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PRESENTED BY:

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CASE STUDY: INNOVATIVE USE OF A VEGETATED FILTER STRIP (BMP 6.4.9)




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October 16, 2019

SUMMARY

- Design Challenges & Solution
- The Upstream Treatment Train
- Hydraulic Routing
- Structure Detailing
- Conclusions and Applications

THE CHALLENGE

- Karst Geology

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- **Existing Features for Preservation**

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- Karst Geology
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- **Massive Single Development Footprint**

THE CHALLENGE

- Karst Geology
- Existing Features for Preservation
- Massive Development Footprint
- **High Quality Watershed**

THE SOLUTION

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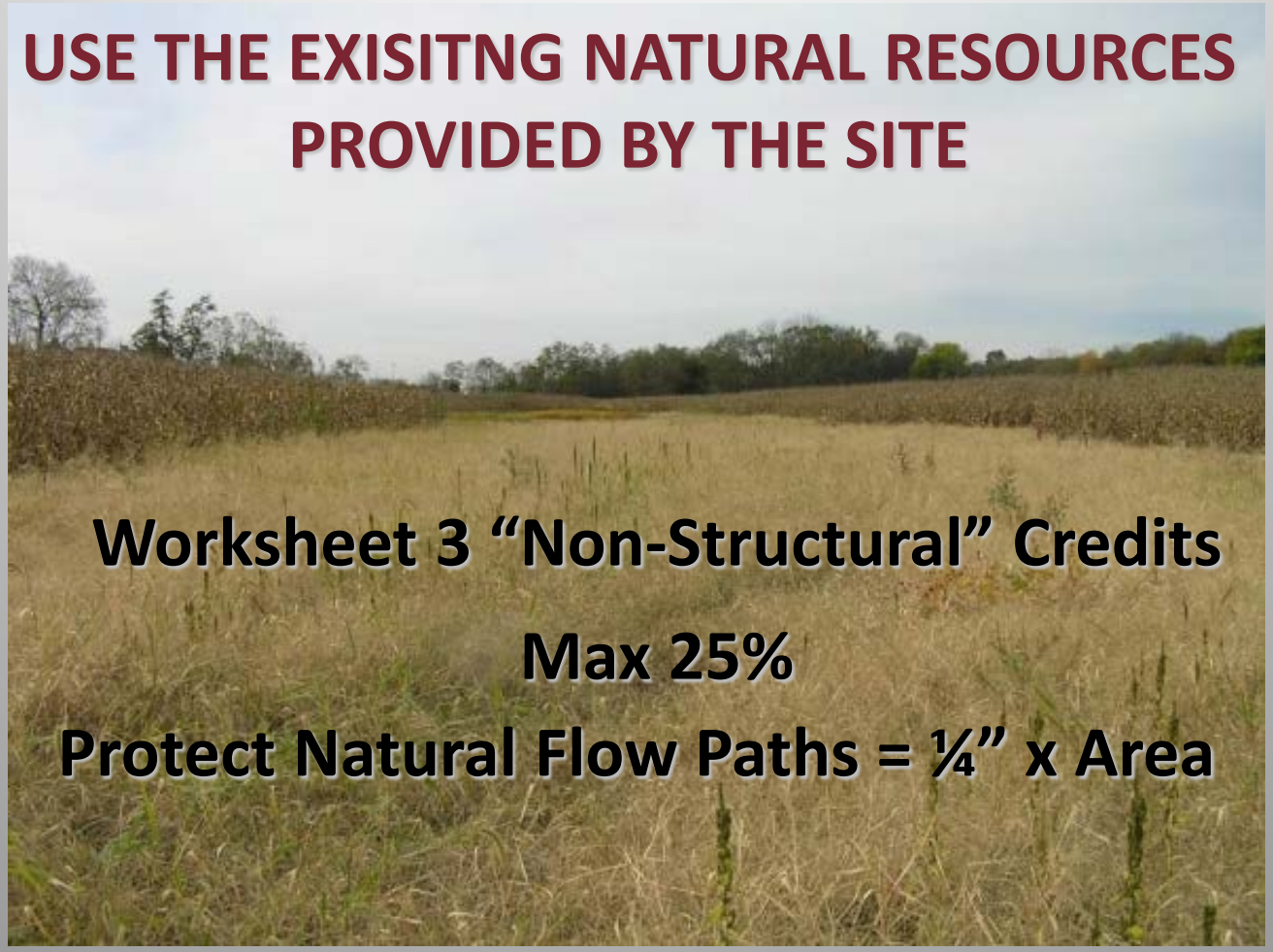
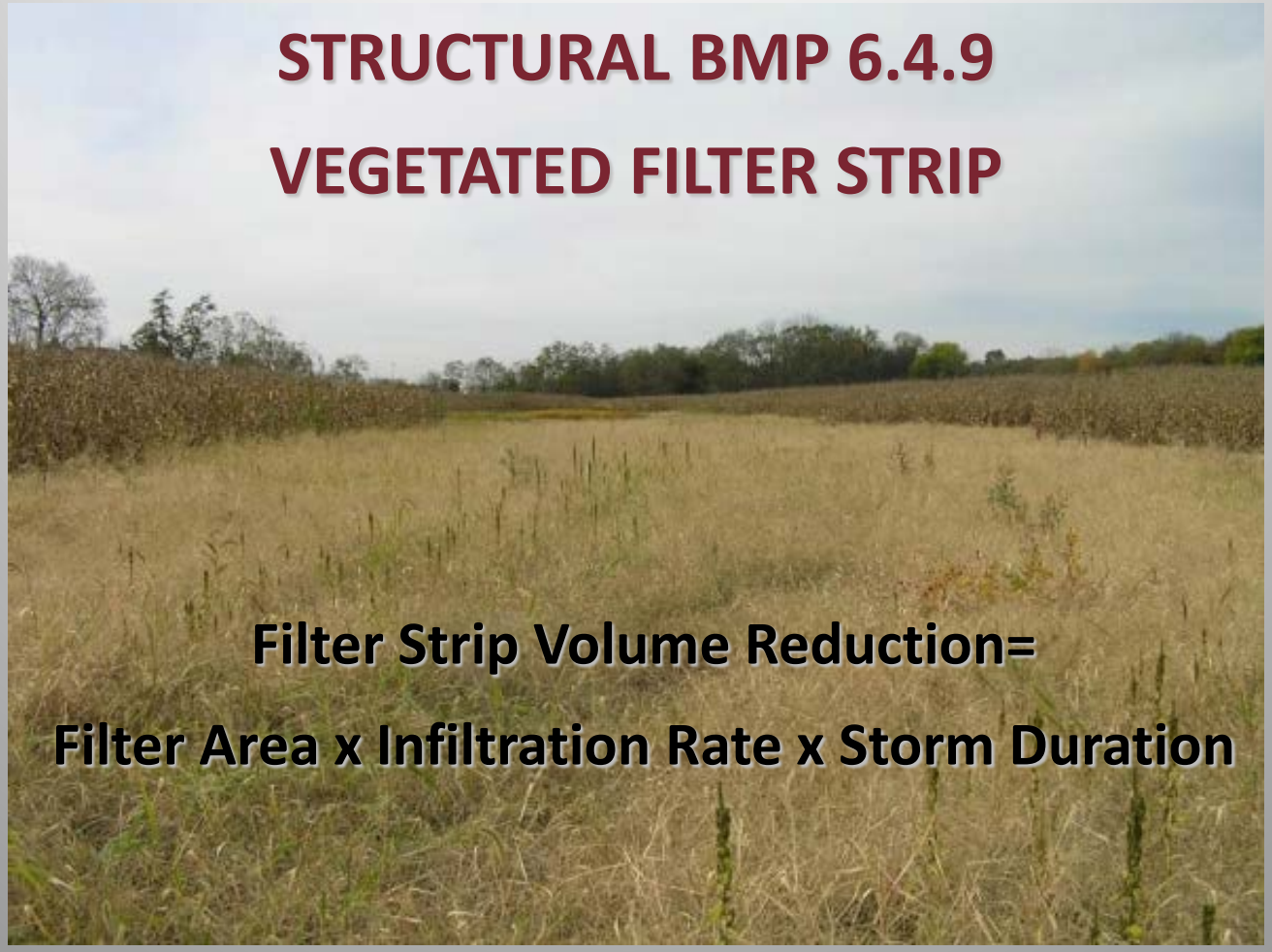
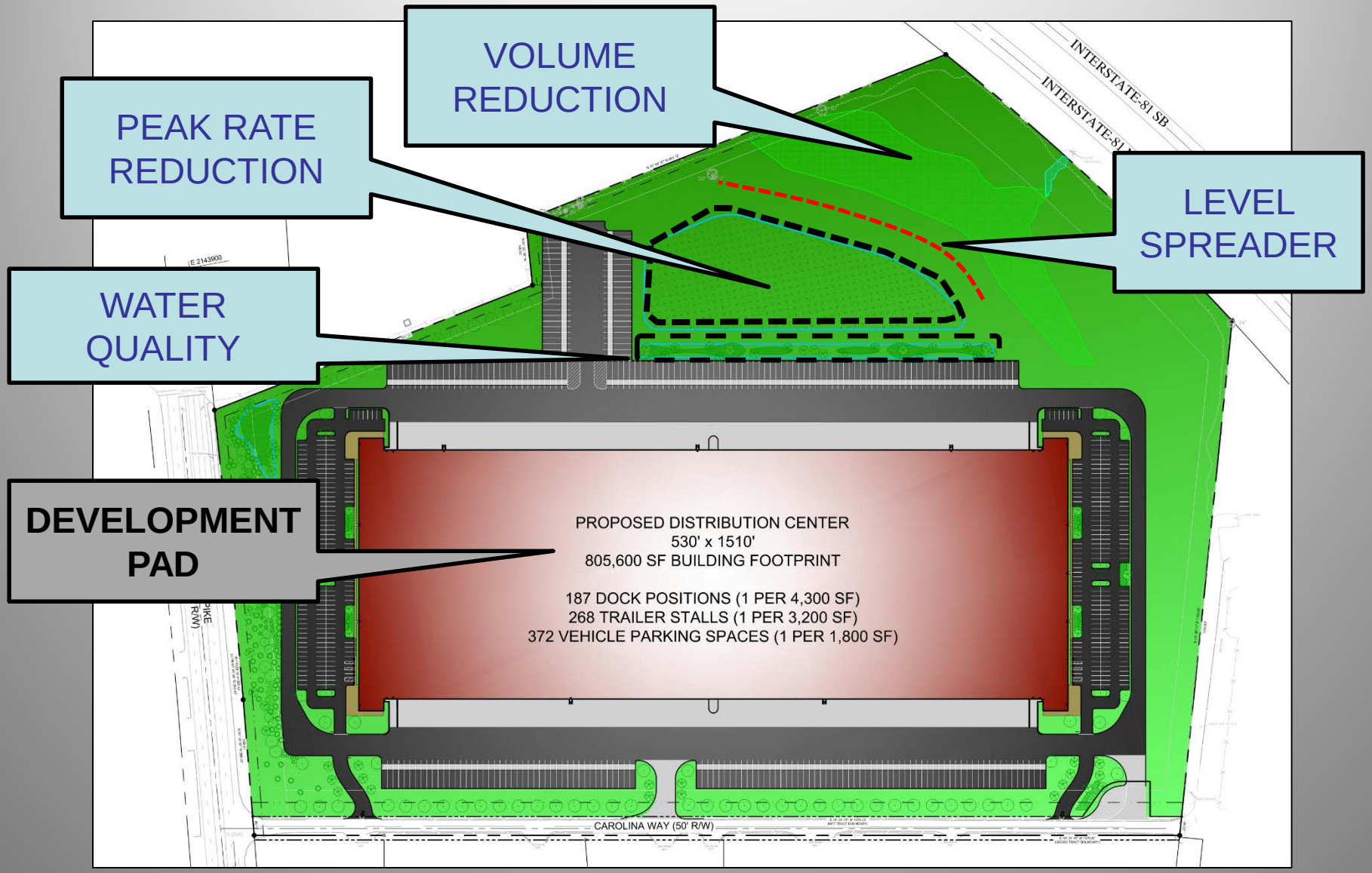


