Project Background

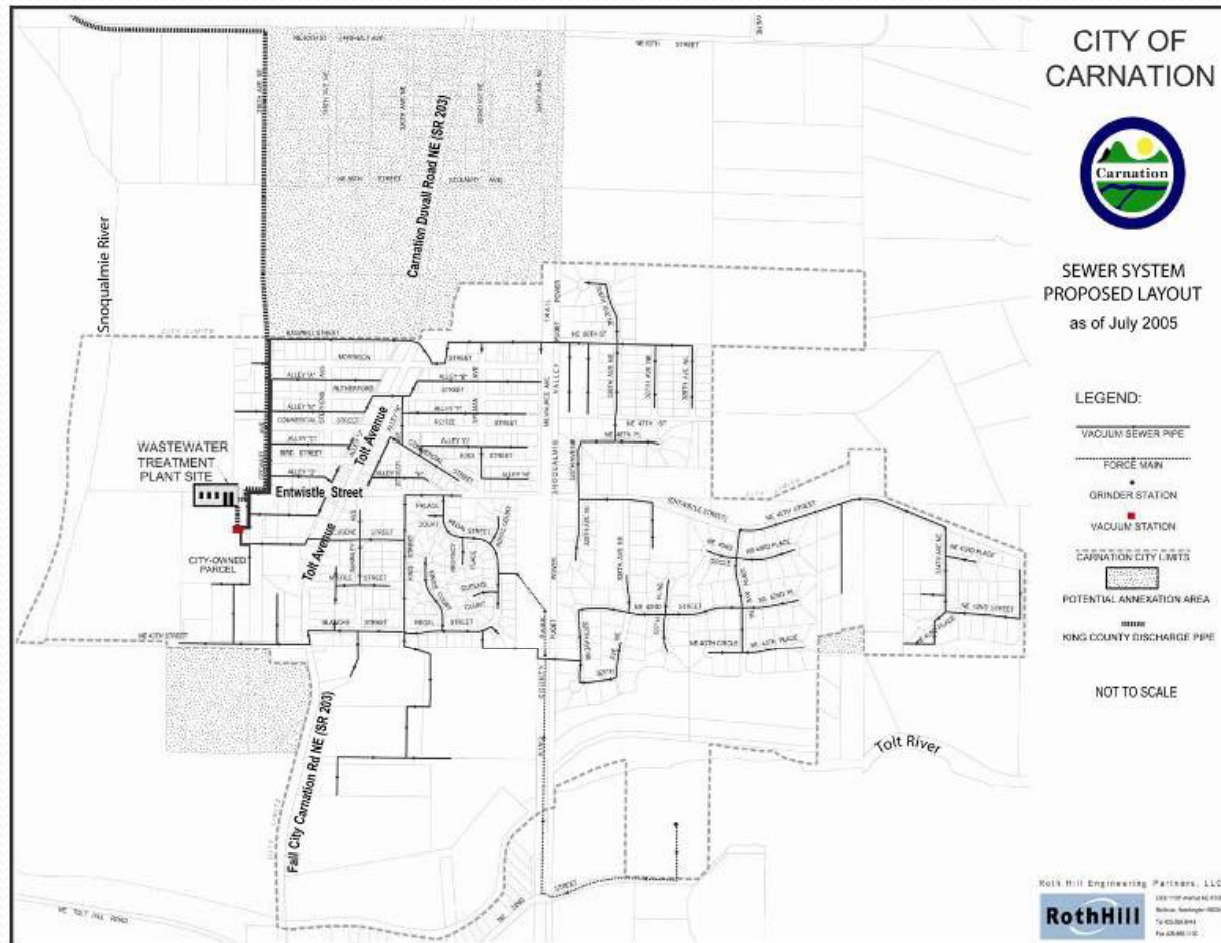
- Health & Safety Concern
- Downward Economic Trend
 - Lost businesses
 - Over 60% in 30 years
 - Restaurants closing
 - No rebuilding
 - Empty store fronts
 - Lost High School
 - Vacant, unbuildable land
 - New development denied
- City Planning Needs



Project Information

- King County built the 10 million dollar sewer treatment facility
- Installation of 60,000 lineal feet (11 miles)
- Non-traditional vacuum sewer conveyance system
 - Reduce major dewatering and restoration costs of 25-35 foot excavations
 - Excavation depths of 4 to 8 feet
 - Costs less – no leaking

