

Low Impact Development (LID) for Large Scale Commercial

JC Penney
The Orchard at Slatten Ranch
4951 Slatten Ranch Rd.
Antioch, CA



Site Location and General Info



Pre- and Post-Development Conditions



Opportunities and Constraints

Opportunities

- ⇒ Large area
 - ↳ Multiple possibilities

Constraints

- ⇒ Flat
- ⇒ Parking
 - City zoning ordinance:
5 spaces/1,000 sq ft of pad
= 640
 - Developer = 830 spaces
(~6.5 stalls/1,000 sq ft)

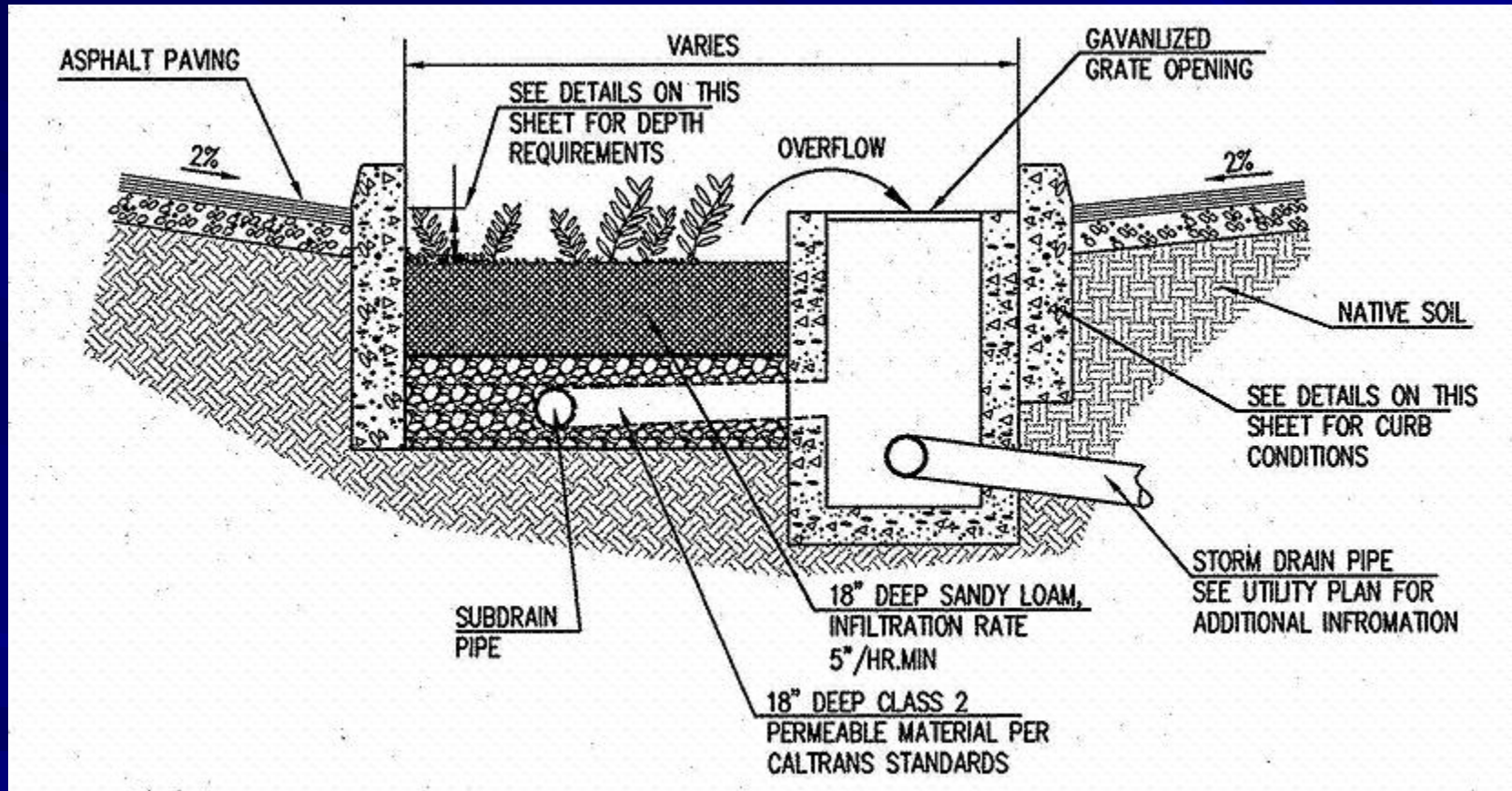


Site Layout

45,376 ft² planned treatment area

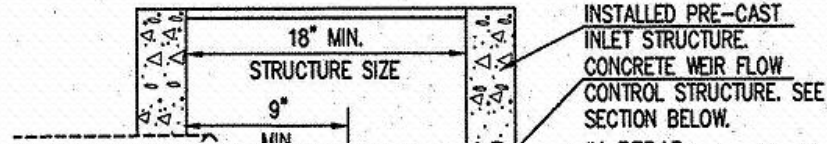


Selected Integrated Management Practices (IMPs)