PRESERVATION OF NATURAL RESOURCES IS MUCH MORE THAN JUST “SELF CREDITING”

THE SOLUTION



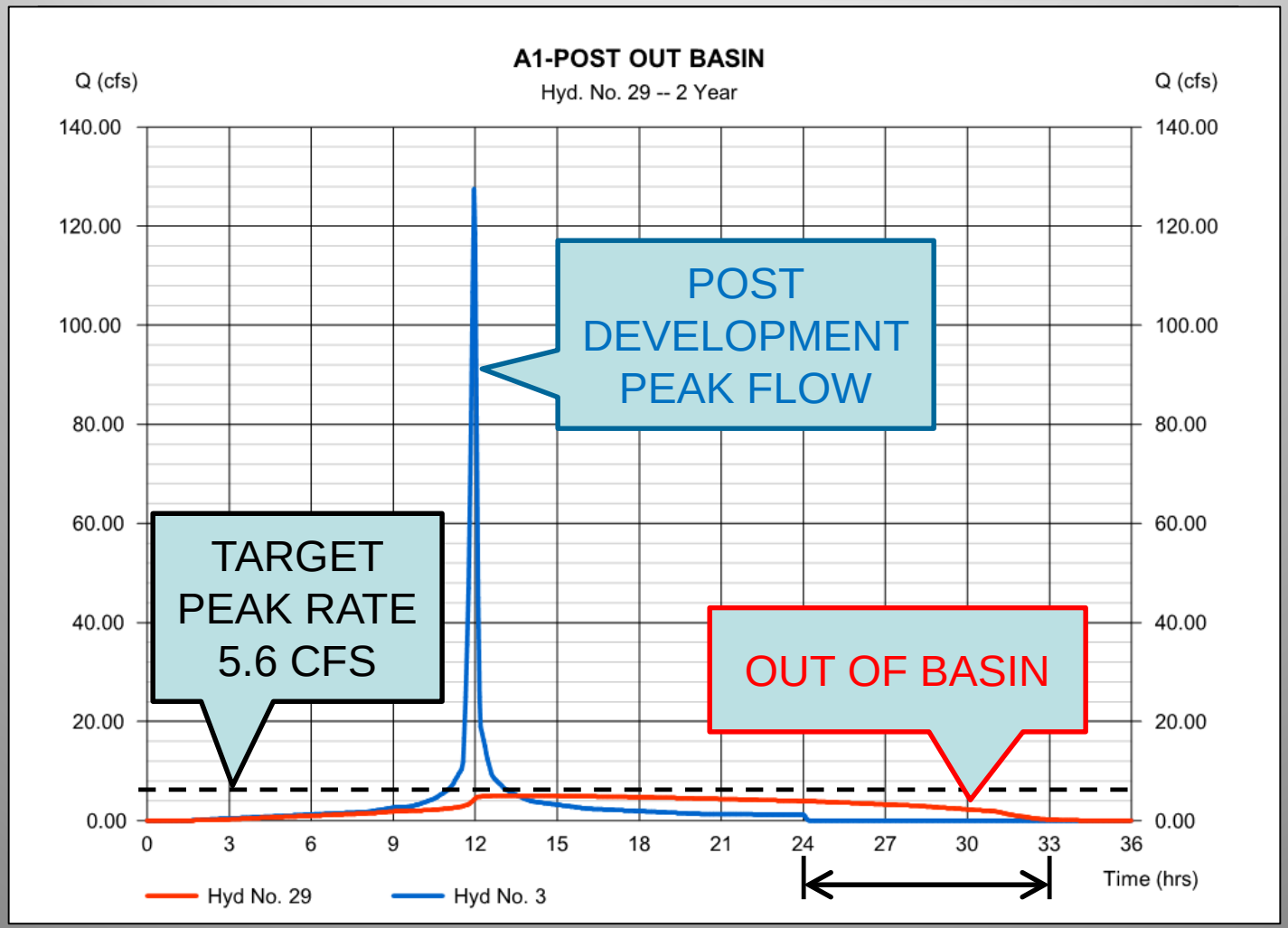
THE SOLUTION
OVERALL SITE PLAN