Project Map



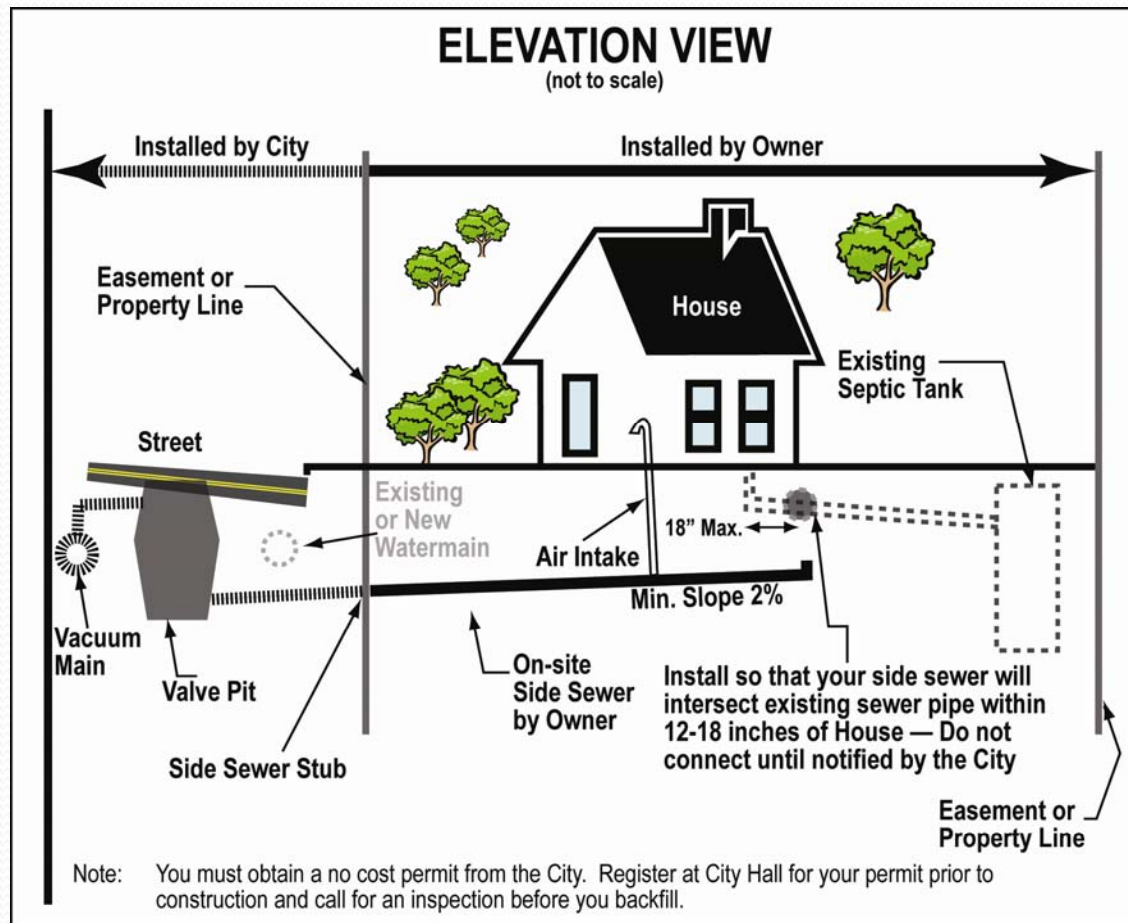
Vacuum Valve Pit



Construction of Vacuum Mainline



Side Sewers





Customer Financing Options

City helped citizens & businesses with low-interest loans & grant funds they had obtained

5 ways to build side sewers:

- CDBG grant for low-moderate income owner-occupied homes
- Housing Repair Program through King County 0% loan
- City contract (PWTF loan) allows payment over time
- Do-It-Yourself Program
- King County Rental Rehabilitation Program for low-moderate rental properties



GIS Role

- Program Application Management
 - Side Sewer Hook Up Program
 - CDBG, KC Rental Rehab, PWTF, DIY
- Permitting
- Design Data
- Construction Maps

