

CASFM Lunch and Learn



Good Example of Detention Basin with Water Quality

No Name Creek – Tall Grass Basin

Approved by UDFCD Maintenance Eligibility Program

Maintained by UDFCD Design, Construction, and Maintenance Program



CASFM Lunch and Learn



Rich Borchardt

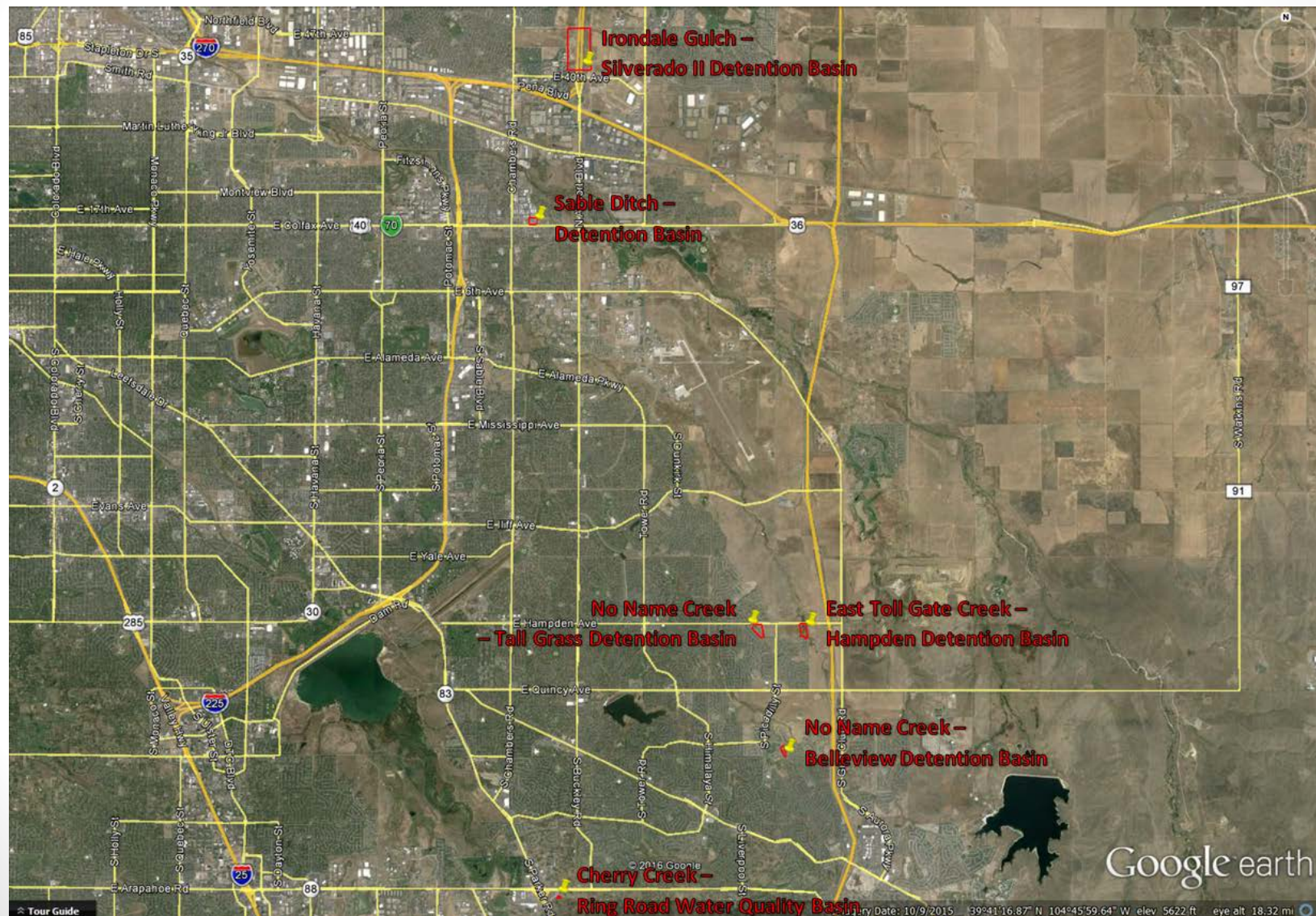
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Background on WQCV and EURV