ROUTING & VOLUME CREDIT

Filter Strip Volume Reduction=

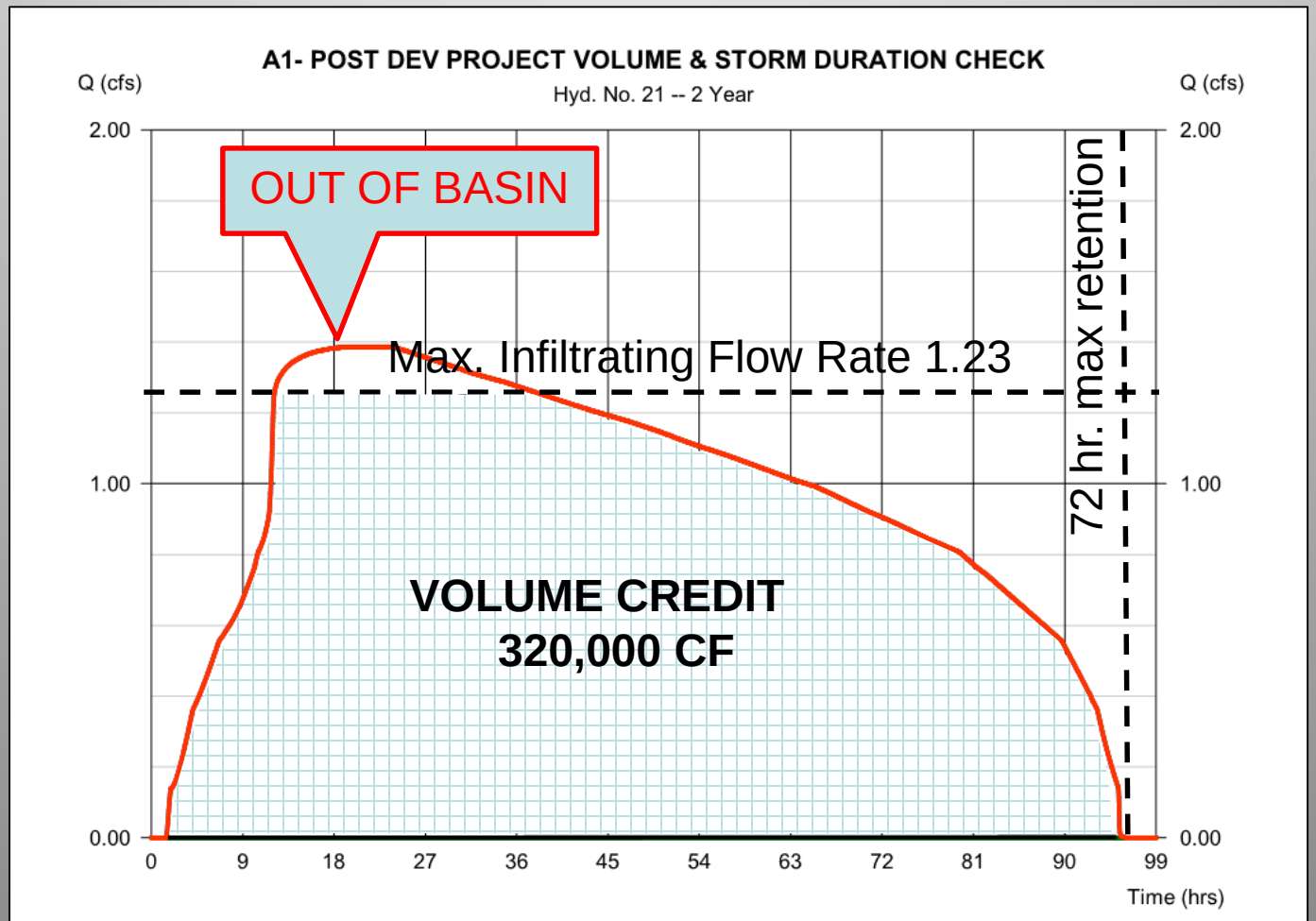
Filter Area x Infiltration Rate x <u>Storm Duration</u>



