



**SANDY CITY
PUBLIC WORKS
Hazardous Concrete
Inventory and Mitigation**

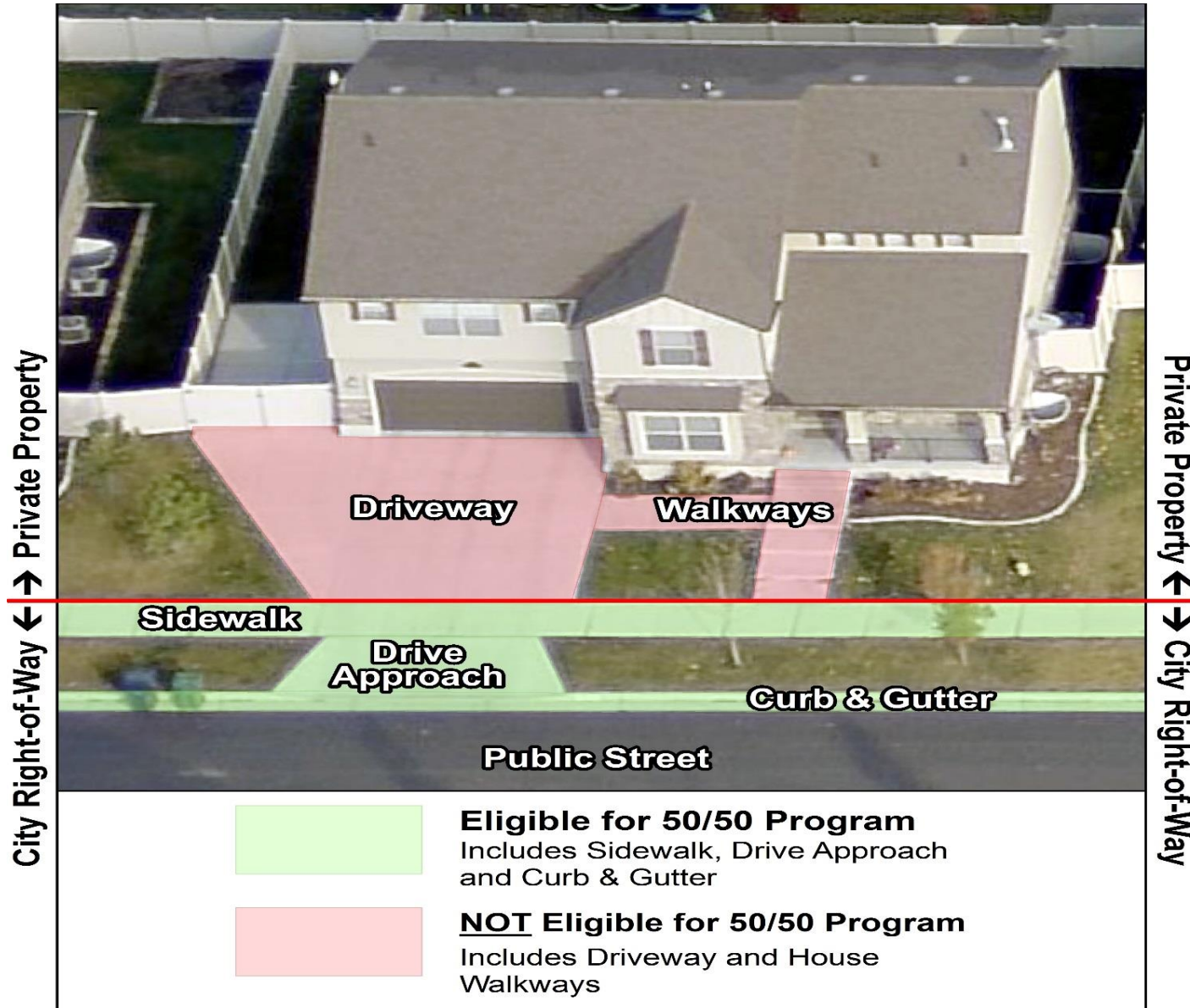
Concrete Coordinator

**Craig
Smith**



- Keeps on-going inventory of hazardous concrete sections throughout the city using a GIS database to print reports, graphs and maps.
- Oversee repair and replacement of hazardous concrete.
- Bids and assists writing contracts for hazardous concrete repair, tree removal, concrete raising, concrete grinding, and certifies invoices for payment.
- Keep current city-wide map of hazardous concrete maintenance activities.
- Inspect, evaluate, and classify all city-owned concrete infrastructure. Identify all trip hazards in the city.
- Draft correspondence to residents. Manage hazardous concrete budget by prioritizing projects and allocating funds.
- Manage Sandy City 50/50 Concrete Replacement Program; receive funds from residents or process reimbursement paperwork.