Lessons Learned and Design Considerations

No Name Creek – Belleview Detention Basin



Lessons Learned and Design Considerations

No Name Creek – Belleview Detention Basin



Lessons Learned and Design Considerations

No Name Creek – Belleview Detention Basin





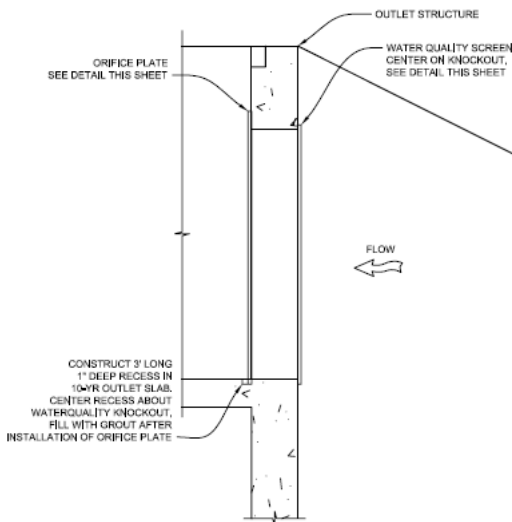
Lessons Learned and Design Considerations

No Name Creek – Belleview Detention Basin



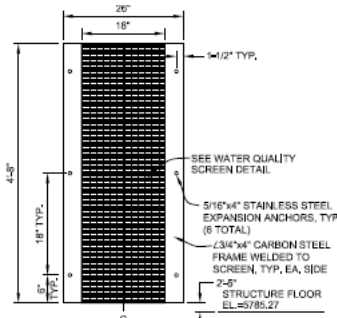
Lessons Learned and Design Considerations

No Name Creek – Bellevue Detention Basin



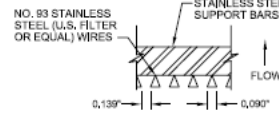
WATER QUALITY OUTLET DETAIL

SCALE: 1" = 1'-0"



WATER QUALITY SCREEN

SCALE: 1" = 1'-0"

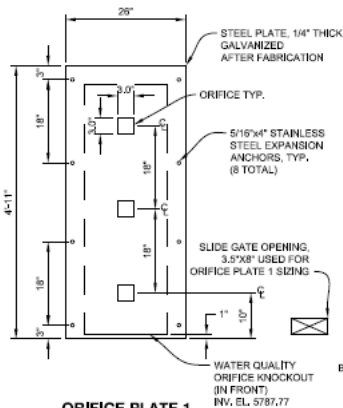


WATER QUALITY SCREEN DETAIL

SEE SCREEN SPEC (THIS SHEET) N.T.S.

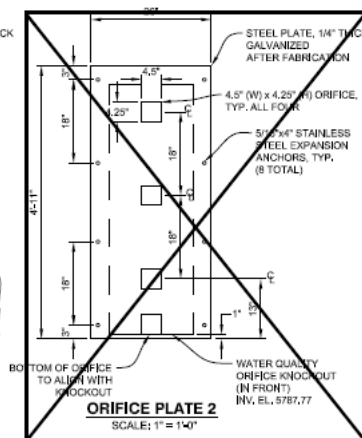
SCREEN SPEC

JOHNSON VEE WIRE (OR EQUAL) STAINLESS STEEL SCREEN WITH NO. 93 VEE WIRE, 0.130" OPENINGS BETWEEN WIRES, 1/2" DIA. x 6.50" SUPPORT RODS 1" ON-CENTER SPACING, TOTAL RACK THICKNESS OF 0.655" AND 2 3/4" x 4" WELDED CARBON STEEL FRAME (SIDES ONLY).



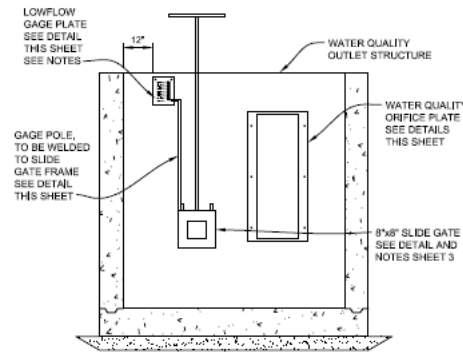
ORIFICE PLATE 1

SCALE: 1" = 1'-0"



