

Bohn Park 50 % Design and Financing

Workshop 5:30 pm – 6:45

SHIRLEY F. JOHNSON COUCIL CHAMBERS
LYONS TOWN HALL, 432 5TH AVENUE, LYONS, COLORADO

I. 5:30 P.M. Workshop

I.1. Workshop - Bohn Park 50% Design Cover Memo

Documents:

[COVER MEMO - BOHN PARK DESIGN-WORKSHOP.PDF](#)

I.2. Workshop - Bohn Park Design BOT Presentation

Documents:

[BOHN PARK DESIGN-BOT PRESENTATION.PDF](#)

“The Town of Lyons will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities. Persons needing accommodations or special assistance should contact the Town at hr@townoflyons.com as soon as possible, but no later than 72 hours before the scheduled event.”

Meeting Date: August 1, 2016

Subject: Bohn Park Final Design and Bid Process, 50% Design Presentation and Workshop

BOT August 1, 2016 Packet Memorandum

Following and attached are narratives, design drawings, notes and backup documents to track design decisions that have been made to date. All design decisions have been documented and included in weekly meeting notes. Meeting notes are on the projects website and available for download and review via the below hyperlinks.

The Design Development (DD) plans/submittal on June 10 was a culmination of 9 weeks of design efforts including weekly design meetings with weekly updates, 1 public meeting to review skate park goals, and close collaboration amongst the design team and Town of Lyons to meet an aggressive schedule and to have critical decisions made in a timely manner. All design decisions, weekly design meeting notes, reports and project information was continually uploaded to the project website for public review and comment.

Since the submittal of Design Development plans on June 10 we have had 1 additional public meeting (total of 2), and have also met with the Parks and Recreation Board (with liaisons from the Ecology Board/Fay Marshall and the Sustainable Futures Commission/Jeff Christy Present, Colorado Parks and Wildlife (CPW), St. Vrain Creek Coalition (SVCC), and the Lyons Watershed Board. DD plans have also been submitted to the Ecology Board for review and comment at their regular meeting in June. Please find all Board and commission comments listed under item number 13 in the project binder (<http://bit.ly/2a5vCOd>). Plans have been updated to reflect all comments to date and are progressing based on anticipated schedule and bid requirements for fall 2016 bidding as noted in the original schedule.(located in the Project Binder Section 13)

All deliverables to date are included in a project binder that will be made available to the Mayor and all Trustees at Town Hall and as a downloadable pdf. The project binder is quite extensive and provides full detail of all comments and decisions made to date. The project binder includes all notes, presentations, concept imagery, budgets and plan submittals as noted at the end of this memo in further detail. Hyperlinks have been included throughout this memorandum for quick review and can be found in the project binder section 3.

Project Binder Section 3.

Programming Workshop Notes

http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-programming-workshop-MM_20160414.pdf

April 21, 2016 weekly design meeting

<http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-BOT-20160421MM.pdf>

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April 28, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-BOT-20160428MM.pdf>

May 3, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-20160503MM.pdf>

May 12, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-20160512MM.pdf>

Project Binder Section 5

May 13, 2016 - Schematic Design Report (30% designs)

http://www.lyonsparksm.com/wp-content/uploads/2015/07/Bohn-Park-Design-narrative_ALL-FINAL.pdf

May 18, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-20160518MM.pdf>

May 26, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-20160526MM.pdf>

June 9, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-20160609MM.pdf>

Project Binder Section 6

June 10, 2016 – Design Development Report (50% designs)

http://www.lyonsparksm.com/wp-content/uploads/2015/07/Bohn-Park_Design-Development-Report_2016-06-10.pdf

June 16, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-20160616MM.pdf>

June 23, 2016 weekly design meeting

<http://www.lyonsparksm.com/wp-content/uploads/2015/07/LBP-20160623MM-DD.pdf>

July 7 no weekly meeting held

July 14 no weekly meeting held

The website will remain active throughout the entire design and construction process for the Town Board of Trustees, various boards and commissions and the general public to review documents, progress and to provide opportunity for comment and feedback. The website is www.lyonsparksm.com

Project Background

The following narrative has been provided for reference and has been published in the RFP for Bohn Park Final Designs and is a public document.

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Lyons residents have identified the immediate rebuilding of Bohn Park, a river park located on the south side of Lyons, as a vital priority for parks recovery to be completed beginning in 2016. B o h n Park provides for major economic impacts for the Lyons community; it provides significant local and visitor recreational opportunities; and it provides ample opportunities to mitigate future flooding and to restore the river corridor's habitat. The selection of this park as the next priority in Lyons parks recovery efforts is supported heavily by both the Town government and the public at large.

Bohn Park is Lyons' largest and most popular park. It is not uncommon to see the park filled throughout the day with anywhere from 200 to 400 residents and visitors on any given weekend during the summer months. Consisting of over 50 acres Bohn Park is home to most of Lyons major athletic facilities. Pre-flood, there were two baseball/softball fields, batting cage, playground, multi-use soccer field, concession stand, whitewater features, picnic areas, shelters, restrooms, Lyons Dirt Jump Bike Skills Park, Bohn Bark Dog Park, Lyons Community Garden, and a multi-use sport court.

The Town of Lyons recently completed the Lyons Parks Flood Recovery Planning Process (www.lyonsparksmmp.com) which included a series of public meetings that assisted in the development of several concept plans for all flood recovery areas related to parks. This process took several months to complete and involved soliciting input and feedback of the public, town staff, Town of Lyons board/commissions and the design team. The Bohn Park Flood Recovery Plan Preferred Alternate map is included with this document along with the Lyons St. Vrain Corridor Trail 6f boundary map.

Project Goals

The Bohn Park Flood Recovery Final Design and Bid Project will address the following fundamental goals outlined in the Lyons Recovery Action Plan and Lyons Parks Flood Recovery Planning Process for ensuring that Bohn Park continues to meet local and regional demands:

- 1) Reconstruction of facilities in Bohn Park to address the immediate recreational needs of Lyons, especially active/athletic uses. We will create a place to gather and play as a community again.
- 2) Creation of an attraction that will draw visitors to our Town. This is essential to ensure that the Town will remain economically viable and maintain its reputation and brand as a destination for healthy, active, outdoor lifestyles.
- 3) Reestablish trail connectivity, both locally and regionally, include loop trails.
- 4) Restore and augment river access and river habitat.
- 5) Restore/Replace picnic opportunities, including shelters and increase size.
- 6) Re-establish natural areas and consider wetlands.
- 7) Installation of public art along trails.

Anticipated Schedule for Design and Construction

The following timelines have been anticipated in the scope and communicated to the public during the planning process thus far along with the caveat that all flood related project schedules may be subject to change based on a multitude of variables including funding, project prioritization, permitting, planning/design, bidding, etc. Final construction design and bid process began in April 2016 and will extend through the summer and early fall 2016. The Town intends to put the project out to bid for construction in late summer/ early fall 2016 in order to award a contract for construction to begin fall/ winter 2016 in order to have the park open to the public in the summer/fall of 2017.

Design Development Goals

Design Development (DD) plans have been submitted on June 10, 2016 and a work session was held on July 18, 2016 with the BOT to review designs, comments to date and to solicit feedback. The design development set is considered an approximate 50% design set that outlines preliminary site layout, preliminary grading, preliminary landscape designs and preliminary materials, equipment, and other site features, preliminary drainage analysis, preliminary hydraulic analysis and floodplain modeling, preliminary ecological restoration plans, and preliminary architecture designs including mechanical/electrical/plumbing, MEP and structural.

Design development (DD) services used the initial design documents from the schematic design phase and have taken them one step further into more detailed design drawings. Some decisions are still being reviewed with Town staff and further study, public input and review needs to be completed before providing more detail. Skate park schematic designs are in progress and a second public meeting was held June 21, 2016.

Hydraulic modeling/ Instream features/ Fish Habitat

Continuing with the defined project objectives to improve flood resiliency, fish habitat, ecological restoration and park user experience; a design solution is developing to achieve and balance these goals. Following the workshop with the Board of Trustees on the 18th of July, along with feedback provided by the Parks and Recreation Commission, the St Vrain Creek Coalition, the Lyons Watershed Board and Colorado Parks and Wildlife; the design has been refined to accommodate the feedback given.

One and two dimensional modeling results indicate that the flood resiliency goals can be achieved by constructing **three** instead of **five** double step cross vanes. As detailed in the basis of design report, hardened riffles will be installed in place of two of the original cross vane structures.

Through working with Colorado Parks and Wildlife, more appropriate river access points have been located, with the river's meander accentuated, to provide increased flood resiliency, valuable ecological benefits in the form of lateral scour pools, and an enjoyable park experience for all recreational users.

The Design Team will continue to work with stakeholders of the project to ensure all goals are being met, and encourages feedback throughout the design process.

Ecological Restoration Designs

Ecological restoration designs are dependent upon results of the hydraulic modeling and instream restoration features that are in progress of being developed. Progress has been made in coordination with the US Army Corp of Engineers/USACE for permitting. Mike Stanley at the Corps confirmed that we can process the Bohn Park stream restoration work as an addendum (additional information) under the existing NWP 27 since this reach was included in the original application. We will continue to document very specific permanent and temporary impact areas by feature type (in acres/s.f.) and provide a summary of why it fits the NWP 27 (needs to be a net ecological benefit).

ECOS is a sub consultant on the design team that is assisting with environmental permitting and ecological designs. Once ecos receives detailed hydraulic design information (including temp. & perm. impact area assumptions), they will be able to compile and submit this information for NWP 27 review.

Plantings that can be sustained as a result of being next to the creek will not need irrigation (i.e., bank-side willow and cottonwood at or near the capillary fringe). We will develop a temporary drip system in the higher, floodplain areas. Overhead spray will also help kick-start the grasses and will only be considered until the plants have established.

Another option for irrigation includes an overall concept to install a gravity fed system using elevated cisterns/tanks that feed drip. In some locations, we are also looking at deep planting where the root ball is set just above the ground water elevation. Many riparian plants are adapted to partial sediment burial which makes this possible.

Drainage design

Water Quality volumes have been assessed based on existing drainage analysis and proposed conditions. Adjustments have been made to the proposed water quality ponds to accommodate flows in anticipation of a storm connection to the St Vrain. It appears that the available grade to drain a pipe is going to be tight. An analysis of the existing drainage basins and off-site drainage basins has been completed. A draft drainage report is in progress and will be updated once hydraulic analysis and instream features have been developed.

Project Binder Section 6

DESIGN DEVELOPMENT SUBMITTAL (50% DESIGNS)

Typically referred to as DD, this phase results in drawings that often specify design elements such as material types and location of site and architecture features.

Design Development drawings generally are the basis of an estimate of the Cost of the Work which would generally be a trade breakdown estimate. Design Development documents are also a significant milestone toward the completion of Construction Documents. The level of detail provided in the DD phase is a culmination of weekly meetings with the Town of Lyons, comments from the public, comments from various Boards and Commissions, results of an in depth planning process during the Lyons Parks Flood Recovery Planning Process, adherence to early planning documents prepared by the Town including previous master and comprehensive plans, the LRAP, SRCAP, FEMA damage assessments and scopes of work, input from the Board of Trustees, and per the owner's request and the project requirements. These Design Development Plans were presented to, various regulatory agencies, the Lyons Parks and Recreation Board on June 13, 2016, several other Lyons Boards and Commissions, and –to the Lyons Board of Trustees on July 18 and again scheduled for August 1, 2016.

Project Binder Section 14

UPDATED PROGRESS DESIGNS

Updated progress designs are the progression of efforts from the 50% Design Development phase that have

incorporated comments and feedback from the various Town Boards, regulatory agencies and others, including Town Staff and the design team. Some of these efforts entailed redesigning site features, additional hydraulic modeling and changes in direction from earlier decisions made during the planning process and schematic design phase. Updated designs are considered a progression of the DD plans towards Construction documents (CDs). Following the definition of the overall design in the design development phase and the direction by the BOT on July 18 and Aug 1 to move designs forward, construction documentation is a natural continuation of the design process— one that sets the parameters for the building process. CDs outline the key interrelationships, rights, responsibilities, and dynamics that bring the park into being.

In a combination of written and graphic formats, construction documents translate the design of a project from the realm of ideas to physical form. They describe, in detail, the components of a project that need to be fabricated and assembled in order for it to be built. To that end, the contributions of myriad consultants are assembled into a coherent, artful whole.