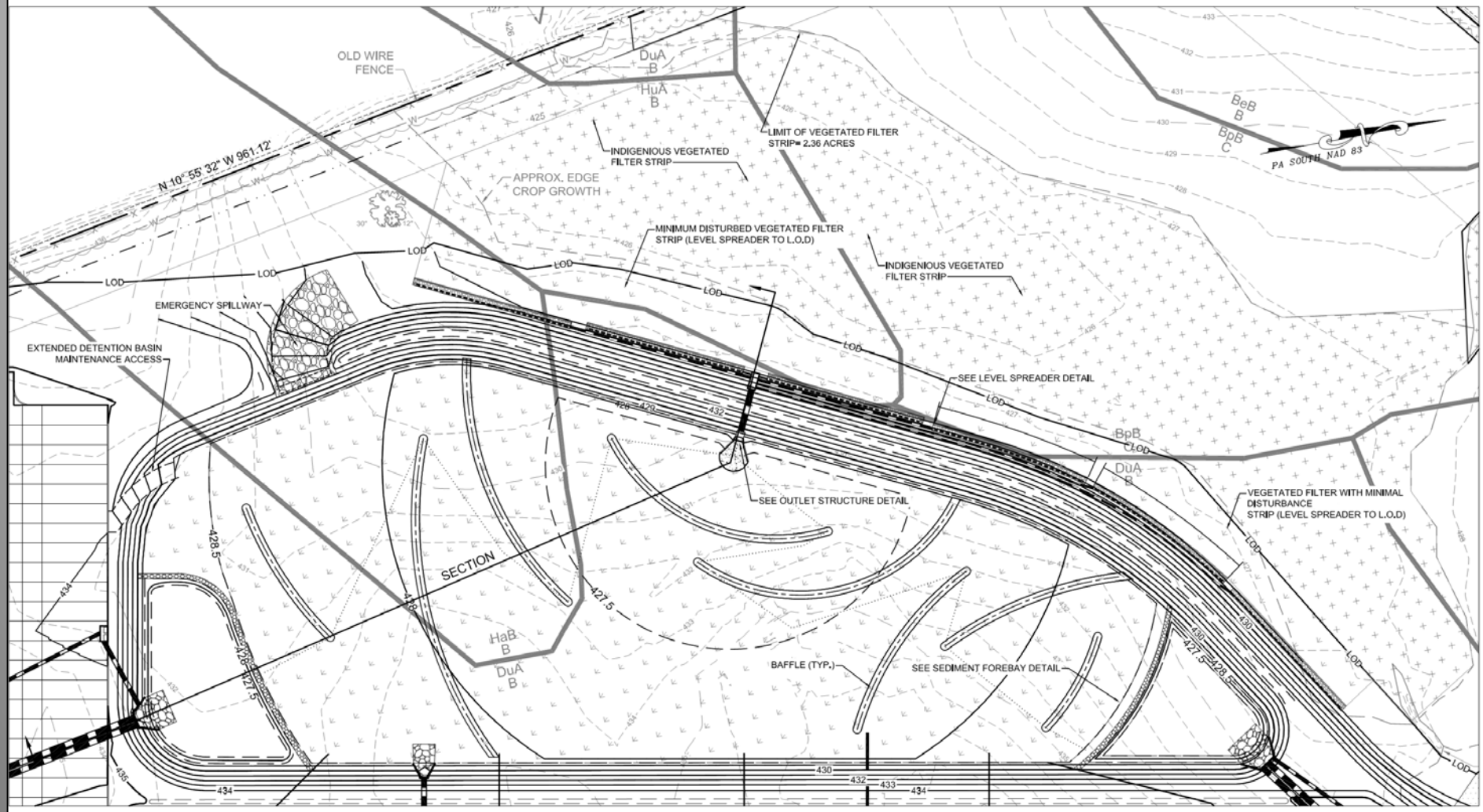
ROUTING & VOLUME CREDIT

Filter Area X Infiltration Rate = Maximum Infiltrating Flow Rate

Ft.^{2} X Ft. / Sec. = Ft.^{3} / Sec.