Right-of-Way





Sidewalk Inventory

Sandy City Public Works

This map uses the most current data available in Sandy City's GIS (Geographic Information System). However, accuracy, completeness and distances are not guaranteed. There may be nonconformities, defects, errors, or omissions. Therefore, Sandy City makes no warranty with respect to the GIS data, and you should not rely on it without verification.

Parcels were obtained from the Salt Lake County Recorders Office. Road centerlines were obtained from VECC (Valley Emergency Communications Center). All other GIS layers are maintained by Sandy City GIS.

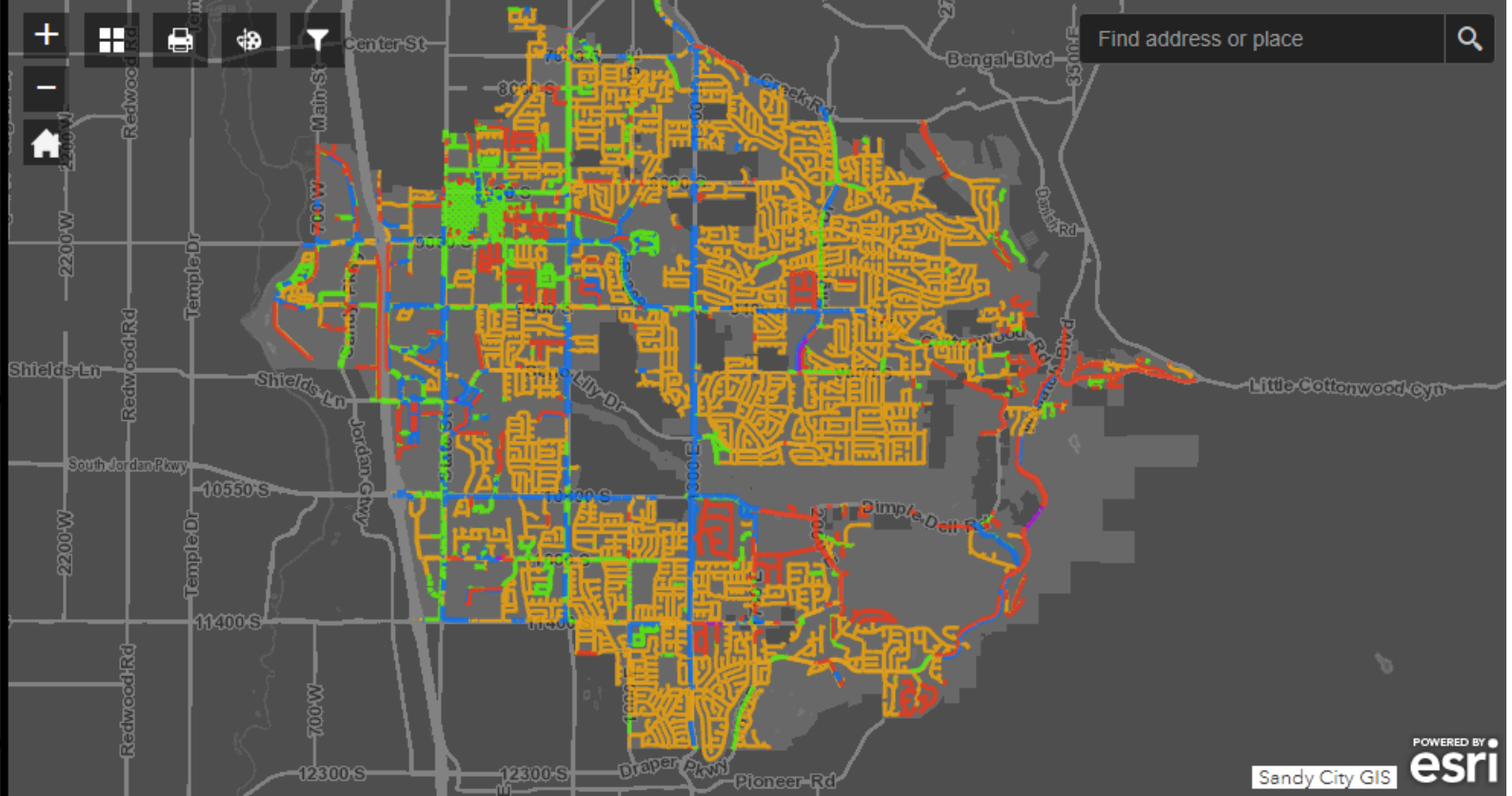
Legend

Sidewalks

Sidewalks

- 4' Sidewalk
- 5' Sidewalk
- Wider than 5' Sidewalk
- Asphalt Path
- No Sidewalk