Project Binder Section 2 PROCESS AND TIMELINE

The work effort identified for the project has been broken down into tasks to better understand the organization that needs to go into development of the designs into final construction documents. Our project approach is organized around four general task items. It includes the complete scope of services outlined in the request for proposals, organized in a manner that brings the most efficiency and value to the Town.

1. Project Management
2. Design Development (approximately 50% progress review set)
3. Construction Documents (90% progress review set and 100% Final Review Set)
4. Bid Phase/ Construction Administration services

We have provided a summary of task descriptions in our RFP proposal response, DHM proposal (Item number 2 in the project binder) for the proposed Phases of the project as well as project deliverables for each Phase. Breakdowns of specific project task items are listed within each project estimating sheet that show an estimate of manpower and expenses. Documents will be developed in accordance with the Town's standards and requirements.

Task 1-Project Management-Ongoing

Project management is key to the success of this project. DHM and select members of the design team held a project kickoff meeting and have weekly progress meetings during the design phase in order to secure feedback and to make critical decisions in order to expedite and move forward with the design to meet anticipated schedule requirements. Design meetings began in April and we estimate they may extend into September or when the project bids (approximately 20-26 weeks). All meetings are documented to note progress, schedule updates and decisions made in order to move forward with critical milestones for bidding the project.

TIMELINE:

Due to the complexity and sensitivity of working within an active stream channel, construction activities within normal high water levels are typically limited to take place between November and Mid-April. Activities outside these months require a much greater level of water control and would increase construction costs significantly. Based on the RFP, scope and proposal, the intent is to construct all in-stream and stream channel and bank work over the fall and winter before proceeding in constructing park amenities outside the normal high water mark. Designs are progressing to where we are hopeful to bid work in August/ September with construction beginning in October/ November pending direction of the BOT. If work cannot begin this fall, the project could push

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construction back another year.

Task 2: DESIGN DEVELOPMENT OF SELECTED PLAN - COMPLETED

During this phase our team leveraged its deep experience in park design and construction to thoroughly evaluate the approved Bohn Park Preferred Alternate and develop detailed plans to a 50% progress level.

We have developed a Design Development package that was used to vet out technical design of the park site improvements based upon the final master plan design evaluation and completion. **THE FOLLOWING PLANS WERE DEVELOPED.**

- Material image board and cut sheets
- Construction details for the park site improvements
- Phasing of improvements will be reviewed based upon technical design parameters and budgeting.
- DHM will incorporate comments from the Parks Flood Recovery Planning Process and from review with Town staff, and stakeholders into a Design Development Plan set for use in permitting, interdepartmental coordination, and review prior to beginning Final Designs and Construction Documents.
- Preliminary site layout of the park,
- Preliminary grading plans
- Preliminary drainage plans,
- Preliminary utilities,
- Preliminary materials,
- Preliminary landscaping,

These plans have been prepared in AutoCAD format and will be the basis for accurate cost estimating. Plan review sets were provided to the Town at completion of Design Development for review and comment.

Detailed designs for the in-stream features were created based on feedback from the Town of Lyons, the public meetings, regulatory agencies and permitting requirements. Design drawings will be advanced to show specific design layout and elevations, as well as specific details.

Task 3: CONSTRUCTION DOCUMENTS (90% Submittal, 100% Final Review) – to be completed

Based upon final Design Development comments from the Town and various boards/commission and the findings from the Construction Cost Estimates, the design team will complete the remaining technical work effort to complete Construction Documents and Technical Specifications for the 90% and 100% Final Construction Set submittals.

90% and 100% complete construction drawings will be prepared for the project including major elements such as cover sheet, general notes, Site Preparation and Tree Protection Plans, Erosion and Sediment Control Plans, overall site layout and materials plans and grading sheets, miscellaneous site details, planting/ revegetation plan, irrigation plans, utility plans, and drainage plans. Detailed designs will be provided for all programming as noted in the Bohn Park Preferred Alternate Plan. 90% drawings will be prepared for submittal through the Town permitting process. DHM will continue developing plans to meet deadlines and schedule requirements for 100% Final Construction drawings during this review to maintain an accelerated schedule for fall and winter construction.

Task 4: Bidding and Construction Administration

Progress Meetings: DHM and S2O will be available for weekly on site OAC meetings to be held throughout the duration of the project.

Construction Administration: Tasks include site visits, availability to answer any RFI's, provide design clarifications and review submittals, visit the site to review critical site items and answer any other questions that may come up during construction that impact design. Our team of consultants will assist with construction administrative services for site, architecture, utilities, and in-stream work, and drainage and infrastructure improvements as it relates to their disciplines. A detailed scope and estimate of hours is included within our fee schedule.

Construction Administration: S2o will provide on-site construction inspection for the in channel structures and floodplain overflow elements. In addition to on-site inspection S2o will assist with any submittal review, Architects Supplemental Instruction ASI, Request for Information RFI, missing detail, or changes that arise during the construction phase.

Phasing/ Cash flow

We understand the BOT is reviewing options for phasing based on cash flow and priorities within the Town. Following are some details for consideration as discussions progress. Phasing of the project has been reviewed and discussed amongst the design team. We have also contacted Denver Front Range contractors to discuss options for possible phasing based on cash flow. There are essentially 3 ways to bid the project based on cash flow and availability of funds. They are as follows:

- 1) Bid the entire project together
- 2) Phasing of the project based on cash flow under one contract
- 3) Multiple contracts based on cash flow and construction sequencing.

Option 1 would be the least costly scenario where the contractor could determine construction means and methods based on the project schedule. They would be able to stack their subs to where they could move from one location on site to the next without demobilizing and returning at a later date when a new phase of work begins, have one mobilization cost and be more efficient with their crews and management.

Option 2 would see a cost increase of greater than 5%. The contractor would not be able to stack their subs and they would have to move off- site for large periods of time. Scheduling may get drawn out based on their availability. The schedule would extend according to cash flow, availability of crews, weather and timing of work within the river/channel and other park areas. Material escalations are unknown and cannot be predicted within the bid. Based on past experience if there are a lot of unknowns the contractor will bid very conservatively to cover their risk(s) which would see a substantial increase in costs. New permits would need to be pulled if the contractor is demobilized for too long. The contractor would be required to spend more time on site maintaining conditions which would lead to more management time.

Option 3 could see costs escalated as much as 50% pending time of year each phase was bid and how busy contractors are. Bidding in low season (typically the fall) is the most ideal time to bid for competitive pricing. Spring and summer bids tend to see a significant increase in costs when contractors are in their high season. There would also be concerns with quality, standard of workmanship and lack of continuity with potentially multiple contractors bidding and constructing the project. The number of mobilizations would greatly increase, the general overhead and bonding costs would increase, and inefficiencies in construction activities would add

to the increase in construction costs. It would be extremely difficult to control costs and potential change order requests due to the overlap in activities.

BUDGETS/ FUNDING STRATEGIES

At the 30% design phase/contract approval phase budgets were provided to the Board of Trustees that indicated available funding for Bohn Park. Significant funding for the Bohn Park Flood Recovery Plan is already in place, and town staff, consultants, and the Board of Trustees will need to prioritize phasing of non-flood related park enhancements in order to complete the park on the timeframe provided. True costs won't be known until the project goes through final design and the town receives bids from contractors. Staff has put together the following alternatives based on the preliminary estimates for the park.

The following is a list of available funds, estimated costs and alternatives for phasing of project enhancements:

FEMA PW20	Bohn Park	\$3,129,297
FEMA PW35	Bohn Park WW Features	\$414,151
FEMA PW20	2 nd Ave Dog Park	\$86,217
FEMA PW 20	Hwy 7 Trail	\$124,093
FEMA PW 20	Corridor Trail 60%	\$956,446
CPW	Fishing is Fun Grant	\$100,000
Rockies Funding / Can'd Aid-Ball Fields		\$80,000
LCF	Bohn Park	\$10,000
FEMA PW 20	Bank Reveg 50%Bohn Park	\$477,197
CIRSA	Bohn Park	\$520,792

This number could increase by using a higher percentage of these funds based on the St. Vrain Corridor Trail Extension/Recovery Grant

Total Flood Recovery Funding for Bohn Park w/ CEF \$5,898,193

In addition to the above funding, there may be a possible savings (and an available amount of funding remaining) from the Meadow Park Flood Recovery Project:

<u>Meadow Park Funding Sources</u>	<u>Amount</u>
PW20	\$5,017,075
PW 35	2,817,550
PW 20 Mitigation	86,178
GOCO	1,122,000
LCF	10,000
Colorado Home and Garden	15,000
CDPHE	150,000
CIRSA	288,978

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Total Flood Recovery Funding for Meadow Park \$9,706,783

Meadow Park Phase I expenses, along with all other park project costs included in FEMA PW 20 to date total \$2,486,038. The preferred bidder for the Meadow Park Phase II construction has submitted a bid for a 'not to exceed' amount of \$6,172,760. From the available funding allocated for Meadow Park (above), if you add the Meadow phase II contract amount and the total spent on all parks projects to date and subtract it:

\$6,172,760 + \$2,486,038 = \$8,658,798

\$9,706,783 - \$8,658,798 = \$1,047,985 possible savings from Meadow Park Project

Total Flood Recovery Funding for Bohn w/ CEF = \$5,898,193 plus
Possible saving from Meadow Park Project (\$1,047,985) provides
\$6,946,178 Available Funding For Bohn Flood Recovery Plan

The Preliminary Cost Estimate for the Bohn Park Flood Recovery Plan created by DHM Design and S2O Design and Engineering on November 4, 2015 suggests that the entire park could be built out to the public's vision for the following totals:

Subtotal	\$6,035,628
15% Contingency	905,344
10% Design/Permitting	603,562
3% CA Services	181,068
TOTAL	\$7,725,605

The available funding is near the needed amount outlined in the preliminary estimate; but poses a fairly significant gap when other services are added in. Based on actual bids, there will likely be a need to prioritize or phase-in a certain number of amenities that could be considered 'enhancements'.

DESIGN AND SEQUENCING CONSTRUCTION

Design services to complete all features of the Bohn Park Flood Recovery plan are 100% funded and can continue to be developed. Sequencing of park amenities and priorities for construction will need to be reviewed with the Board of Trustees to coincide with discussions on available budget, funds and cash flow. Final decisions on what is to be built can happen during the bidding process as we strategize on bidding options. Options may include phased construction, a series of bid alternates that can be chosen as budgets allow, or complete removal of park features from the bid documents. Not all features will be able to be developed based on final bids.

Budgets have been developed based on park amenities identified in the 50% Design Development plans. This is a

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normal discussion to be had at this level of detail within the design process between 50% and 90%. Some park enhancements were not included in the originally presented 30% design budget such as the flood control measures in the Marten and Stacy parcels, additional skate park features, the concept of a possible Parks Office/Storage Facility/Community Building and other items. It's at this time in the design process we want to have more pointed discussions on funding strategies, available budget and priorities. As of now the design team has been instructed that available budget for the project will be approximately \$7M. Additional funding sources may be needed or should be considered for park "enhancements" or amenities deemed not to be a priority by the Board of Trustees. These could be the Parks Building, Skatepark, the Proposed Stacey Parcel Overflow Channel, one or more of the multi-use sport or tennis courts, or others. .

Preliminary cost estimates are coming in higher than budget currently allows at the 50% level. We will be working on designs to reduce costs to align within available funding. We will continue to work on designs to achieve this. Some strategies to consider are reallocating savings from Meadow Park construction to Bohn Park, consideration of additional funds from new grants, reducing programming within the park to match current budgets. A detailed estimate is included in the project binder (Item #7).

The Parks Office/Storage Facility/Community Building adds considerable cost and increases the cost estimate well above budget. Given the difficulty the Town is facing finding a home for its Public Works Facility, it was considered as an option to relocate parks management and maintenance staff to within Bohn Park. This would assist in providing for much needed space for storage, maintenance equipment and bulk storage as well as needed office space for parks staff. In addition, such a facility could help provide for efficiencies in operations and maintenance costs by having staff, equipment and materials on-site. Better service to the community by having offices and programming within the park and opportunities for more programming space for the community.

A few options for reducing costs include acquiring donated material, phasing of Skate Park, removal/phasing of the parks office building, phasing of the overflow channels to be paid from a separate allocated fund, removal of topsoil from native areas, limiting irrigation to active park areas. We can also look at removal of tennis courts and shade shelters for future phasing as required.