Infiltration Planters

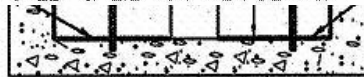
Flow Control



WEIR STRUCTURE SCHEDULE

STRUCTURE NUMBER	#44	#41	#35	#32	#31	#30	#22	#14	#6	#5	#3	#1
INLET INSIDE DIAMETER	18"	24"	18"	24"	24"	30"	24"	18"	30"	30"	30"	30"
WEIR WIDTH: W	0.7"	0.8"	0.6"	0.5"	1.3"	5"	0.8"	0.7"	1.1"	0.9"	1.7"	2.0"
WEIR HEIGHT: H	12"	15"	12"	15"	15"	5"	10"	10"	12"	18"	12"	12"

* SEE DETAIL NO. 35 ON SHEET C-2.2 FOR WEIR DETAILS



WEIR SECTION

* SEE WEIR SCHEDULE ON UTILITY PLAN SHEETS FOR DIMENSIONS & LOCATIONS

NOT TO SCALE

35

WEIR FLOW CONTROL STRUCTURE

Installation



Installation



10/19/2007

Installation



Installation



Installation



11/03/2007

2008



2008



Issues



Issues



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Antioch Annual Rainfall = 12" – 15"

October 13, 2009

Received approximately 3.5" <12 hours



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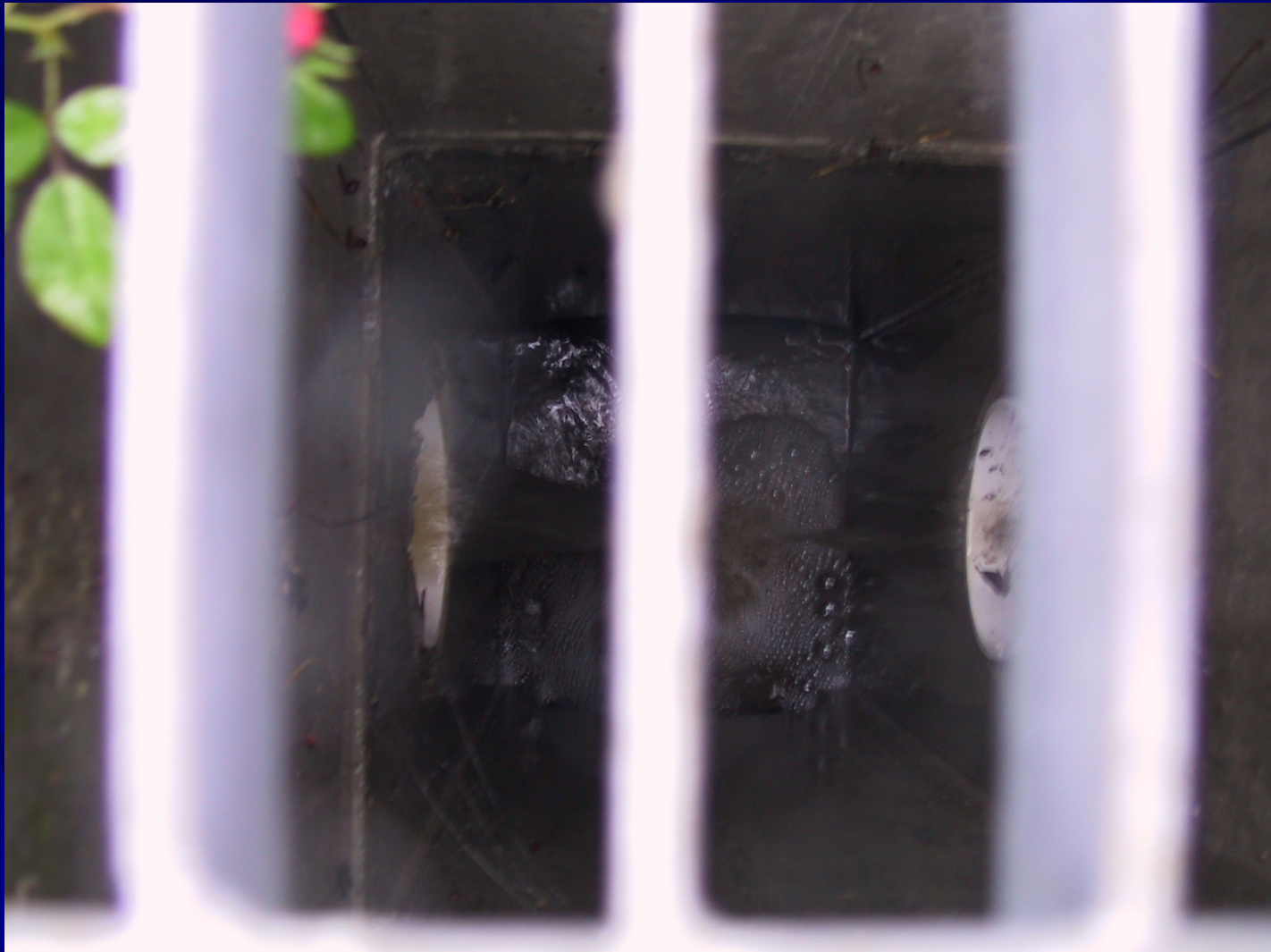
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Conclusions

- Number of parking stalls wanted by developer forced specific IMPs
- Infiltration rate of engineered soil influences plant selection and irrigation requirements
- Fine construction details need constant supervision
- Walkways/bridges over IMPs
- Overall works as intended

Contact Info

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