Sidewalk by Type



POWERED BY
Sandy City GIS **esri**

Miles of Existing Sidewalk

556 Miles

Estimated Value of Existing Sidewalk

\$ 93,161,112

Miles of Missing Sidewalk

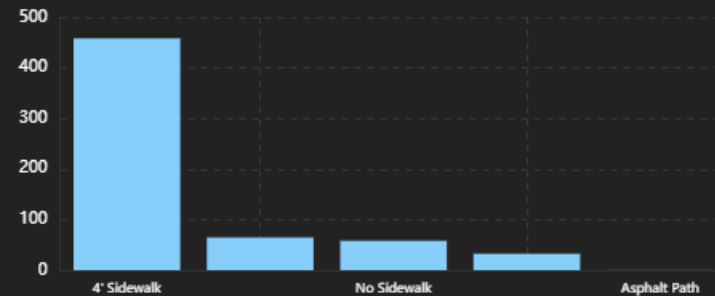
58 Miles

Estimated Cost of Missing Sidewalk

\$ 11,264,590

**This is only the cost of the concrete, it does not include engineering design, land acquisition and additional related concrete work (curb & gutter, ADA ramps, etc.)*

Miles of Sidewalk by Type



Photos

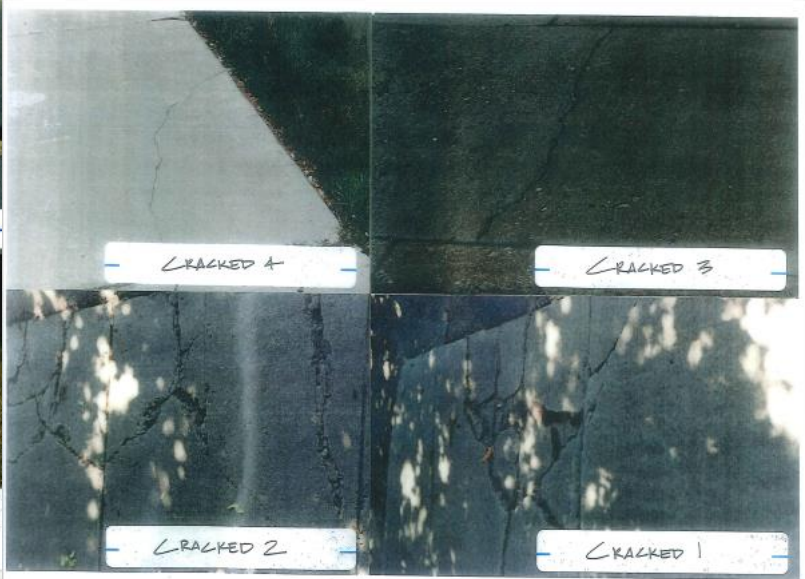


Rating Matrix

4 Categories Severity Ranking

- I. Raised Concrete 1-4
- II. Spalled Concrete 1-4
- III. Sunken Concrete 1-4
- IV. Cracked Concrete 1-4