OPPORTUNITIES FOR COMMENT AND FEEDBACK

Opportunities for comment and feedback will continue throughout the design phase-from the 50% to the 90%. This may mean presenting plans at a regularly scheduled meeting or sending plans for comment via email. Ideally comments will build off subsequent design phases and decisions made in order to move forward, however at times it may be necessary to change direction and go backwards to achieve the goals of the Town. This would require additional efforts and design to bring designs back in line. We currently scheduled opportunities for comment and review at the 30% schematic design phase (May 13), 50% Design Development Submittal (June 10), and projected for 90% and 100% designs. At each phase comments are based on plans and designs developed from decisions and approvals made during the previous phase.

All comments and feedback are welcome. Comments will be accepted between the 50% and 90% and we will review all comments at our weekly meetings and make those comments "actionable" as part of the design

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process with a response in our weekly meeting notes. Continual feedback between all boards and commissions will be encouraged and plans presented when needed.

We currently have weekly Design Team meetings on Thursdays at 10:00 am at S2O's office. We have an active website and will provide weekly updates to the BOT via email. Continuous feedback is encouraged and accepted between design submittals and throughout the design process.

Plans have been presented to the PRC, WB, CPW, SVCC and BOT.

Project Binder Section 13

PRC Notes:

Mark Wilcox with DHM presenting

Overview of planning process: public meetings, LRAP, other master plan docs

Scope of work

Design goals

50% plan shown. 3 tennis courts, possible park office building

Skatepark options (bowl + street course behind softball fields) Concrete sidewalk from parking lot to skatepark

Concerns voiced about skatepark location and concrete on west side.

Ian was concerned that the area between the two proposed skate parks could become over-developed and that the trail connection should remain the priority. Plans reflect removal of a concrete sidewalk behind the ballfields to the west and designed for a soft surface trail connection instead.

Water feature for kids near playground

Location of storage building and that the appearance match Steamboat Mtn. – Ian

If plans for the parks office building move forward we will review architecture character and viewsheds to make sure we meet Ian's requirements.

Concerns on Ecocycle appearance and traffic between Bohn and Ecocycle – Veronika

Scott Shipley of S2O reviewed stream structures Goals:

flood mitigation, access, riparian feel Funding sources

Several overflow channels added to guide water

Bank restoration

Rosgen cross-vane drop structures

Next steps in the planning process

Final design in late summer or fall

Phasing and implementation strategies for funding

PRC discussed making a statement to the board in support of the plan.
Continued discussion about concrete on west side

Ian motioned to approve 50% design. Mary second. All in favor.

Ecology Board Notes:

1) Review Design Documents

Marshall went through the 50 percent design presentation for Bohn Park. Simms said perhaps the riparian areas could be deeper with fencing until the plants mature. Designs will reflect these comments. A fence will be designed to separate the public from the ecological restoration areas similar to the fence constructed at Meadow Park.

CPW Comments: see project binder for formal comment letter and written response from the design team.

SVCC Comments: see project binder for formal comment letter and written response from the design team.

1. Will there be any pedestrian crossings near the confluence? We know there's one planned within the project, but was just wondering if there was consideration of another one or if another one that we don't know about already exists.

At this time we are not planning one.

2. What is the scope of work for the area river left (Stacey property) within the project? Will there be any trails?

At current no trails are planned at this time. Parks and Wildlife did suggest that fishermen might like to access on this side, but we had assumed that this would be through bushwhacking.

3. Is the SSV3 trailer park area being actively used? We are pretty sure it is not, but wanted to confirm.

It is going to be acquired through the buyout process but has not yet been acquired. We have not been a party to any plans there yet, but obviously have designed our flood-overflow channel to mesh with any potential braided channel options that might be installed upstream on this property.

Watershed Board Comments: see project binder for formal comment letter and written response from the design team.

Please see below our official submission of the recommendations to the Bohn park river restoration:

The overall goal for this reach is to be as natural looking aesthetic with a natural riffle pool design with boulders and have minimal to no drop structures [cross veins]. But also provide safety to the park attendees and neighboring houses/buildings.

Specific recommendations are as follows:

1. Those drop structures [cross veins] needed for safety purposes should be as much at grade as possible-grade above and below the structure. So they function more as a grade control than recreational drop. All cross veins should have very quiet water at the sides with minimal to no flow or back eddy flow to allow for fish habitat. With back eddy flows and currents, the fish have to work hard for their food and a normal 'wild pool' does not have those kinds of water flows. Also, deep in the pools and thought the tail of the pool there should be boulders to allow fish to hide behind. For cross veins, double-steps can be utilized but also cross veins with spaces between the boulders [.5-1x of the boulder diameter] should be considered to allow better fish habitat and fish passage. All cross veins should appear as natural looking as possible. Also, please consider having the low flow point through the veins and J hooks be eccentric and not in the center of the channel, providing a more natural flow and aesthetic.
2. Any J hooks should appear to be natural looking and not appear artificial. Large boulders [3-5ft diameter] can provide the habitat, energy dissipation, and river flow controls needed. Consideration of 'J hook type structures made out of wood and stone can provide excellent microorganism ecosystems and highly functional.
3. We propose greater amounts of wood installed and there are many different techniques that are safe for boaters and tubers but provide a healthy ecosystem for the aquatic biology [The bugs feed and proliferate on the woody debris and then become food source for the fish.] Logs can be installed looking similar to a random fallen tree along the bank that face either up or downstream that can be anchored by large boulders and sit in holes to provide cover. Logs can also be installed to provide the same benefits as rock vanes, J hooks, v-weirs with one end buried in the bed of the channel and the other end buried in the riverbank while the middle is exposed providing a place for fish to get under and hide. Fish lunkers are constructed wood overhangs that can be built to look quite natural and provide ample cover for fish. These and other wood applications can add complexity to the stream bank and provide many small micro-eddys for additional aquatic habitat. Many of these techniques can be achieved to maximize the aquatic biology but also designed to be safe for tubers and boaters.
3. Vertical banks on the outside bends of the thalweg can be stabilized with large boulders and safe woody

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debris and provide long shallow point bars on the opposite side of the river. These point bars are places where sand and gravel can deposit and provide low-gradient places for folks to get into the river.

4. Consideration of lowering the grade upstream to lower the overall drop through this reach should be considered.

5. Controlling the water access points is key and they should be designed to be consistent with fish 'habitat protection as well as bank preservation.

It is the goal of the LWB to work in concert, cohesively with the BoT and under their direction with the town parks and rec as well as any engineers and construction contractors. If there is a way we can do this better please advise us.

Project Binder:

Project binder can be downloaded here: <http://bit.ly/2a5vCOd>

1. Project RFP
2. DHM Proposal
3. Weekly Meeting Notes
 - Programming Workshop Notes
 - http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-programming-workshop-MM_20160414.pdf
 - April 21, 2016 weekly design meeting
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-BOT-20160421MM.pdf>
 - April 28, 2016 weekly design meeting
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-BOT-20160428MM.pdf>
 - May 3, 2016 weekly design meeting
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-20160503MM.pdf>
 - May 12, 2016 weekly design meeting
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-20160512MM.pdf>
 - May 18, 2016 weekly design meeting
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-20160518MM.pdf>
 - May 26, 2016 weekly design meeting
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-20160526MM.pdf>
 - June 9, 2016 weekly design meeting
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-20160609MM.pdf>
 - June 16, 2016 weekly design meeting

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- <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-20160616MM.pdf>
- June 23, 2016 weekly design meeting
- <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/LBP-20160623MM-DD.pdf>
- 4. Monthly Reports to Administrator
- 5. 30% Schematic Design Report
 - http://www.lyonsparksmp.com/wp-content/uploads/2015/07/Bohn-Park-Design-narrative_ALL-FINAL.pdf
- 6. 50% Design Development Submittal
 - http://www.lyonsparksmp.com/wp-content/uploads/2015/07/Bohn-Park_Design-Development-Report_2016-06-10.pdf
- 7. 50% Design Development Budget Spreadsheet
- 8. Skate park Presentation April 28, 2016
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/Public-meeting-1-PowerPoint.pdf>
- 9. Skate Park Concepts Presentation June 21, 2016
 - Concept 1
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/Concept-1.pdf>
 - Concept 2
 - <http://www.lyonsparksmp.com/wp-content/uploads/2015/07/Concept-2.pdf>
- 10. Architecture Concepts – BRS Architecture
- 11. S2O Basis of Design Report
- 12. July 18, 2016 BOT presentations (DHM and S2O presentations)
- 13. Comments and Responses:
 - CPW (Colorado Parks and Wildlife)
 - SVCC (St. Vrain Creek Coalition)
 - WB (Watershed Board)
 - PRC (Parks and Recreation Commission)
 - EB (Ecology Board)
 - SFB (Sustainable Futures Board)
 - Jeff Christy was present for the PRC presentation
- 14. Updated designs
- 15. FEMA Scope and Versioning Documents

Bohn Park Final Design and Bidding Process

BOT Work Session August 1, 2016



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Photograph courtesy of Ed Bruder

Bohn Park 2016 Flood Recovery Project Scope

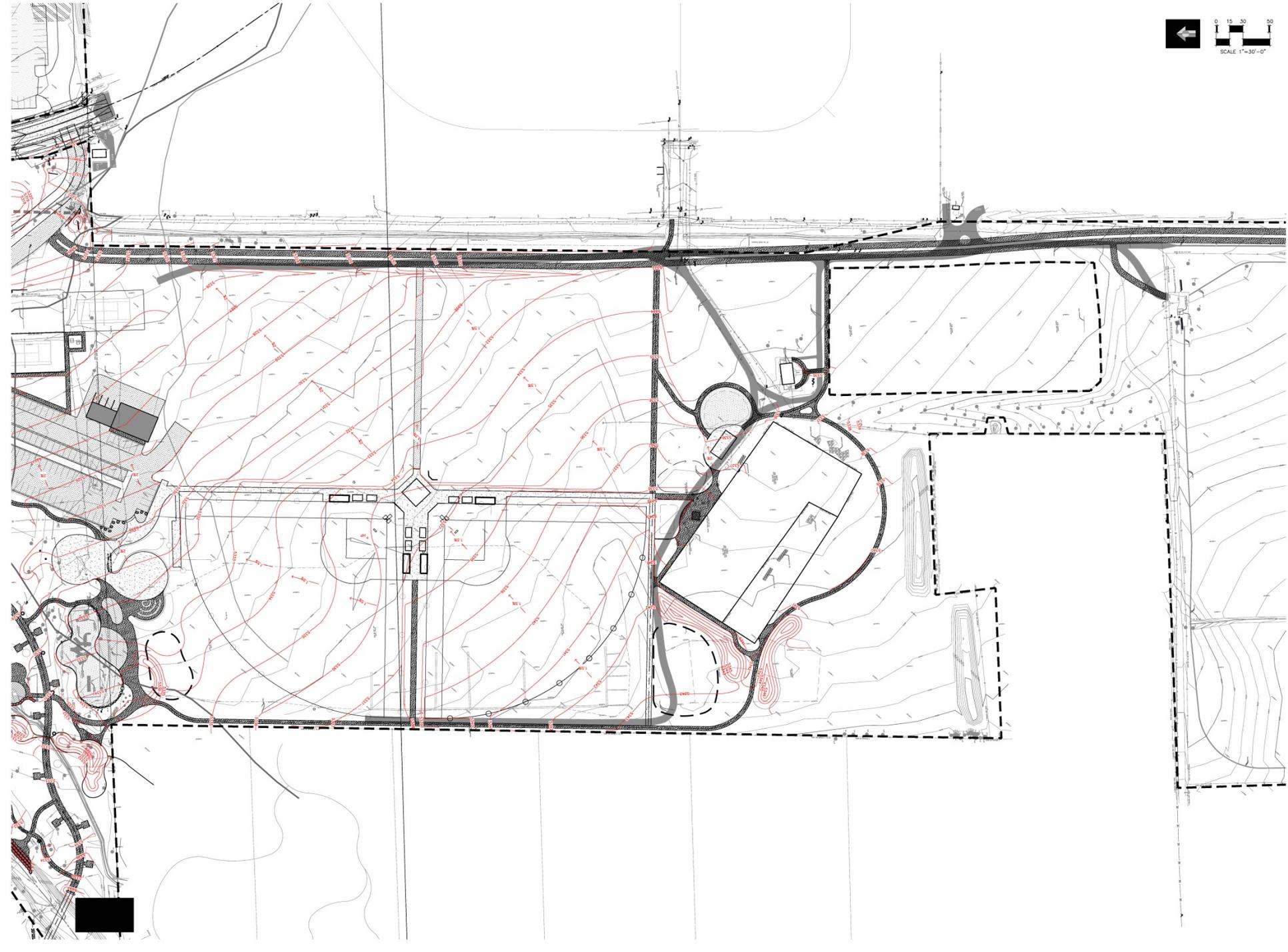
- The Bohn Park Flood Recovery Final Design and Bid Project will address the following fundamental goals outlined in the Lyons Recovery Action Plan and Lyons Parks Flood Recovery Planning Process for ensuring that Bohn Park continues to meet local and regional demands:
 - 1) Reconstruction of facilities in Bohn Park to address the immediate recreational needs of Lyons, especially active/athletic uses. We will create a place to gather and play as a community again.
 - 2) Creation of an attraction that will draw visitors to our Town. This is essential to ensure that the Town will remain economically viable and maintain its reputation and brand as a destination for healthy, active, outdoor lifestyles.
 - 3) Reestablish trail connectivity, both locally and regionally, include loop trails.
 - 4) Restore and augment river access and river habitat.
 - 5) Restore/Replace picnic opportunities, including shelters and increase size.
 - 6) Re-establish natural areas and consider wetlands.
 - 7) Installation of public art along trails.