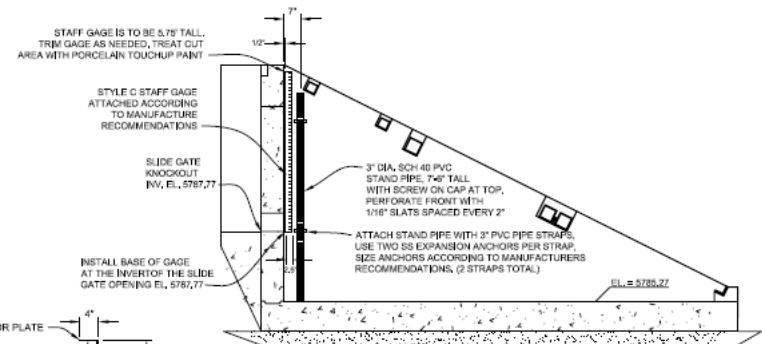
ORIFICE PLATE 2

SCALE: 1" = 1'-0"



LOW FLOW STAFF GAGE

SCALE: 1/4" = 1'

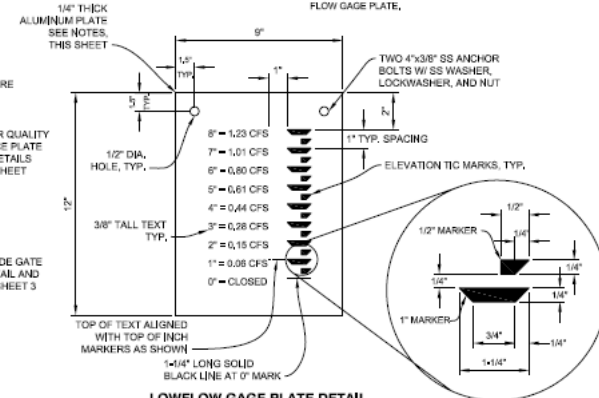


STAFF GAGE & STAND PIPE DETAIL

SCALE: 1/4" = 1'

NOTES

1. THE LOW FLOW GAGE PLATE SHALL BE MADE OF 1/4" THICK ALUMINUM ALLOY 6061, THE PLATE SHALL HAVE A BASE COAT OF WHITE, ALL LETTERING, INCH MARKERS, AND HALF-INCH MARKERS SHALL BE BLACK. A CLEAR COAT SHALL BE APPLIED TO THE PLATE AFTER ALL LETTERING AND MARKERS HAVE BEEN INSTALLED.
2. THE LOW FLOW GAGE PLATE SHALL BE INSTALLED SUCH THAT WHEN THE 8"x8" SLIDE GATE IS OPEN ONE INCH THE TOP OF THE 1/4" GAGE POLE INDICATOR PLATE ALIGNS WITH THE TOP OF THE ONE-INCH MARKER ON THE LOW FLOW GAGE PLATE.



LOWFLOW GAGE PLATE DETAIL

SCALE: 4" = 1'