Address																																							
Trees near SW Tree Tree Plant																																							
ADA Ramp ADA Comp? ADA Cond PIS PIS Cond DIA XDA DIA TYPE DIA COND																																							
SW SW COND CIG CIG COND WW FROSS																																							
Inspection																																							
Feature # of Sections Has Type Severity Notes																																							
<table border="1"> <thead> <tr> <th>FEATURE</th> <th>HAZARD</th> <th>SEVERITY</th> </tr> </thead> <tbody> <tr> <td>COOR</td> <td>TYPE</td> <td>1 - worst</td> </tr> <tr> <td>CG</td> <td>Cracked</td> <td>2</td> </tr> <tr> <td>DA</td> <td>Raised</td> <td>3</td> </tr> <tr> <td>XCA</td> <td>Sunk</td> <td>4 - best</td> </tr> <tr> <td>FROG</td> <td>Spalled</td> <td></td> </tr> <tr> <td>SW4</td> <td></td> <td>DIA TYPE</td> </tr> <tr> <td>SW6</td> <td></td> <td>M - Microbills</td> </tr> <tr> <td>WW</td> <td></td> <td>S - Standard</td> </tr> <tr> <td>ADA</td> <td></td> <td></td> </tr> </tbody> </table>										FEATURE	HAZARD	SEVERITY	COOR	TYPE	1 - worst	CG	Cracked	2	DA	Raised	3	XCA	Sunk	4 - best	FROG	Spalled		SW4		DIA TYPE	SW6		M - Microbills	WW		S - Standard	ADA		
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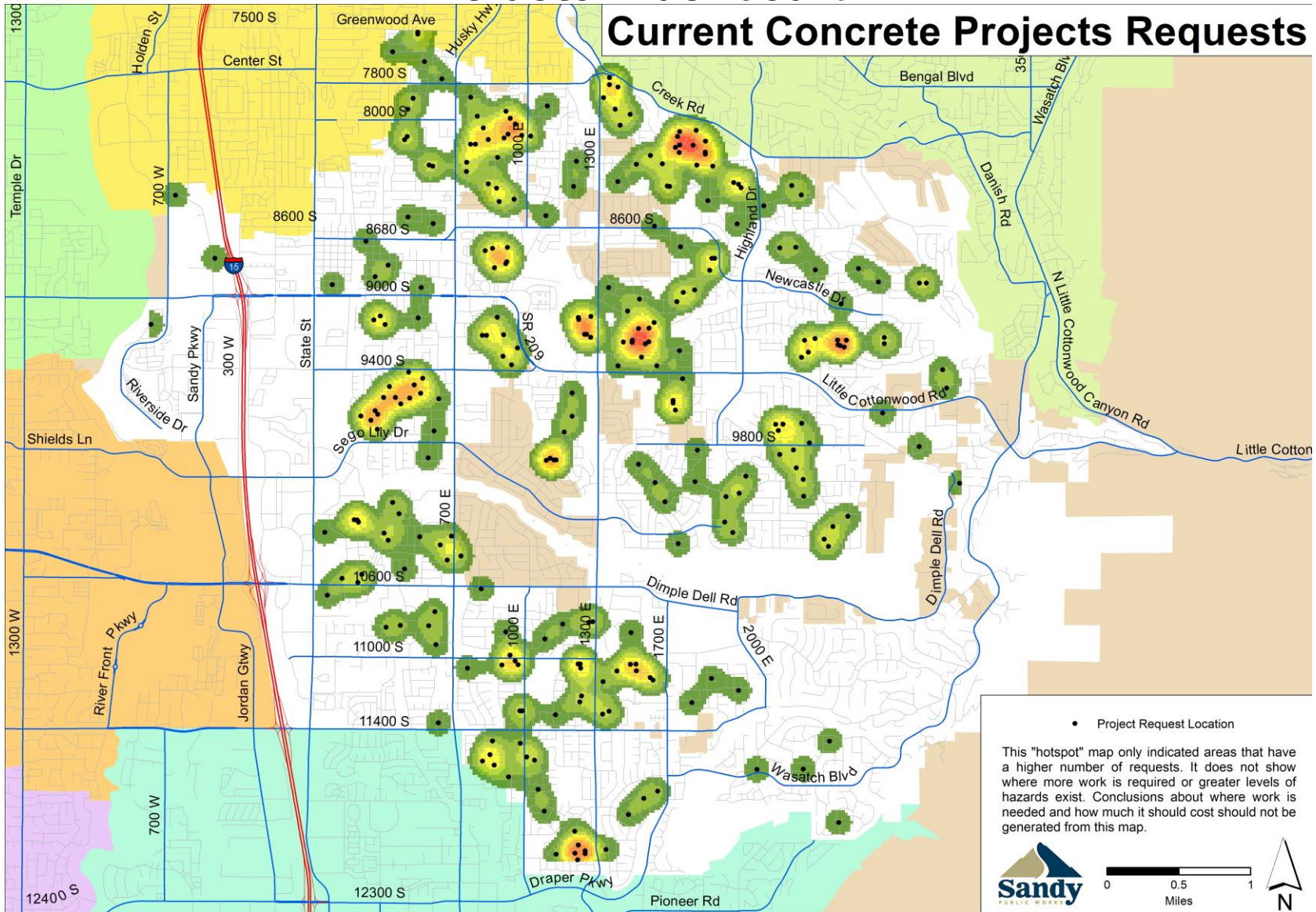
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	Work Order#	Actual Start	Location	Name	Phone	4" Sidewalk	6" Sidewalk	Drive Approach	Curb & Gutter (LF)	Asphaltic Concrete (SF)	Waterway / Frog (SF)	ADA (EA)	Root Cut(s)	Remove Tree(s)	Remove Stump(s)	Sent To	Comments
2	350509	03/11/2014 12:00	789 CEDAR TERRACE DR			8			20	40							
3	350510	04/11/2014 12:00	10302 S 300 E	Kurt Reibson					50	100							Spalding
4	350512	05/20/2014 12:00	9750 S 300 W						20	40							
5	350513	08/4/2014 12:00	8722 TREASURE MOUNTAIN CIR					100	50	100							
6	350515	02/9/2015 12:00	1051 SUNBURN LN	Chris Young	801-715-7530				20	40							
7	350516	02/10/2015 12:00	912 SUNBURN LN			30	16	120	50	110		1			1	Contractor - Concrete	CG @ DA OK to Remove Pan Spalding