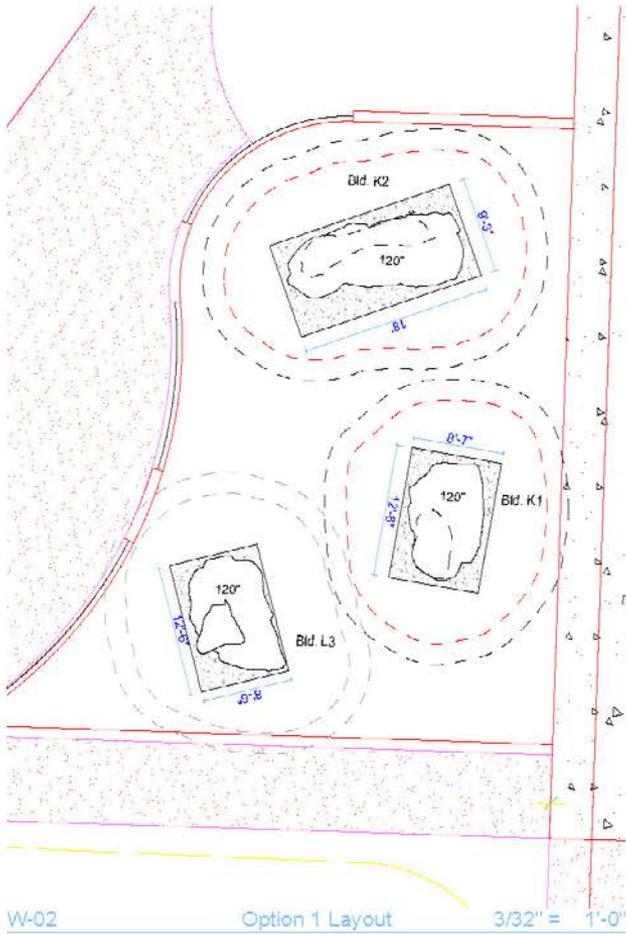
50% Design Set





50% Design Drawing





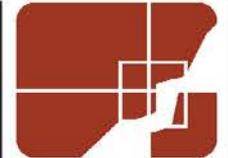
Design Reference



Design Reference



Design Reference



ID Sculpture

591 South Boulevard
 Gunnison, CO 81230
 www.IDSculpture.com
 970.641.1747

Bohn Park

***SCHEMATIC DESIGN
 NOT FOR CONSTRUCTION***

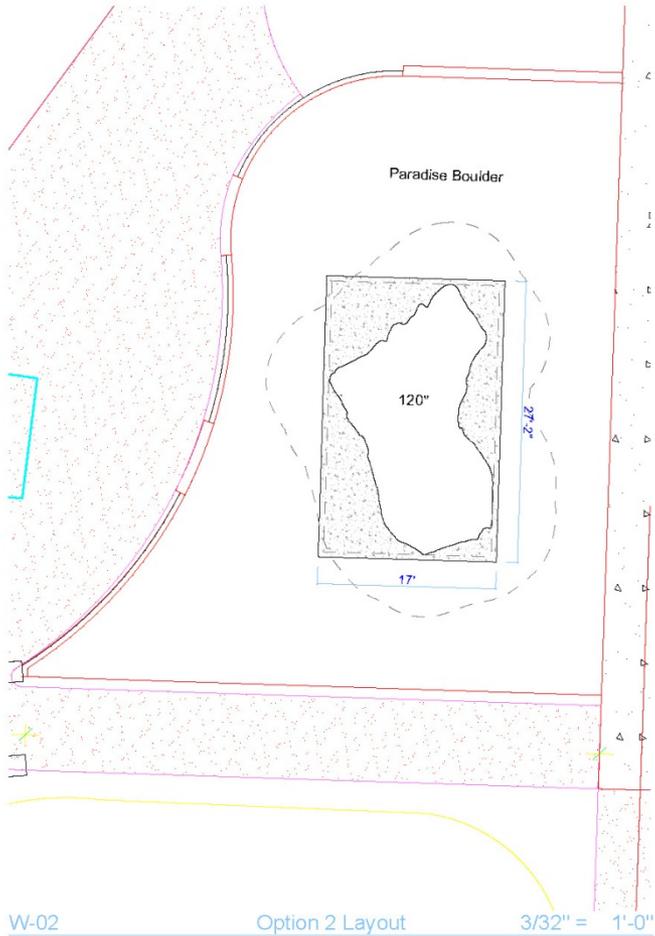
*All IDS projects are designed to meet or exceed ASTM 1487-11
 Not all equipment may be appropriate for all children.
 Supervision is required.
 ASTM compliant safety surfacing is required under and around all play equipment.
 The Americans with Disabilities Act (ADA) may require your play area to be accessible, please consult with an ADA professional to ensure compliance.*

Date: **5/17/16**

Drawing Title: **Option 1**

Sheet #:

A.01.1



Paradise Boulder



Paradise Boulder-Perspective



Design Reference



591 South Boulevard
Gunnison, CO 81230
www.IDSculpture.com
970.641.1747

Bohn Park

***SCHEMATIC DESIGN
NOT FOR CONSTRUCTION***

All IDS projects are designed to meet or exceed ASTM 1487-T1. Not all equipment may be appropriate for all children. Supervision is required. ASTM compliant safety surfacing is required under and around all play equipment. The Americans with Disabilities Act (ADA) may require your play area to be accessible, please consult with an ADA professional to ensure compliance.

Date: **5/17/16**

Drawing Title: **Option 2**

Sheet #:

A.01.2

Concept 1



Concept 1



Concept 2



Concept 2





PROPOSED PAVILION PERSPECTIVE
BOHN PARK 2016 FLOOD RECOVERY PROJECT



JUNE 10, 2016

A-2



PROPOSED RESTROOM PERSPECTIVE
BOHN PARK 2016 FLOOD RECOVERY PROJECT



JUNE 10, 2016

A-1



PROPOSED PAVILION PERSPECTIVE
BOHN PARK 2016 FLOOD RECOVERY PROJECT



JUNE 10, 2016

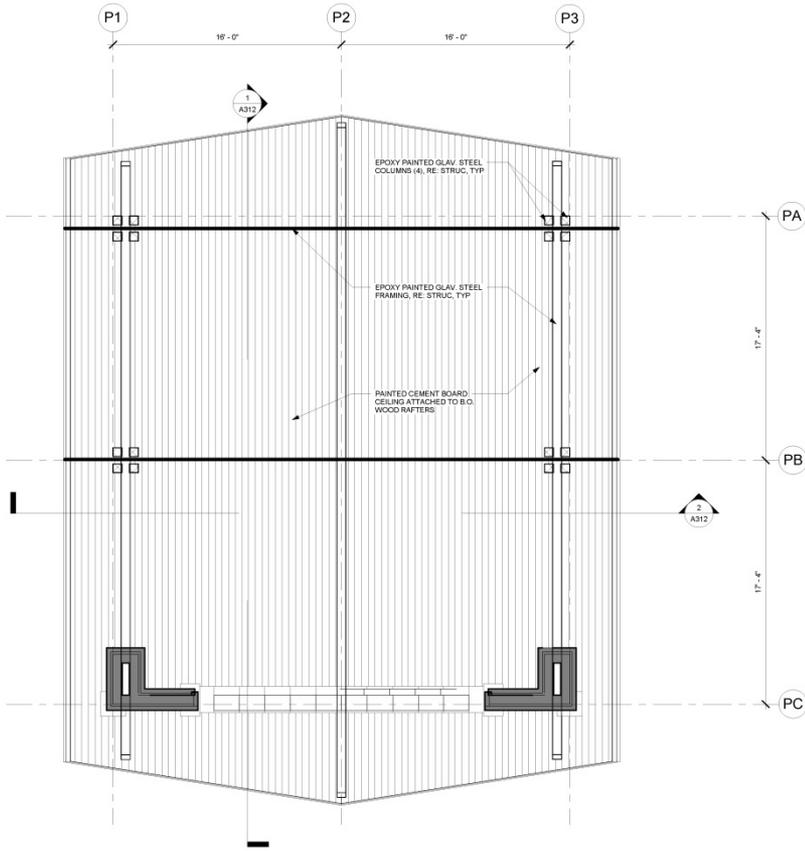
A-3

RCP GENERAL NOTES

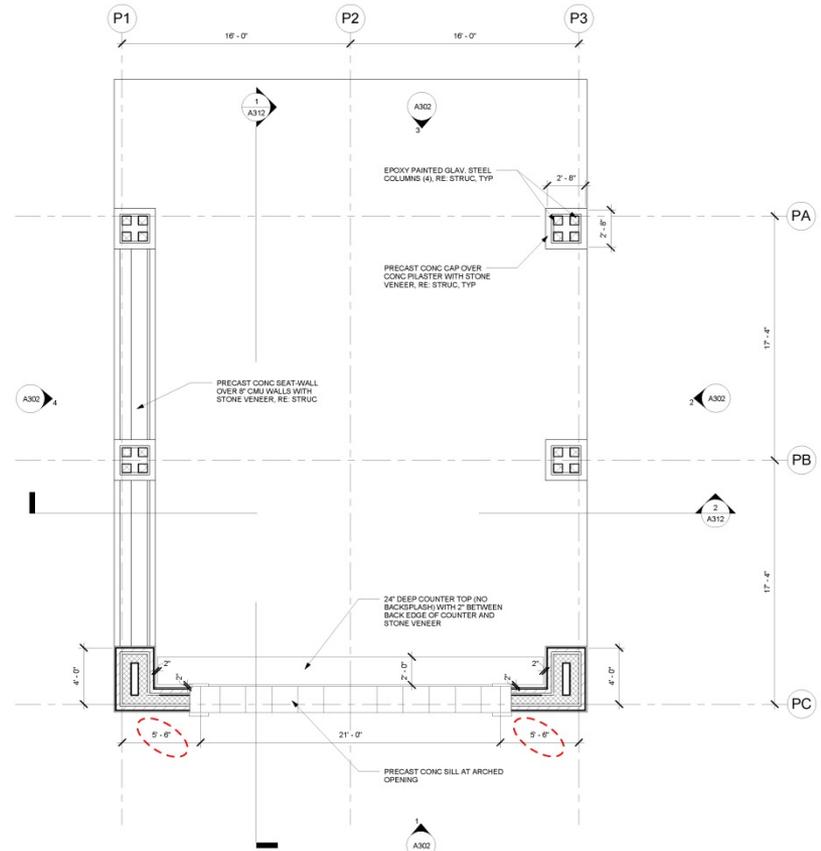
1. ALL CEILING ELEVATIONS LISTED AS A F.F. DIMENSIONS. SEE INTERIOR ELEVATIONS FOR CLARIFICATION IF NECESSARY.
2. ALL WALLS SHALL TERMINATE 6" ABOVE CEILING ELEVATION UNLESS OTHERWISE NOTED.