Program Application Management

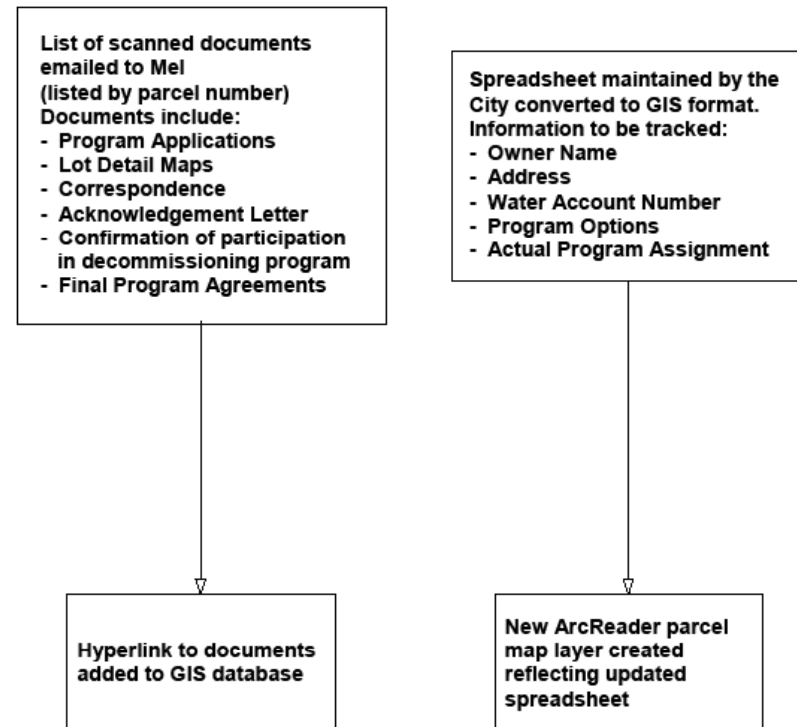
Attributes of PA_Parcels_050808

NAME	PARCEL_NO	DATE_RTRND	HYPERLINK	DIY	CDBG_KCHR	KCRRSSP	PWTF	SDP	Las
Qualle Edgar	1389310070	08092006	..M38M389310070	0	1	0	0	1	Qualle
Gruber Michael E & Michelle R	1389310060	09252006	..M38M389310060	1	0	0	0	1	Grube
McFall Steven & Mary	1389310050	09082006	..M38M389310050	1	0	0	0	1	McFall
Mortimer Jenny	1389310040		..M38M389310040	0	0	0	0	0	Mortir
Clinton Chad P & Douglas J	1525079009			0	0	0	0	0	Clintor
Clinton Chad P & Douglas J	1525079011			0	0	0	0	0	Clintor
Cairns Michael	1389310080	10062006	..M38M389310080	0	0	0	1	1	Cairns
Gavagan Michael S	1389310030	09262006	..M38M389310030	0	0	0	1	1	Gavag
CITY OF CARNATION	1625079060			0	0	0	1	0	Carna
TOBIN ROBERT E & BARBARA C	1389310100	09082006	..M38M389310100	0	1	0	0	1	TOBIN
Subbaraman Chittur P	1389310110	09252006	..M38M389310110	0	0	0	1	1	Subbe
Retzinburger Randy	1389310090	10042006	..M38M389310090	1	0	0	0	1	Retzin
Harviston Butch and West Judy	1389310020	08302006	..M38M389310020	0	0	0	1	1	Harvis
Currier Scott W and Susan L	1389310120	09112006	..M38M389310120	0	0	0	1	1	Currie
Thompson Michael J & Irene E	1389310010	09202006	..M38M389310010	0	0	0	1	1	Thomp
Ash Rachel and Shuck Jason	1389310130	11012006	..M38M389310130	0	0	0	1	1	Ash
Johnson Gayle	1525079055	08162006	..M52M525079055	0	1	0	0	1	Johns