8	350519	03/20/2015 12:00	8250 VISCOUNTY DR	Mella Trigg	801-325-9953				30	60							
9	350521	03/20/2015 12:00	1210 HOLLYRIDGE RD						10	20							
10	350520	03/25/2015 12:00	1254 HOLLYRIDGE RD														ARB Rec Removal 1815.50 REM
11	350523	04/14/2015 12:00	1643 WILLOW GREEN DR													50/50	
12	350524	05/14/2015 12:00	351 SANDY PARK CIR			16										50/50	
13	350536	06/18/2015 12:00	7770 - 7770 CANDLELITE LN			50	30	200									3 Homes
14	350537	06/18/2015 12:00	1558 LEXINGTON DR	George Singstad	801-573-4794				30	360		1				Contractor - Concrete	Blames Snowplow
15	350538	06/23/2015 12:00	1401 LONGDALE DR	Kenny	801-455-8883	9	10	225	45	90						Contractor - Concrete	
16	350540	07/8/2015 12:00	8133 MARRION CIR							80			200				Holds Water
17	350542	07/27/2015 12:00	305 E 9070 S				15	60									City Crew
18	350548	08/10/2015 12:00	8705 SALESBURY CT	Stephne	801-858-9470		20									City Crew	
19	350549	08/12/2015 12:00	2801 WILLOW WICK DR	Jamie	801-941-2021			50	1	1						Contractor - Raising	
20	350553	08/31/2015 12:00	8828 SANDY PRWY						10	100							
21	350555	09/22/2015 12:00	201003 E 10000 S	Becky	801-885-7083	12											City Crew
22	350560	10/30/2015 12:00	8239 S 740 E	Lisa	801-343-9913	32							2		1	City Crew	
23	350561	11/10/2015 12:00	11127 S 1330 E	Gary Roach	801-518-8416	50	20	100		40				2		City Crew	Owner Called Trees
24	350562	01/11/2016 12:00	910 SCARLEIN DR	Peter	801-460-9312	24											
25	350563	01/20/2016 12:00	1821 E 9845 S	Zoe	801-808-2091	8	20									50/50	
26	350564	02/18/2016 12:00	8035 S 1400 E	Deanna Johnson	801-382-9883	16	20						1			City Crew	Sent to Chad and Mark
27	350567	03/12/2016 12:00	787 OAK GREEN DR	Margene Raynaud	801-255-5480	80										City Crew	
28	350568	03/12/2016 12:00	748 E 8280 S	City Council						80		1				Contractor - Concrete	Arb Rec Removal
29	350569	03/16/2016 12:00	9137 S 300 E	Claudia	801-271-0795	16					200		1			City Crew	
30	350570	03/16/2016 12:00	10748 S 400 E	Ferry		30	20	100		40						City Crew	Chad
31	350571	03/16/2016 12:00	8297 S 885 E			24							1				