RCP LEGEND

-  EPOXY PAINTED CEMENT PANEL BOARD
 -  EXPOSED STRUCTURE
- SEE MECHANICAL AND ELECTRICAL LEGENDS FOR ADDITIONAL SYMBOLS



1
A102
PAVILION REFLECTED CEILING PLAN
1/8" = 1'-0"
0 2' 4' 8'



3
A102
PAVILION FLOOR PLAN
1/8" = 1'-0"
0 2' 4' 8'



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 303.977.5564
 www.dhmdesign.com

BOHN PARK
 2016 FLOOD RECOVERY PROJECT
 Lyons, Colorado

PROJECT NUMBER: 16044.00
 DATE: 06/10/16

DRAWN BY: Author
 CHECKED BY: Checker

REVISIONS: No. Date

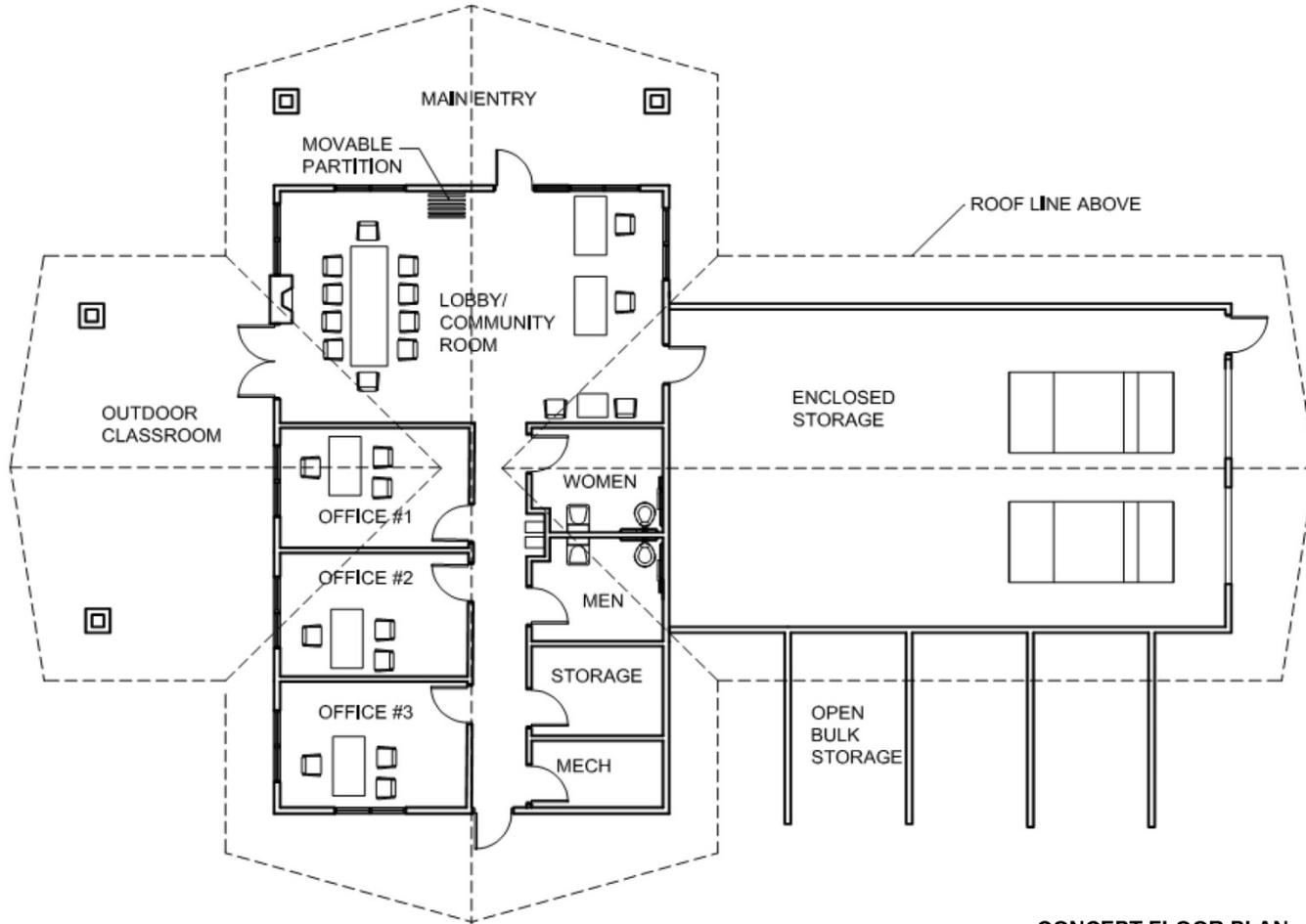
JOB DESCRIPTION:
DESIGN DEVELOPMENT

SHEET TITLE:
 PAVILION FLOOR PLAN AND RCP

A102

SHEET OF

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CONCEPT FLOOR PLAN
NOT TO SCALE

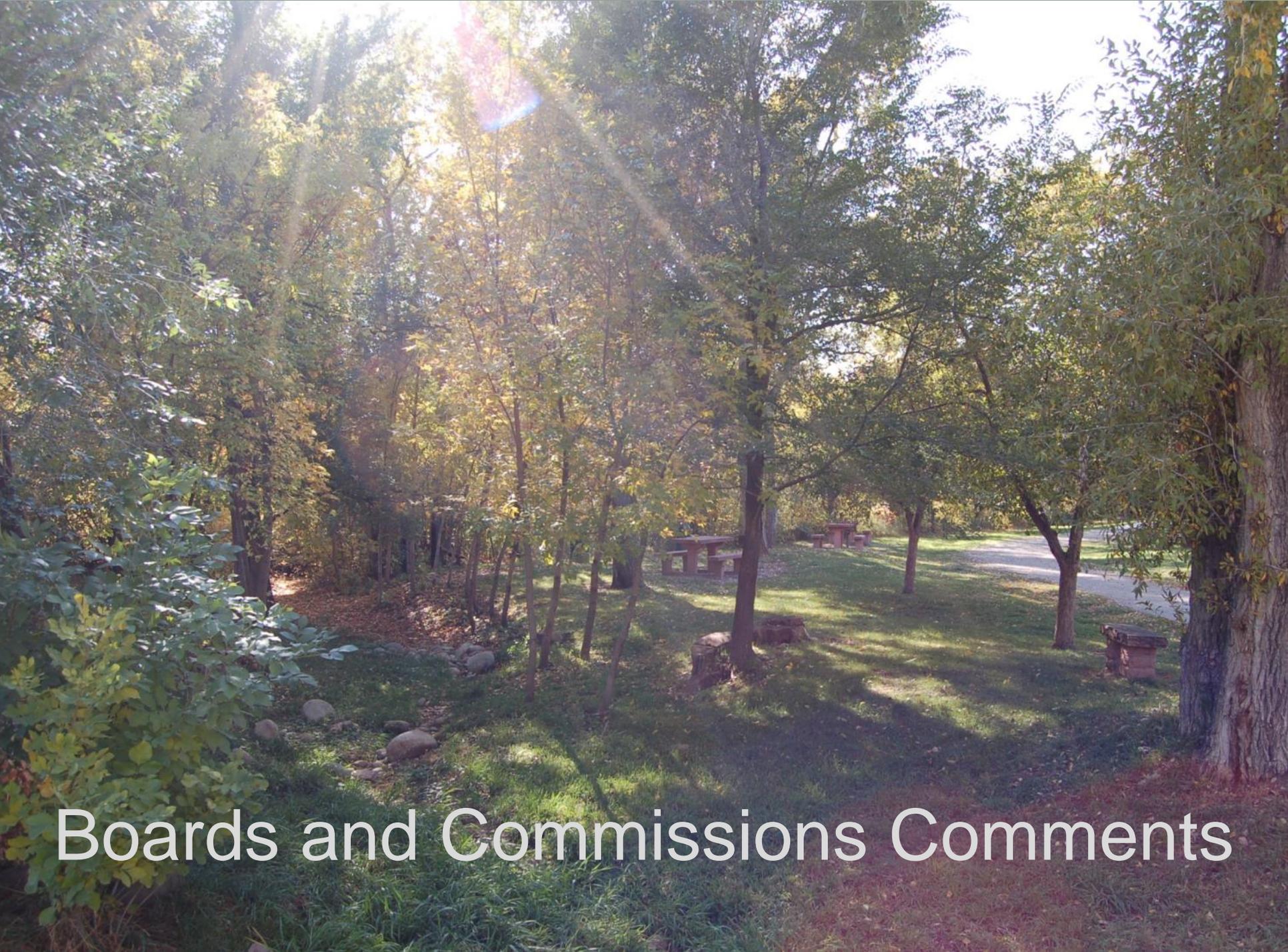
BOHN PARK - LYONS, COLORADO
Architectural Program & Preliminary Budget



6/10/2016

COMMUNITY CENTER

Item Space	Area	Cost/s.f.	Area Cost	Comments
1.0 Mens Room 1 Toilets 1 Urinals 1 Lavatories	100 nsf	\$400	\$40,000	
1.1 Womens Room 1 Toilets 1 Lavatories	100 nsf	\$400	\$40,000	
1.2 Community Room Training Space Nature Center Conference Center	250 nsf	\$250	\$62,500	
1.3 Offices 3 Staff Offices Lobby / reception Office Storage	700 nsf	\$250	\$175,000	
1.4 Internal Circulation	250 nsf	\$250	\$62,500	
1.5 Storage Office Supplies Sundries and cleaning equipment	80 nsf	\$185	\$14,800	
1.6 Garage Storage (50x20') Janitor sink Large Equipment	1250 nsf	\$165	\$206,250	
1.7 Mechanical/Electrical & Plumbing Chase Systems All electric Year round operations	145 nsf	\$185	\$26,825	
1.8 Outdoor Nature Space / Porch	400 nsf	\$125	\$50,000	
Total Net Area & Cost	3275 nsf		\$677,875	
Contingency		20.0%	\$135,575	
Total Cost			\$813,450	



Boards and Commissions Comments

PRC Notes:

- Concerns voiced about skatepark location and concrete on west side.
- Ian was concerned that the area between the two proposed skate parks could become over-developed and that the trail connection should remain the priority. Plans reflect removal of a concrete sidewalk behind the ballfields to the west and designed for a soft surface trail connection instead.
-
- Water feature for kids near playground
-
- Location of storage building and that the appearance match Steamboat Mtn. – Ian
- If plans for the parks office building move forward we will review architecture character and viewsheds to make sure we meet Ian's requirements.
-
- Concerns on Ecocycle appearance and traffic between Bohn and Ecocycle – Veronika
-
- Scott Shipley of S2O reviewed stream structures
- Goals: flood mitigation, access, riparian feel
- Several overflow channels added to guide water
- Bank restoration
- Rosgen cross-vane drop structures
-
- Next steps in the planning process
- Final design in late summer or fall
- Phasing and implementation strategies for funding
-
- PRC discussed making a statement to the board in support of the plan.
-
- Ian motioned to approve 50% design. Mary second. All in favor.