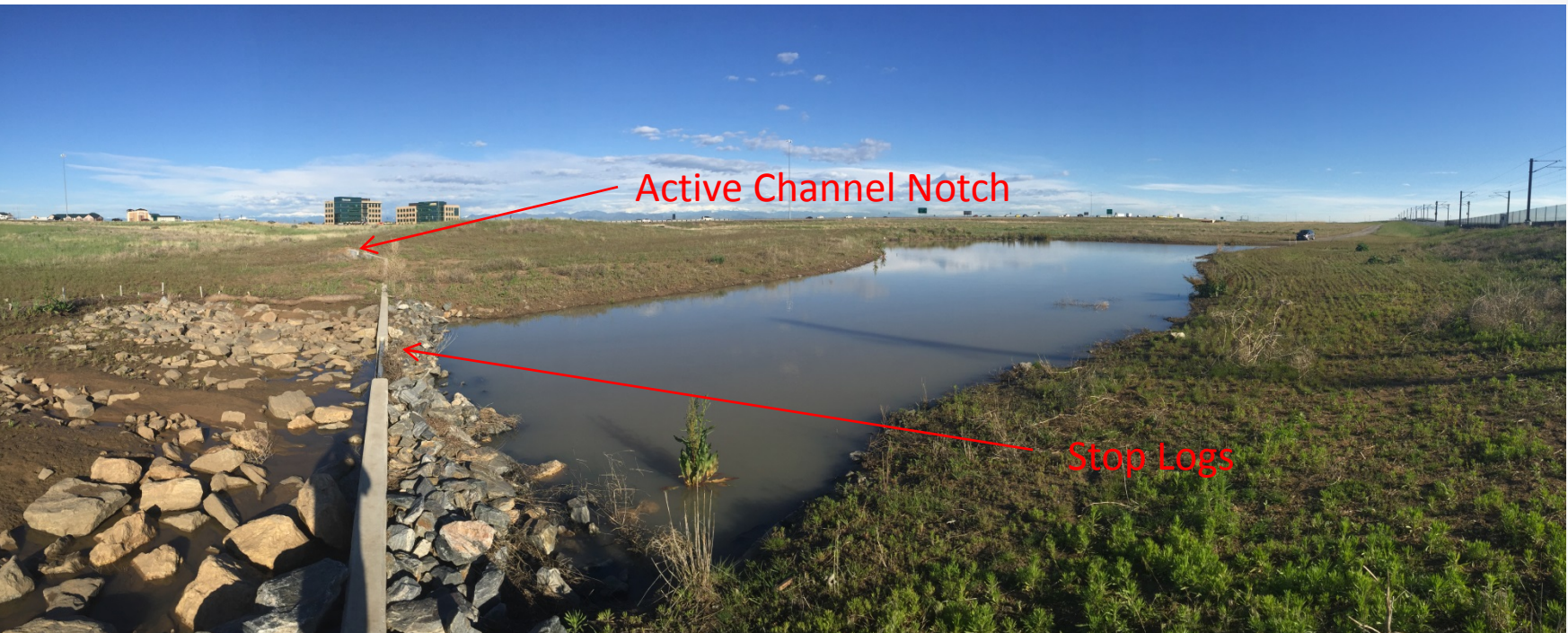
Lessons Learned and Design Considerations

Irondale Gulch – Silverado II Detention Basin



Lessons Learned and Design Considerations

Irondale Gulch – Silverado II Detention Basin





Lessons Learned and Design Considerations

Irondale Gulch – Silverado II Detention Basin





Lessons Learned and Design Considerations

Irondale Gulch – Silverado II Detention Basin





Lessons Learned and Design Considerations

Sable Ditch – Sable Detention Basin





Lessons Learned and Design Considerations

Sable Ditch – Sable Detention Basin



Lessons Learned and Design Considerations

Sable Ditch – Sable Detention Basin





Lessons Learned and Design Considerations

East Toll Gate Creek – Hampden Avenue Detention Basin





Lessons Learned and Design Considerations

East Toll Gate Creek – Hampden Avenue Detention Basin





Lessons Learned and Design Considerations

East Toll Gate Creek – Hampden Avenue Detention Basin





Lessons Learned and Design Considerations

Cherry Creek – Ring Road Detention Basin





Lessons Learned and Design Considerations

Cherry Creek – Ring Road Detention Basin



Lessons Learned and Design Considerations

Cherry Creek – Ring Road Detention Basin





Lessons Learned and Design Considerations

Cherry Creek – Ring Road Detention Basin





Lessons Learned and Design Considerations

No Name Creek – Tall Grass Basin



Lessons Learned and Design Considerations

Realistic Maintenance Plan for Water Quality Basins

1. Plan on routine debris removal and outlet trash rack and screen cleaning minimum 5 times per year.
2. Check outlet is functioning after each storm add additional cleanings as-needed.
3. Forebay is cleaned anywhere between 2 times per year to once every 5 years.
4. Micropool is cleaned out every 5-10 years.
5. Whole pond sediment removal every 15-30 years

Lessons Learned and Design Considerations

Rich and Jeff's Top Six List

1. Don't try to fit 10 pounds of potatoes into a 5 pound bag.
2. Don't mow detention basins with water quality.
3. How does the design consider maintenance?
4. Debris and pond clean out is cheap, don't skimp on this maintenance.
5. Observation and monitoring are urgent.
6. To err is human, to learn and adjust is critical.

Agenda

1. Introduction(Rich)
2. Lessons Learned and Design Considerations (Rich and Jeff)
3. Realistic Maintenance Plan (Rich)
4. Top things to consider for Maintenance and Design.