32	350572	03/24/2016 12:00	1440 E 9200 S	Michelle Fabert	801-414-3185	22	24	100									
33	350573	04/6/2016 12:00	402 E 10185 S	Terry Mitchell	801-888-8838	16			20	40				1		City Crew	Sent to Bland
34	350575	04/13/2016 12:00	9893 ELECTRA LN	Aziz Kund	801-880-9540	8							1			City Crew	
35	350576	04/13/2016 12:00	1094 COBALT LN	Brian Walker	801-750-0325	60									3		Send Wasatch
36	350577	04/13/2016 12:00	1154 COBALT LN	Linda Myers	801-209-8985	56			20	40				2			
37	350713	05/4/2016 12:00	8335 S 1300 E														
38	353111	05/4/2016 12:00	9336 S 1300 E	MARYLOU SINCAGAGE	801-881-8259			120	25	50							
39	353122	05/4/2016 12:00	1807 MADRID WY	RYAN	801-391-8835		18	100	30							Contractor - Concrete	
40	353123	05/6/2016 12:00	3485 VAL CIR	KIM FRANKLIN	801-844-5772	10	17	75	20							50/50	\$ 1046.20
41	353124	05/12/2016 12:00	8030 PEREGRINE PLC	CAROLYN LARSEN	801-880-8030	30									2	City Crew	
42	353132	05/19/2016 12:00	9495 S 880 E	GREGG DODD	801-291-4859	117	10		60		200	1				Contractor - Concrete	
43	372899	05/27/2016 12:00	8214 PEACH BLOSSOM DR	FRANCIS	801-289-7211	40			20							City Crew	
44	353152	05/27/2016 12:00	8283 TERRI LYNN DR	TONY	801-521-7520	28	20		20	20			3			City Crew	
45	353151	06/2/2016 12:00	9100 PEACH BLOSSOM DR	KELLY	801-880-0354	36	25	100	6	12			1			50/50	
46	353153	06/14/2016 12:00	8005 MARBELLA CIR	DIANN & BRENT	801-455-4791				20								5 HOMES IN THE CIRCLE
47	353158	06/17/2016 12:00	10550 WEEPING WILLOW DR						40								
48	353180	06/17/2016 12:00	1289 QUAIL CREEK DR	DAN		20	20									Contractor - Concrete	
49	353192	06/19/2016 12:00	1982 VISCOUNTY CV	CHRIS ROBINSON	812-390-0018	57	30	100	93	188					City Crew		
50	353162	06/22/2016 12:00	9106 S HUMMINGBIRD LN	RUSS MADSEN	801-554-5952	45	53		70							50/50	
51	353163	06/22/2016 12:00	9026 HUMMINGBIRD LN	BOONE NEWSON	801-943-4333		28	150	70							Contractor - Concrete	
52	353164	07/5/2016 12:00	8880 S 550 E	EMILY FERGESON	801-215-1900	12										Contractor - Concrete	
53	353165	07/19/2016 12:00	10405 LEBLANC DR	TERRY KENTON	801-870-0000	12	12	65	32	64					3	City Crew	\$ 2080.4