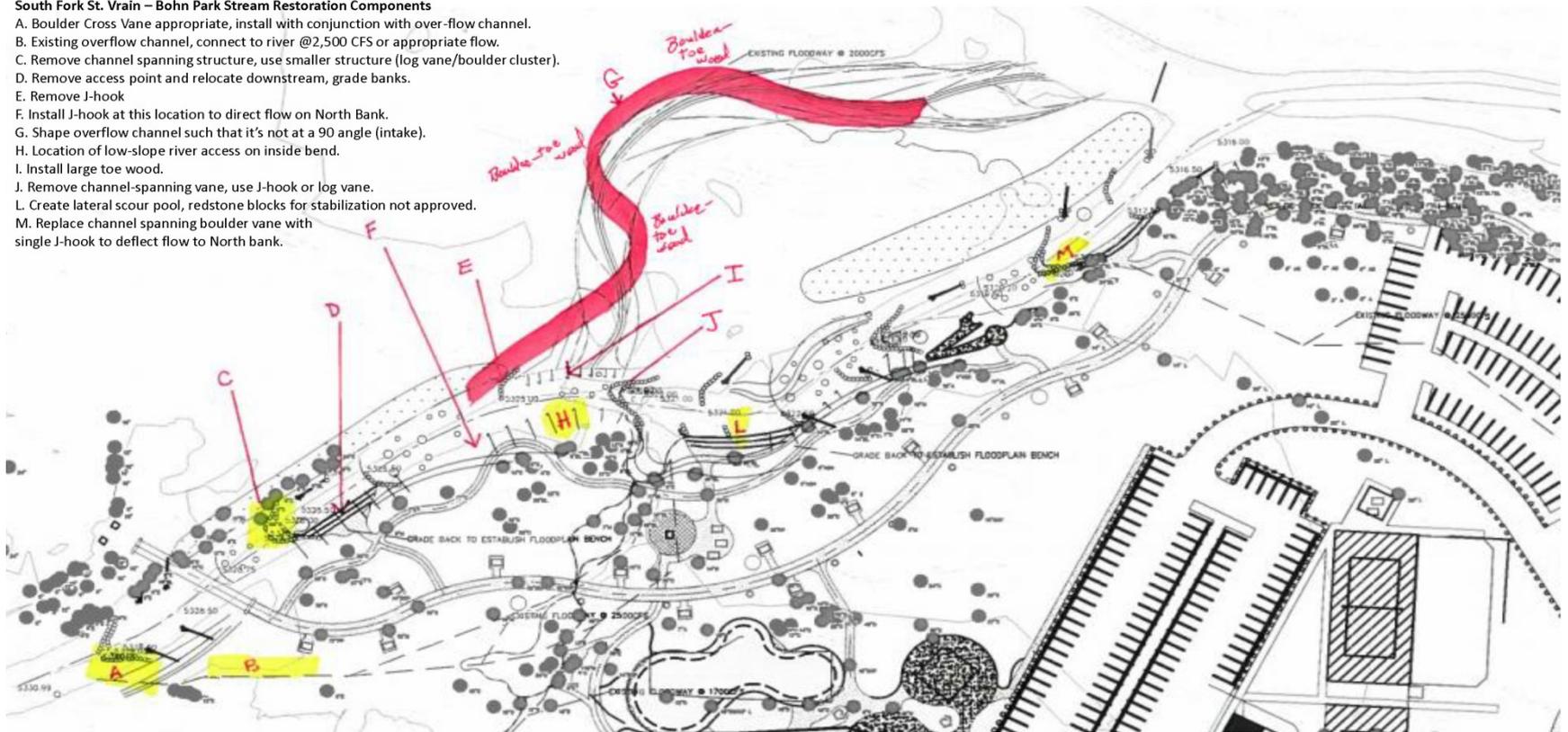
Ecology Board Notes:

- Marshall went through the 50 percent design presentation for Bohn Park. Simms said perhaps the riparian areas could be deeper with fencing until the plants mature. Designs will reflect these comments. A fence will be designed to separate the public from the ecological restoration areas similar to the fence constructed at Meadow Park.

CPW Comments:

South Fork St. Vrain – Bohn Park Stream Restoration Components

- A. Boulder Cross Vane appropriate, install with conjunction with over-flow channel.
- B. Existing overflow channel, connect to river @2,500 CFS or appropriate flow.
- C. Remove channel spanning structure, use smaller structure (log vane/boulder cluster).
- D. Remove access point and relocate downstream, grade banks.
- E. Remove J-hook
- F. Install J-hook at this location to direct flow on North Bank.
- G. Shape overflow channel such that it's not at a 90 angle (intake).
- H. Location of low-slope river access on inside bend.
- I. Install large toe wood.
- J. Remove channel-spanning vane, use J-hook or log vane.
- L. Create lateral scour pool, redstone blocks for stabilization not approved.
- M. Replace channel spanning boulder vane with single J-hook to deflect flow to North bank.



CPW Responses:

- **Channel Realignment:** We will be moving the channel to the North near the North overflow channel providing for lateral pools as the river bends to the south and back to the north again in this reach allowing for depositional benches on the inside of each bend. As discussed, we will likely create the outside toe with rock in these locations for safety reasons. We may attempt to design some wood into the upstream-most portions of these bends.
- **Overflow channels:** We will build a sill and I am consulting with Matt Kondratieff for some novel ideas for this. Alternately we will use rock and cobble as you suggest.
- **Wood:** We will not be cabling woody debris. In cases where needed we will use buried wood with rock reinforcement. Woody debris will be mostly below the water's surface (some is planned in areas where it will degrade over time, but not in reinforced areas).
- **Floodplain Benches:** will be installed in the areas that we discussed.
- **Riffle locations:** Two-three of the five planned drop structures are being transformed to riffle runs. We will use a similar method to Meadow Park, as you suggested, in these reaches for creating riffles.

SVCC Comments:

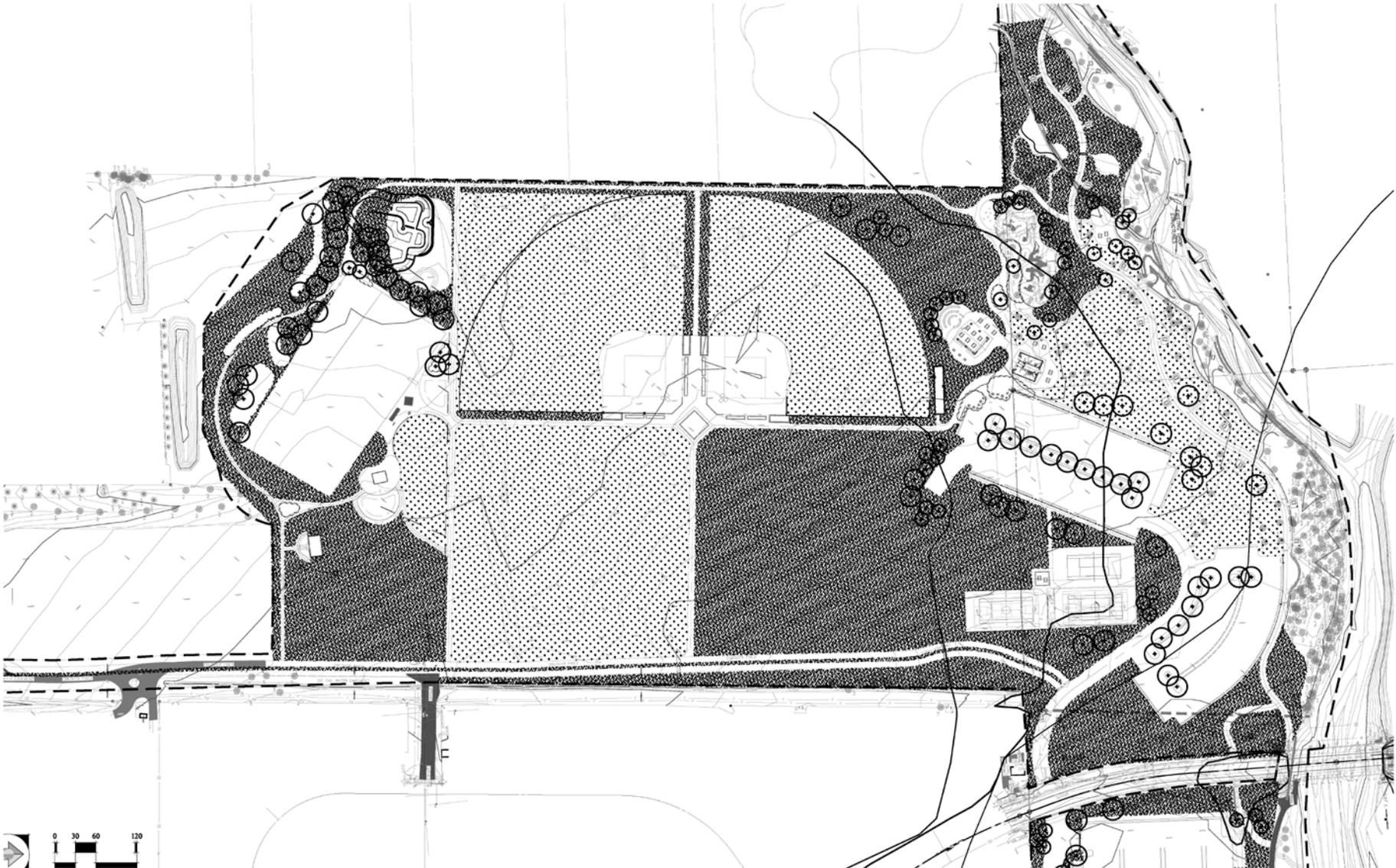
- 1. Will there be any pedestrian crossings near the confluence? We know there's one planned within the project, but was just wondering if there was consideration of another one or if another one that we don't know about already exists.
- At this time we are not planning one.
- 2. What is the scope of work for the area river left (Stacey property) within the project? Will there be any trails?
- At current no trails are planned at this time. Parks and Wildlife did suggest that fishermen might like to access on this side, but we had assumed that this would be through bushwhacking.
- 3. Is the SSV3 trailer park area being actively used? We are pretty sure it is not, but wanted to confirm.
- It is going to be acquired through the buyout process but has not yet been acquired. We have not been a party to any plans there yet, but obviously have designed our flood-overflow channel to mesh with any potential braided channel options that might be installed upstream on this property.

Watershed Board Comments:

- The overall goal for this reach is to be as **natural looking aesthetic** with a **natural riffle pool design with boulders** and have **minimal to no drop structures [cross veins]**. But also provide safety to the park attendees and neighboring houses/buildings.
- Specific recommendations are as follows:
 1. Those drop structures [cross veins] needed for safety purposes should be as much at grade as possible- grade above and below the structure. So they function more as a grade control than recreational drop. All cross veins should have very quiet water at the sides with minimal to no flow or back eddy flow to allow for fish habitat. With back eddy flows and currents, the fish have to work hard for their food and a normal 'wild pool' does not have those kinds of water flows. Also, deep in the pools and thought the tail of the pool there should be boulders to allow fish to hide behind. For cross veins, double-steps can be utilized but also cross veins with spaces between the boulders [.5-1x of the boulder diameter] should be considered to allow better fish habitat and fish passage. All cross veins should appear as natural looking as possible. Also, please consider having the low flow point through the veins and J hooks be eccentric and not in the center of the channel, providing a more natural flow and aesthetic.
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 3. We propose greater amounts of wood installed and there are many different techniques that are safe for boaters and tubers but provide a healthy ecosystem for the aquatic biology [The bugs feed and proliferate on the woody debris and then become food source for the fish.] Logs can be installed looking similar to a random fallen tree along the bank that face either up or downstream that can be anchored by large boulders and and sit in holes to provide cover. Logs can also be installed to provide the same benefits as rock vanes, J hooks, v-weirs with one end buried in the bed of the channel and the other end buried in the riverbank while the middle is exposed providing a place for fish to get under and hide. Fish lunkers are constructed wood overhangs that can be built to look quite natural and provide ample cover for fish. These and other wood applications can add complexity to the stream bank and provide many small micro-eddys for additional aquatic habitat. Many of these techniques can be achieved to maximize the aquatic biology but also designed to be safe for tubers and boaters.
 3. Vertical banks on the outside bends of the thalweg can be stabilized with large boulders and safe woody debris and provide long shallow point bars on the opposite side of the river. These point bars are places where sand and gravel can deposit and provide low-gradient places for folks to get into the river.
 4. Consideration of lowering the grade upstream to lower the overall drop through this reach should be considered.
 5. Controlling the water access points is key and they should be designed to be consistent with fish 'habitat protection as well as bank preservation.
- It is the goal of the LWB to work in concert, cohesively with the BoT and under their direction with the town parks and rec as well as any engineers and construction contractors. If there is a way we can do this better please advise us.