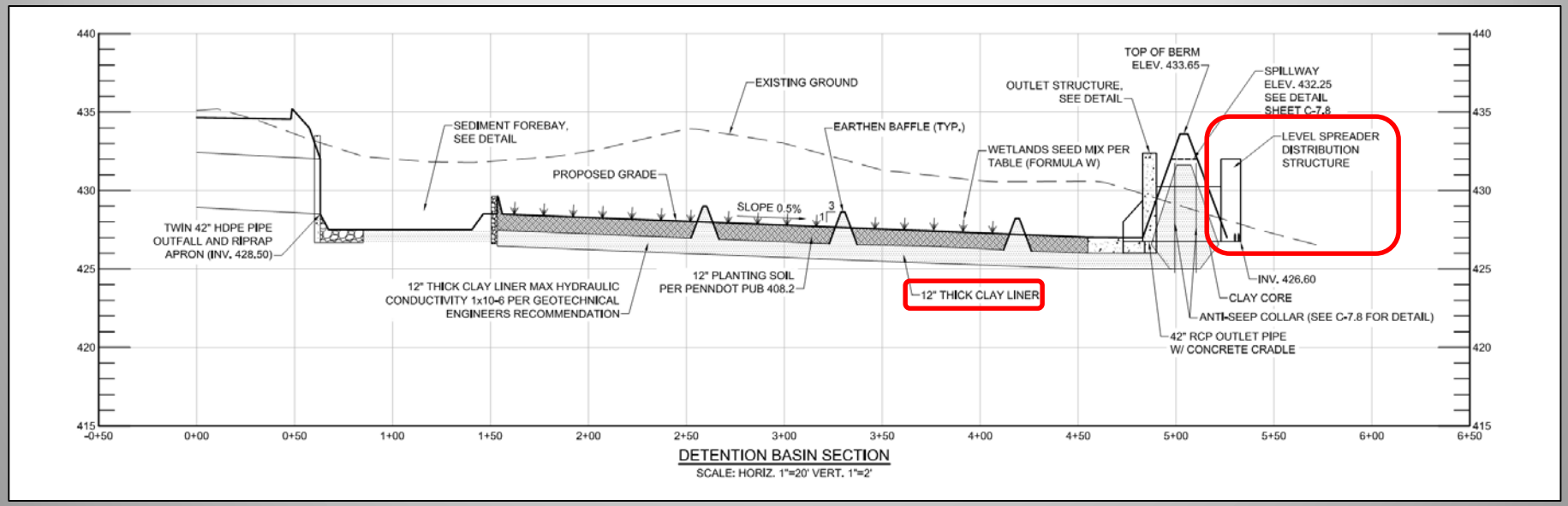


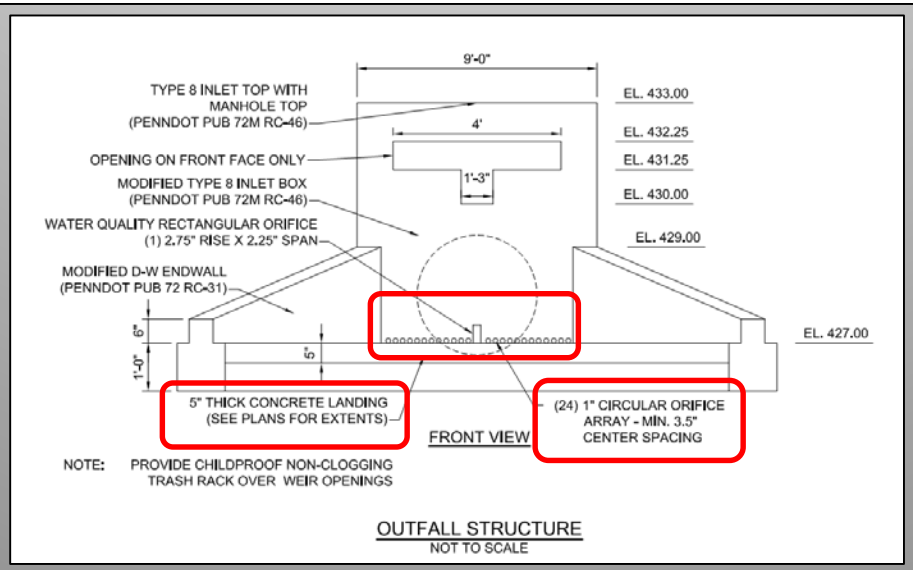
STRUCTURE DETAILING



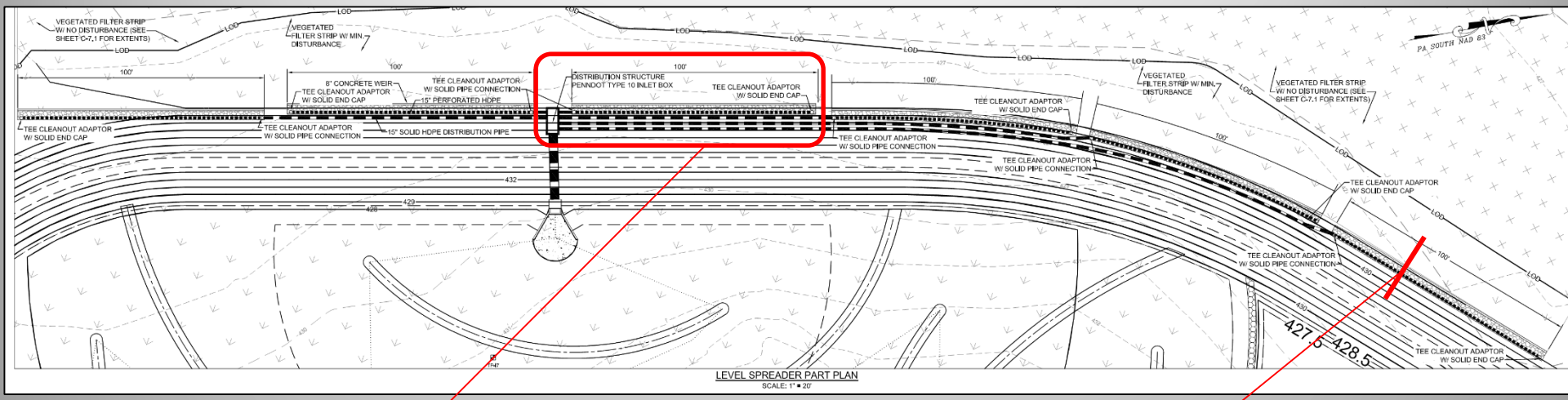
EXTENDED DETENTION BASIN
SCALE: 1" = 40'