Short List for Hazardous Concrete Replacement

Short List Cluster Dashboard

Current Concrete Projects Requests



Current Funding Sources

Sources

Annual Amount Description

■ Hazardous Concrete Contract	\$400,000.00	City Contractor - sidewalk, DA, curb/gutter
■ Concrete Raising Contract	\$ 30,000.00	City Contractor - sidewalk, DA, curb/gutter
■ Public Works- Concrete Crew	\$ 40,000.00	City Crew - sidewalk, DA, curb/gutter
■ Tree & Stump Removal Contract	\$ 50,000.00	City Contractor – Tree removal for repairs
■ Sidewalk Trip Hazard Contract	\$ 75,000.00	City Contractor – grinding sidewalk trip hazard
■ 50/50 Program	<u>\$ 10,000.00</u>	Cost share with residents for sidewalk repair
TOTAL:	\$ 605,000.00	



**SANDY CITY PARKS DEPARTMENT
COMMUNITY FORESTRY
PARKSTRIP TREE SELECTION**



Autumn Blaze Maple

ACCEPTABLE TREES These trees are recommended (not to be taken as a comprehensive list).

Maples (Acer)

Norway Maple (Platanoides)

- Columnar Fairly narrow growth habit
- Crimson King Purple foliage all year round
- Crimson sentry Purple foliage, narrow and dense habit
- Deborah Faster growing than most Maples, deep bronze-green leaves
- Emerald Queen Widely used Norway cultivar
- Parkway Similar to Emerald Queen, but narrower growth habit
- Royal Red Deeper red than Crimson King
- Hedge Maple (Campestre) Round headed Maple to 30' height
- Red Maple (Rubrum)
 - October Glory Brilliant fall color, round headed to 30' height
 - Red Sunset Beautiful orange to red fall color, crown to 45' height
 - Scarlet Sentinel Narrow growth, yellow-orange fall color
 - Autumn Blaze Larger of Rubrum cultivars, brilliant red-orange fall color

- Horsechestnut (Aesculus)
- Oak (Quercus)
- Red Oak (Quercus Rubra)
- Crimson Spire (Quercus Robur)
- Linden (Tilia)
- Little Leaf Linden (Tilia Cordata)
- Redmond Linden (Tilia Americana)
- Crimean Linden (Tilia Euchlora)
- Common Hackberry (Celtis Occidentalis)
- Japanese Zelkova (Zelkova Serrata)
- Umbrella Tree (Catalpa)
- Modesto Ash (Fraxinus Velutina)
- Goldenrain Tree (Koelreuteria Paniculata)
- Goldenchain Tree (Laburnum Watereri)
- Chinese Elm (Ulmus Parvifolia) Not to be confused with Siberian Elm, a Utah non-native
- Flowering Pear (Pyrus Callerna)

- Aristocrat Larger of Calleryana pears, reddish-purple fall color
- Bradford Most widely used of flowering pears, red fall color
- Capital Narrow habit, reddish-purple fall color



Parkway Maple

Parkstrip Trees

- Crabapple (Malus)
- Radiant (pink flower)
- Prairie Fire (pink flower)
- Snow in Spring (white flower)
- Snowdrift (white flower)

- Hawthorn (Crataegus Lavallei)
- Kwanzan Cherry (Prunus Serrulana)
- Honey Locust (Gleditsia Tricanthos)

- Imperial
- Shademaster
- Skyline
- Sunburst

- Kentucky Coffee Tree (Gymnocladus)
- European Mt. Ash (Sorbus Acuparia)



There are a wide variety of crabapples to choose from, with white to pink flowers and small to large fruits. Some are more susceptible to disease. The Parks Department has had success with the 4 varieties listed.

- Graceful rounded variety to 35'
- Straight, strong trunk, dark green foliage to 45'
- Pyramidal form, larger of honey locust species
- Bright golden foliage on tips of branches to 40'
- Leaves resembles Honeylocust
- Clusters of bright orange berries height



Crimson Cloud English Hawthorn

UNACCEPTABLE TREES FOR PARKSTRIPS:

- Silver Maple (Acer Saccharinum) Large surface roots guaranteed to raise or crack concrete
- London Plane Tree (Platanus) Large surface roots, tree becomes too large for park strip
- Siberian Elm (Ulmus Pumilla) Large surface roots, readily volunteers, messy tree
- Cottonwood (Populus Fremonti) Large surface roots, guaranteed to raise or crack concrete
- Poplar (Populus) Large surface roots, tree becomes too big for park strip
- Russian Olive (Elaeagnaceae Angustifolia) Profuse suckering, messy tree, long sharp thorns
- Willow (Salix) Any variety Weak branch structure, falls apart easily
- Quaking Aspen (Populus Tremloides) Weak branching, prone to many disease & insect problems
- American Elm (Ulmus Americana) Prone to Dutch Elm Disease
- Black Locust (Robinia Pseudoacaia) Large seed pods make for messy tree, poor branch structure
- Box Elder (Acer Negundo) Large surface roots, suckers profusely
- Tree of Heaven (Ailanthus) Large surface roots, suckers profusely
- Idaho Locust (Robinia x Ambigua) Prone to borers & other health problems, suckers profusely
- Birch (Betula) Any variety Prone to borers, large majority of trees die in our climate
- Horse Chestnut (Aesculus) Large Tree, fruits can be a problem
- Flowering Plum (Prunus Cerasifera) Growth habit to wide for park strip, suckers profusely when pruned, hard to keep correctly pruned.



Top Challenges

- Managing a continually aging concrete infrastructure.
- Provide the safest service level possible in the face of rising costs.
- Meeting ADA requirements.

Communication Methods

Reporting Hazardous Concrete

- Call Public Works 801-568-2999
- Email Public Works pw@sandy.Utah.gov
- Call Concrete Coordinator 801-568-2974
- Email Concrete Coordinator
csmith@sandy.utah.gov



**QUESTIONS
COMMENTS?**