Record: 0 Show: All Selected Records (0 out of 694 Selected) Options

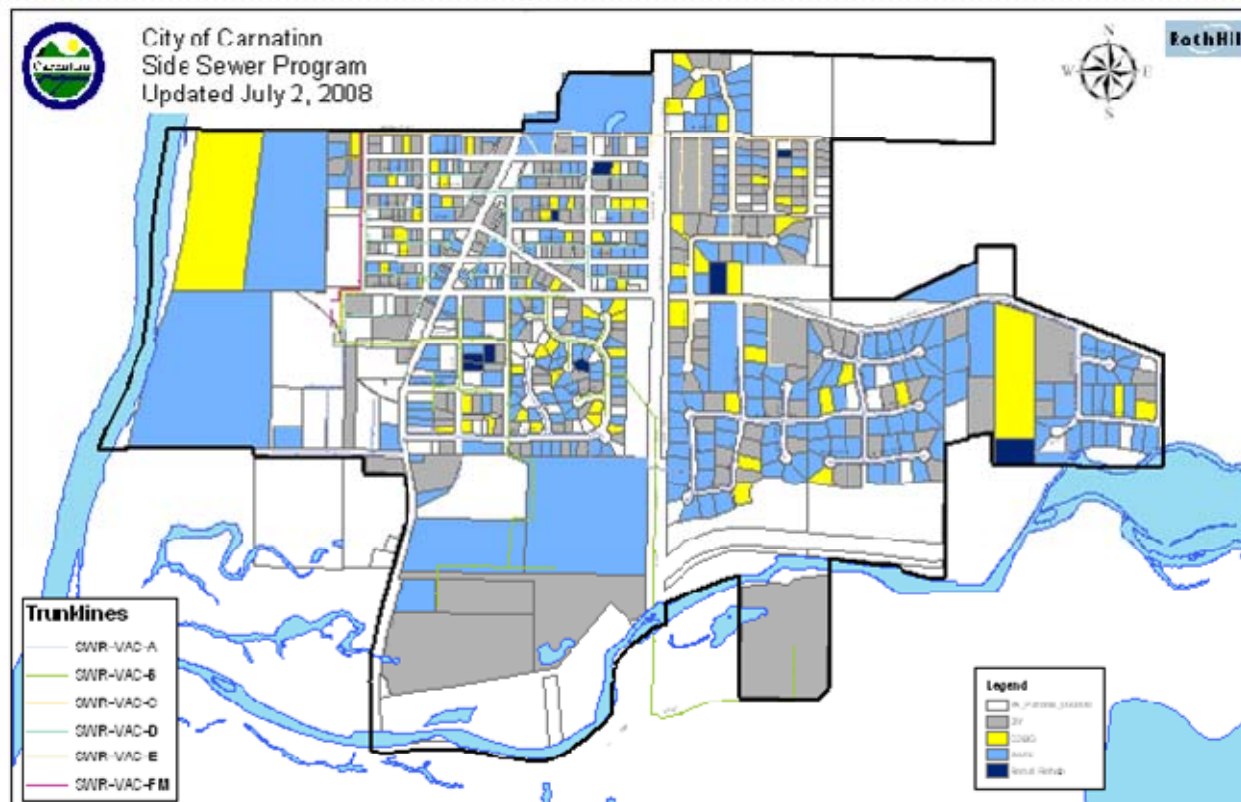
Program Application Flow Diagram

Carnation Side Sewer Program Application GIS Information Flow Diagram



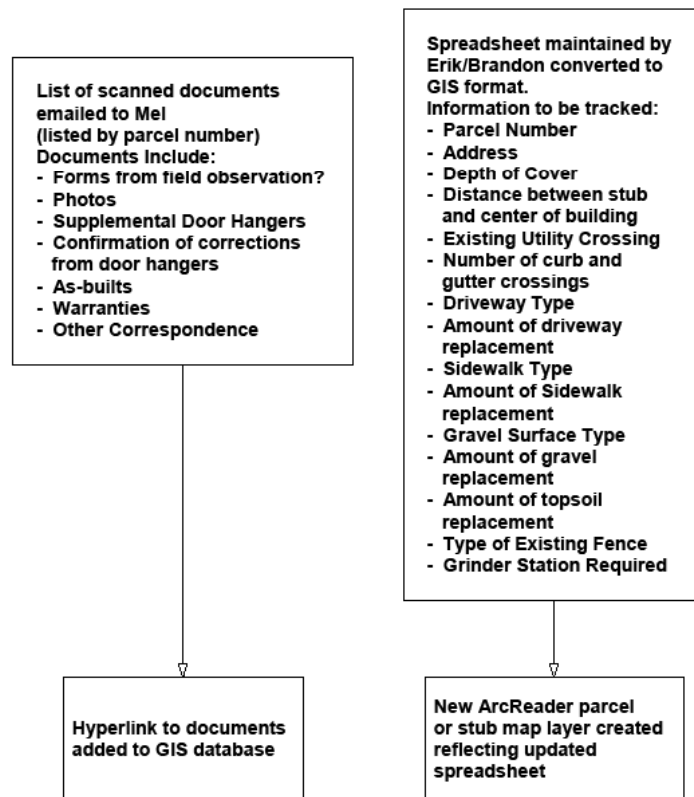
Updates to the GIS Database will take place on a weekly basis.

Program Applications Management



Design Data

Carnation Side Sewer Design GIS Information Flow Diagram



Updates to the GIS Database will take place on a weekly basis.