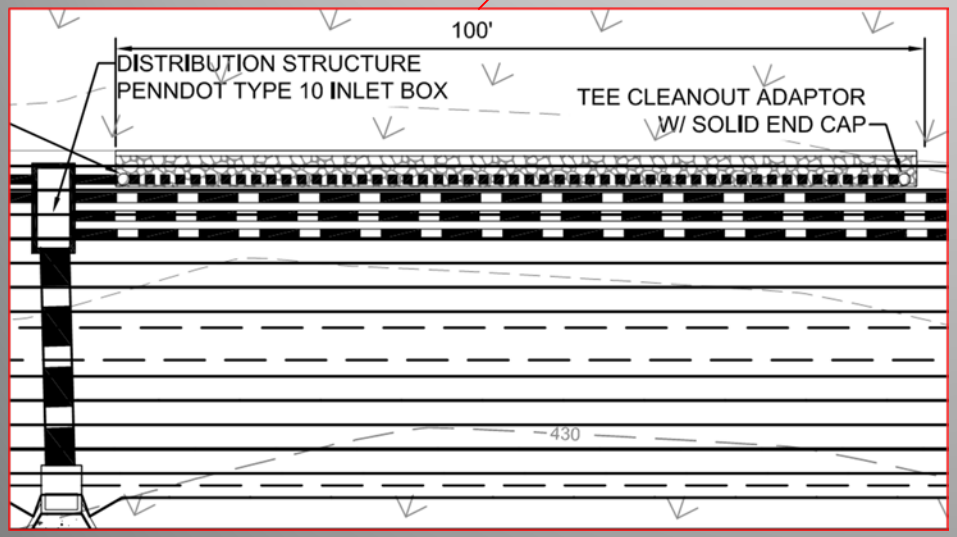
STRUCTURE DETAILING
EXTENDED DETENTION BASIN

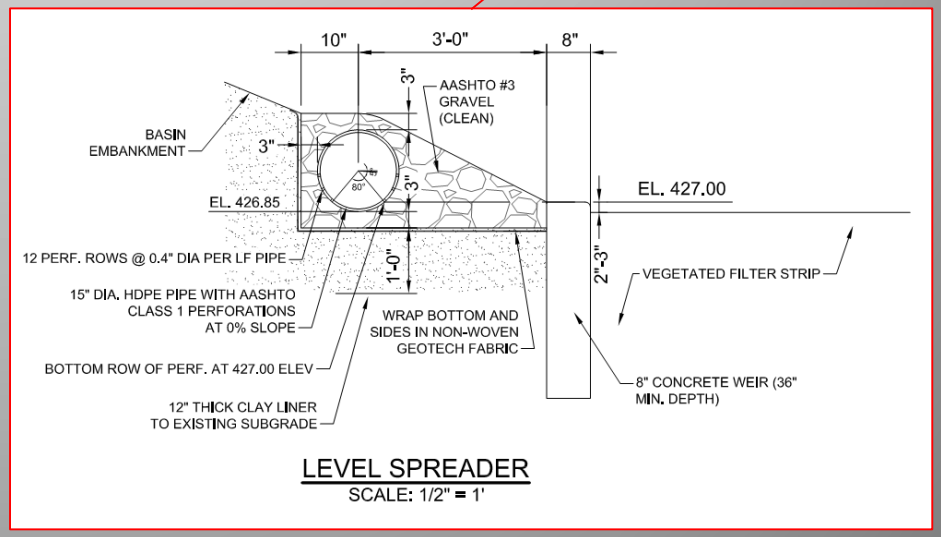




STRUCTURE DETAILING
LEVEL SPREADER







STRUCTURE DETAILING
VEGETATED FILTER STRIP

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No Construction Details:

Preserved Indigenous Meadow

- Specifications for repair and maintenance including Topsoil and Seeding
- Filter Area contained in a delineated Stormwater Easement
- Regular Mowing of the 1st 5’ beyond the end of the Level Spreader

CONCLUSIONS & APPLICATIONS

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Future Applications:

- Infiltration in Karst
- Preserved Low Flow Paths
- Any Site with Concern for Maintenance

QUESTIONS?

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Special Thanks to:

- Owner/Client – Liberty Property Trust
- Contractor – Penntex Construction