Design Data

Attributes of Field_parcels_021507

NAME	PARCEL_NO	COVER_VF	DIST_LF	UTLTY_XI	CURB_X	DW_TYPE	DW_SY	SW_TYPE	SW_SY	R_G	R_G_SY	TPSOIL_SY	FENC_TYPE	GRINDER_RQD
Qualle Edgar	1389310070	5.31	64		1	3	7	0	0		0	10.67		N
Gruber Michael E & Michelle R	1389310060	6.27	50		1	3	0	1	0.8		0	8.33		N
McFall Steven & Mary	1389310050	6.39	82		1	3	0	1	0.8		0	13.67		N
Mortimer Jenny	1389310040	6.43	154		1	3	7	1	0.8		0	25.67		N
Clinton Chad P & Douglas J	1525079009	6.63	450		0	0	0	0	0		0	75	C	N
Clinton Chad P & Douglas J	1525079011	0	0		0	0	0	0	0		0	0		N
Cairns Michael	1389310080	5.13	58		1	3	6	0	0		0	9.67		N
Gavagan Michael S	1389310030	6.35	56	G, T, S	1	3	0	1	0.8		0	9.33		N
CITY OF CARNATION	1625079060	0	0		0	0	0	0	0		0	0		
TOBIN ROBERT E & BARBARA	1389310100	4.85	66	W	1	3	7	0	0		0	11		N
Subbaraman Chittur P	1389310110	5.91	60	W, G	1	3	0	0	0	R	2	10		N
Retzinburger Randy	1389310090	4.35	55	W	1	3	8	0	0		0	9.17		N
Harviston Butch and West Judy	1389310020	6.19	50	G, T, S	1	3	0	1	0.8		0	8.33		N
Currier Scott W and Susan L	1389310120	5.59	174	W, G, P, C	1	3	0	0	0		0	29		N
Thompson Michael J & Irene E	1389310010	6.35	66	G, T, C	1	3	0	1	0.8		0	11		N
Ash Rachel and Shuck Jason	1389310130	5.91	54	W, G, P, C	1	3	0	0	0		0	9		N

Record: 0 Show: All Selected Records (0 out of 694 Selected) Options

Permit Flow Diagram

Carnation Side Sewer Permit GIS Information Flow Diagram

List of scanned documents
emailed to Mel
(listed by parcel number)
Documents Include:

- Permit Applications
- Permits Issued
- Connection Authorization
letter/email from City
- Other Correspondence

Hyperlink to documents
added to GIS database

Spreadsheet maintained by
Eilean converted to GIS
format.
Information to be tracked:

- Permit Number
- Parcel Number
- Owner Name
- Address
- Water Account Number
- Submittal Date
- Approval/Issuance Date
- Construction Date
- Inspection Date
- Completion Date

New ArcReader parcel
map layer created
reflecting updated
spreadsheet

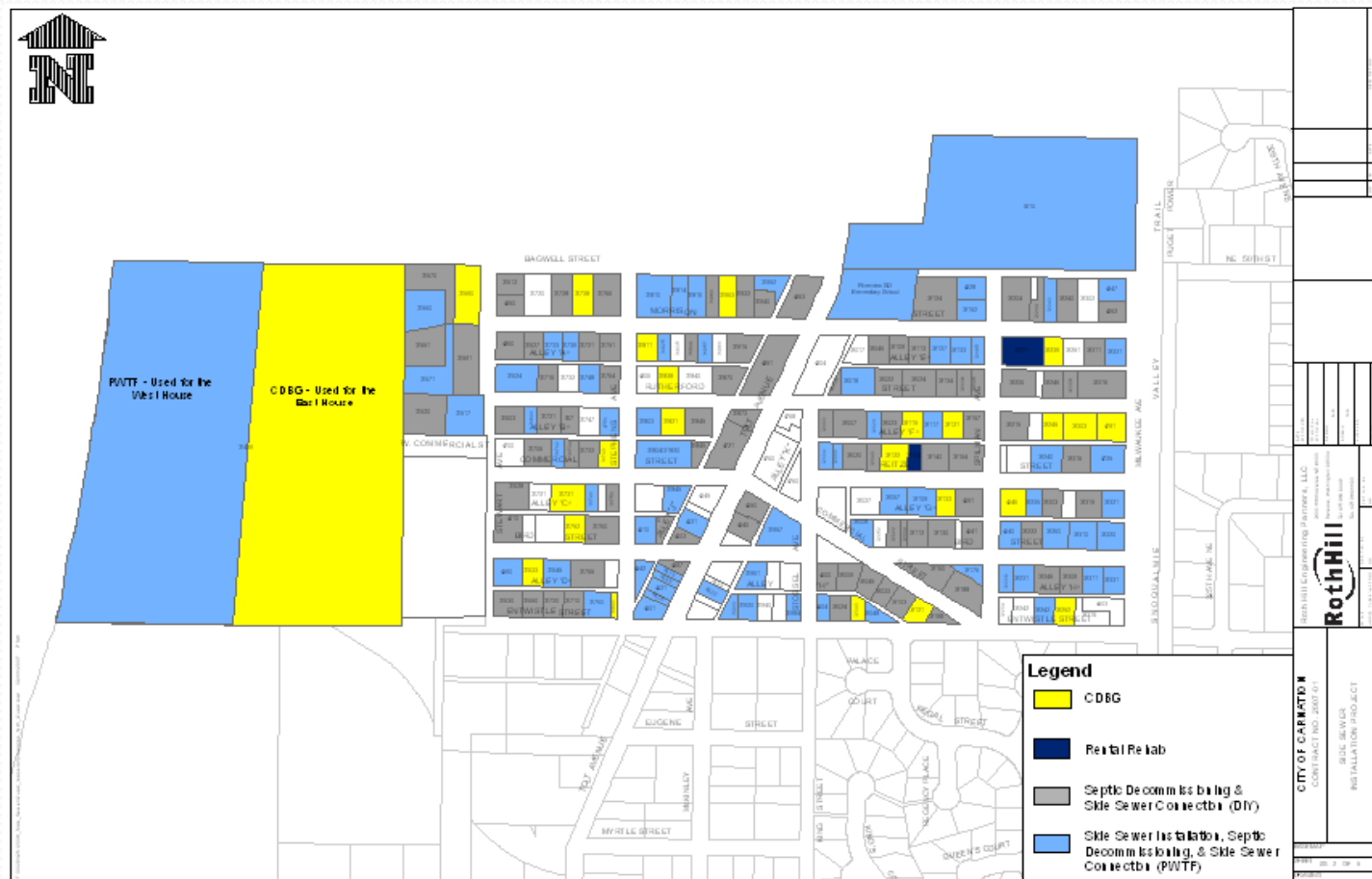
Updates to the GIS Database will take place on a weekly basis.

Permitting

Owner Name	Parcel Number	Application	Application Received	Letter Sent	Resubmittal R	To Review	Approval Date	Constru
Miller Howard A	8658302955	DIY	11/16/2007	11/19/2007		11/19/2007	11/19/2007	
Bloom L & Raphael S	8658302920	DIY	08/27/2007	08/28/2007		08/27/2007	08/28/2007	
Christensen Paul S	8658302895	DIY	07/30/2007	07/31/2007		07/31/2007	08/01/2007	
Bowling Michael	8658302890	DIY	06/20/2007	06/26/2007		06/26/2007	06/26/2007	
Miller Aaron M	8658302525	DIY	09/07/2007	09/10/2007		09/10/2007	09/11/2007	
Grady Patrick L & Sunne J	8658302515	DIY	09/26/2007	09/27/2007		09/26/2007	09/27/2007	
Wallstrom Laura	8658302495	DIY	10/05/2007	10/09/2007		10/05/2007	10/08/2007	
Pillo Joseph & Lisa	8658302475	DIY	10/31/2007	11/01/2007		11/01/2007	11/01/2007	
TOLT CONGREGATIONAL CHUR	8658302430	DIY	05/01/2007	05/11/2007		07/17/2007	07/17/2007	
CARNATION CITY OF	8658301460	DIY	06/03/2008	None		06/04/2008	06/05/2008	
Bowersock Timothy A & Lisa	8658301435	DIY	11/09/2007	11/09/2007		11/09/2007	11/12/2007	
Funk Patricia	8658301430	DIY	11/05/2007	11/05/2007		11/05/2007	11/05/2007	
Chambers William J & Nancy	8658301420	DIY	11/21/2007	11/26/2007		11/26/2007	11/26/2007	
Briske Theresa J	8658301390	DIY	07/30/2007	07/31/2007		07/31/2007	08/01/2007	
Smith Troy	8658300145	DIY	10/05/2007	10/09/2007		10/05/2007	10/08/2007	

Record: 0 Show: All Selected Records (0 out of 696 Selected) Options

Construction Maps





Thank You!

Contact Information

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