Updated 50% Design Set





MATCHLINE - SEE SHEET L3.3

MATCHLINE - SEE SHEET L3.2

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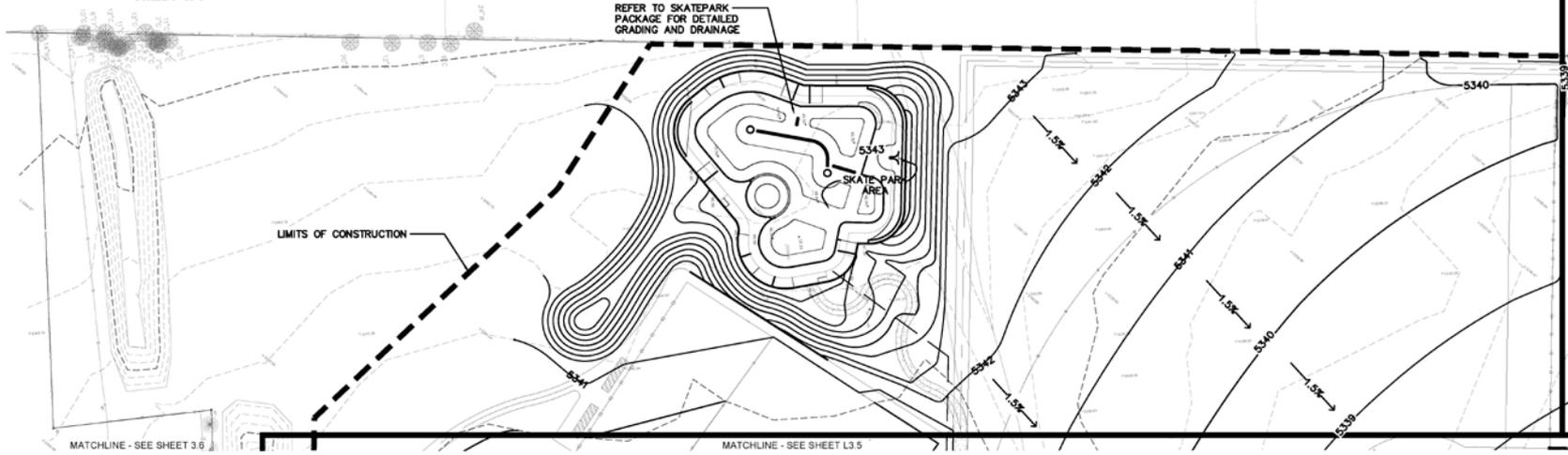
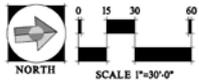
PROJECT NUMBER: 045
 16044.00 09/10/18
 DESIGNED: MW
 DRAWN: GC
 CHECKED: MW

REVISIONS:
 01 DESIGN DEVELOPMENT

GRADING PLANS

SHEET NUMBER:

L3.1
 SHEET X OF XX



REFER TO SKATEPARK PACKAGE FOR DETAILED GRADING AND DRAINAGE

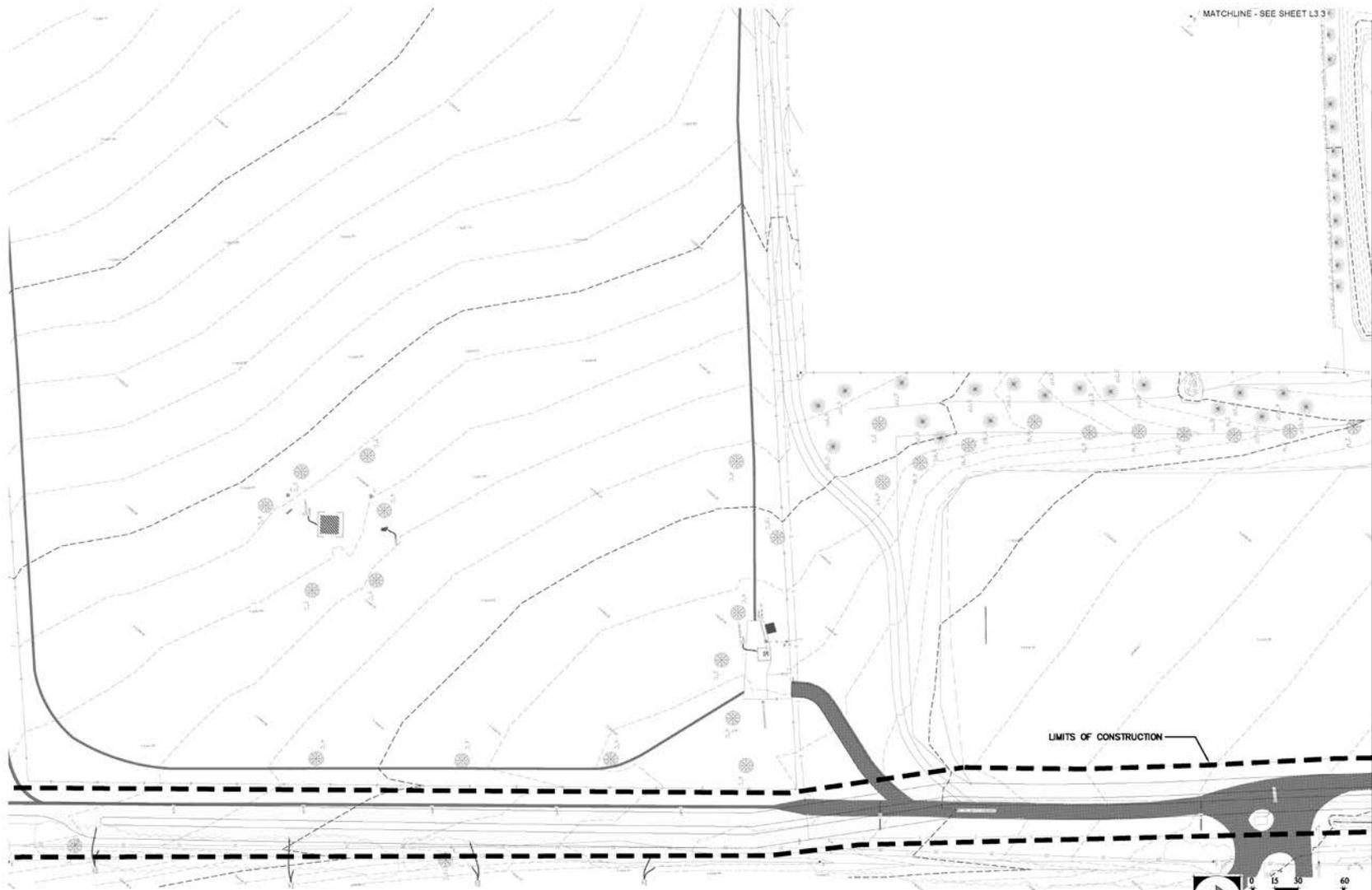
LIMITS OF CONSTRUCTION

SKATE PARK AREA

MATCHLINE - SEE SHEET 3.6

MATCHLINE - SEE SHEET L3.5

MATCHLINE - SEE SHEET L3.2



MATCHLINE - SEE SHEET L3.3

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MATCHLINE - SEE SHEET L3.5

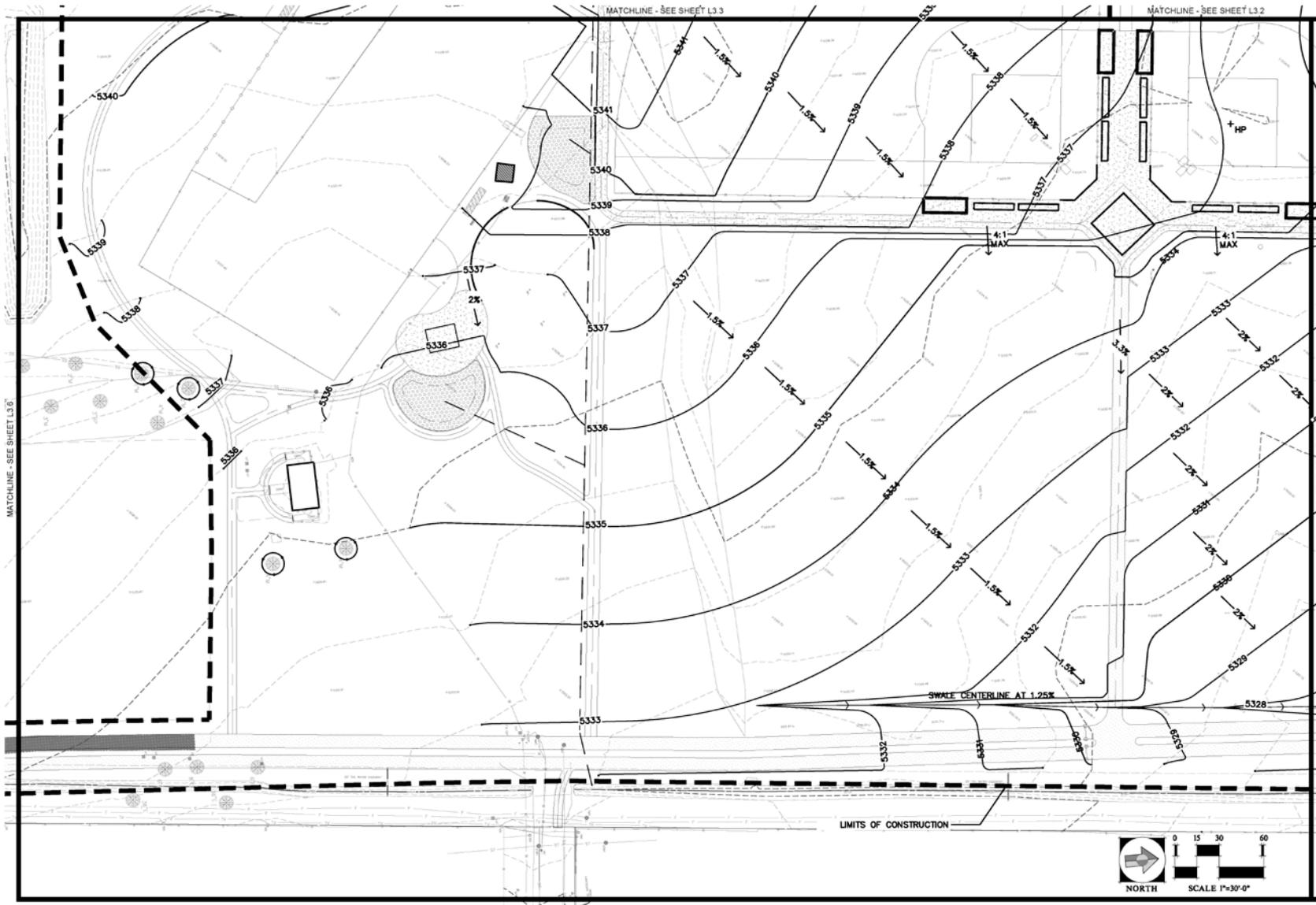
BOHN PARK
2016 FLOOD RECOVERY PROJECT
 Lyons, Colorado

PROJECT NUMBER: 16044-00
 DATE: 09/10/18
 DESIGNED: MW
 DRAWN: CC
 CHECKED: MW

REVISIONS:
 DESIGN DEVELOPMENT
 GRADING PLANS

SHEET NUMBER:
L3.4
 SHEET X OF XX





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 Lyons, Colorado

PROJECT NUMBER: 16044.00
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 DESIGNED: MW
 DRAWN: CC
 CHECKED: MW

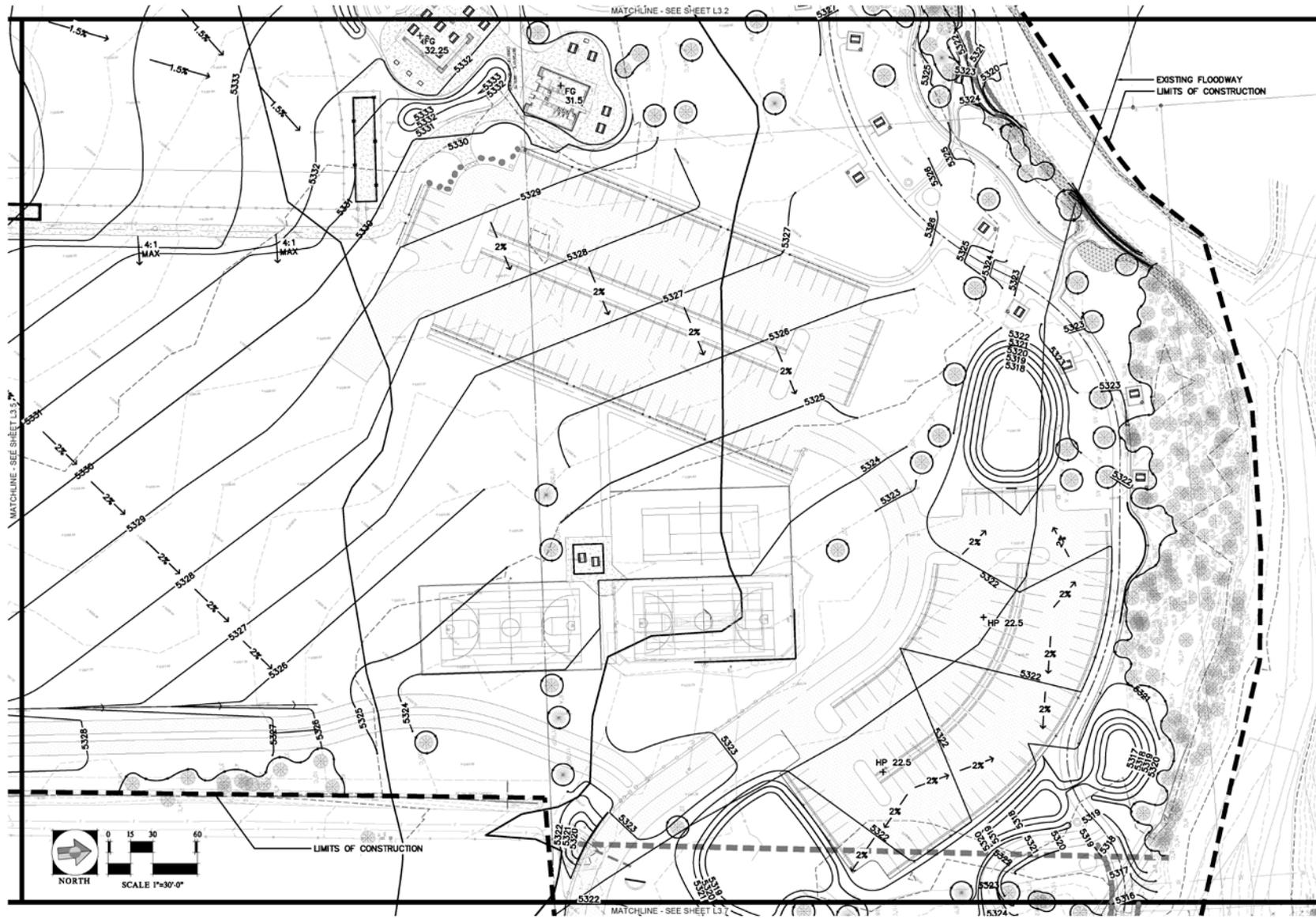
REVISIONS:

JOB SUPERVISOR:
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GRADING PLANS

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L3.5
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 Lyons, Colorado

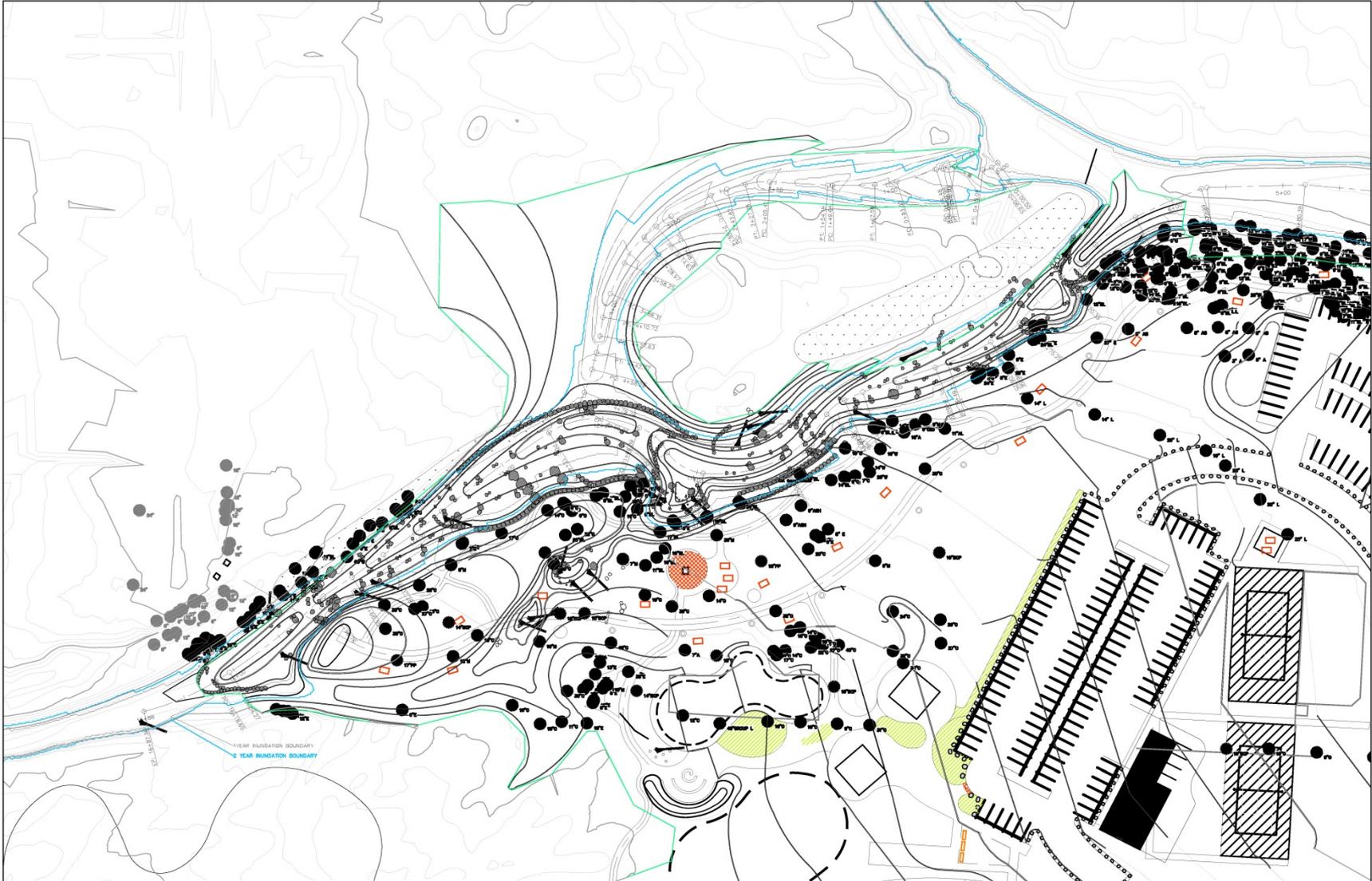
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 DATE: 09/10/16

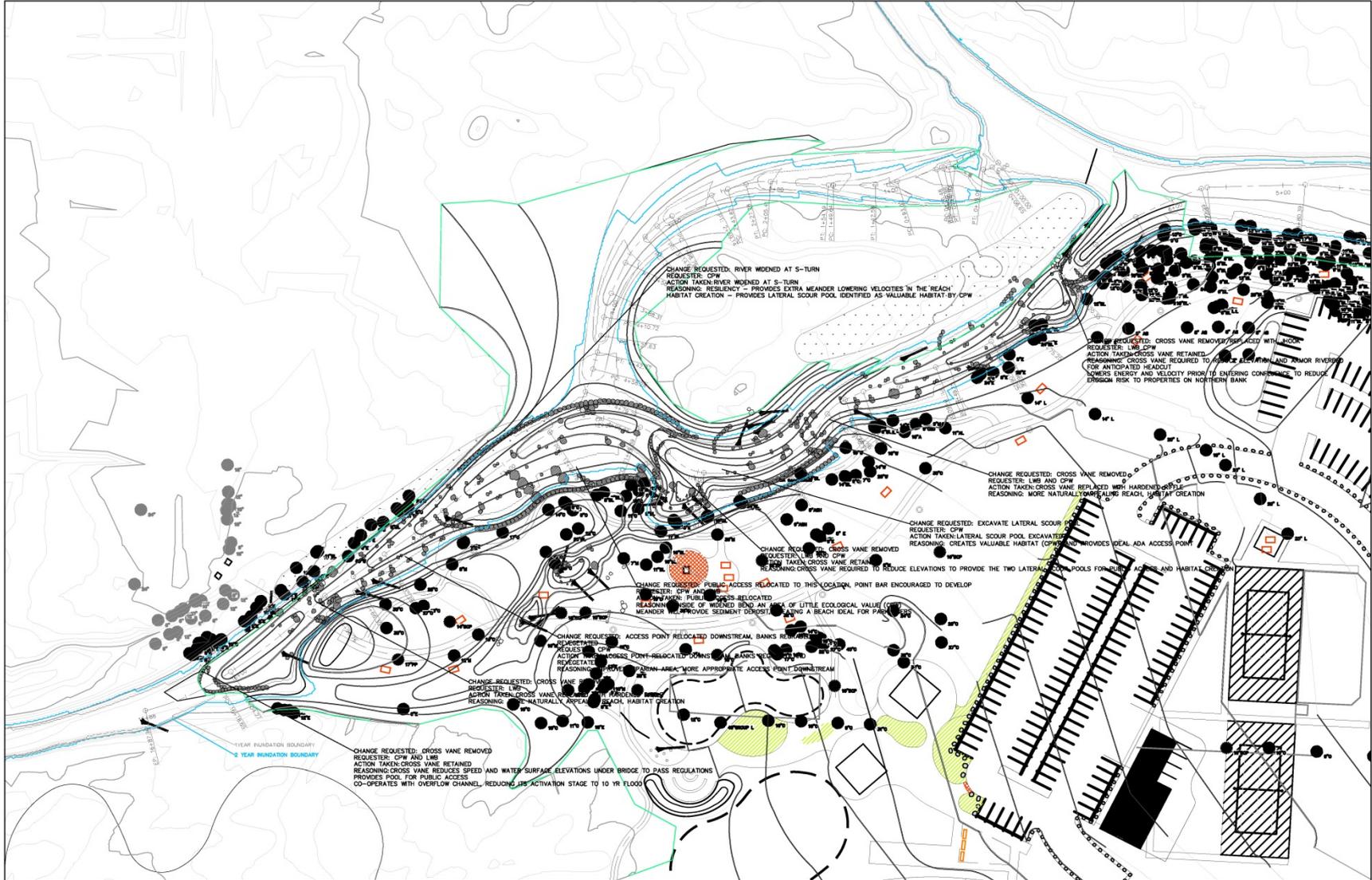
DESIGNED: MWW
 DRAWN: GC
 CHECKED: MWW

REVISIONS:
 NO DISPOSITION:
 DESIGN DEVELOPMENT

GRADING PLANS
 SHEET NUMBER:
 SHEET TITLE:

L3.6
 SHEET X OF XX







Balancing Multiple Objectives

Funding Sources

- FEMA PW20 & PW35
- Town Insurance-CIRSA
- Colorado Water Conservation Board-CWCB
- Community Development Block Grant-CDBG
- Donations and In-Kind Resources
 - Can'D Aid ,Colorado Rockies
- Colorado Parks and Wildlife – Fishing is Fun Grant
- LWCF – State Trails
- Various other sources

*based on reimbursement, prioritization of projects and cash flow impact the ability to complete projects.

Construction Costs...

- FEMA Parks Damage Assessment PW 20
- Whitewater Features Cost - Whitewater Damage Assessment - PW35

Construction Costs...

Bohn Park Flood Recovery Plan

Lyons Parks Flood Recovery Planning Process

Preliminary Cost Estimate

- November 4th, 2015 -

Prepared By: DHM/S20

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Miscellaneous Demolition / Debris Removal (5%)	LS	1	\$292,000.00	\$ 292,000.00
Earthwork	LS	1	\$100,000.00	\$100,000.00
Top Soil	LS	1	\$35,000.00	\$35,000.00
Crusher Fines	SF	148,034	\$2.50	\$370,085.00
Post Tension Sport Court	EA	3	\$65,000.00	\$195,000.00
Flood Memorial	LS	1	\$15,000.00	\$15,000.00
Gravel Paving (Vehicular Road)	SF	97,269	\$4.00	\$389,076.00
Concrete Curb Stop	EA	192	\$55.00	\$10,560.00
Playground Edger	LF	1,376	\$15.00	\$20,640.00
Concrete / Boulder Retaining Wall	LF	488	\$100.00	\$48,800.00
Baseball Field	EA	2	\$350,000.00	\$700,000.00
Baseball Backstop Fencing	EA	1	\$5,000.00	\$5,000.00
Baseball Field Pole Lighting	LS	1	\$175,000.00	\$175,000.00
Batting Cage	EA	1	\$10,000.00	\$10,000.00
Sand Volleyball Courts	EA	2	\$10,000.00	\$20,000.00
Soil Prep (Native Seed Only)	SF	838,094	\$0.12	\$100,571.28
Wood Mulch (Shrub Bed)	SF	25,000	\$0.80	\$20,000.00
Import Top Soil	LS	1	\$35,000.00	\$35,000.00
Bluegrass Sod w/ Soil Prep	SF	271,506	\$0.85	\$230,780.10
Native Seed (Hydromulch)	SF	838,094	\$0.07	\$58,666.58
Shrubs (5 gallon)	EA	600	\$50.00	\$30,000.00
Evergreen Trees (8'-10' Height B&B)	EA	45	\$500.00	\$22,500.00
Ornamental Trees (2" Caliper B&B)	EA	3	\$450.00	\$1,350.00
Deciduous Trees (3" Caliper B&B)	EA	110	\$500.00	\$55,000.00
Irrigation	LS	1	\$150,000.00	\$150,000.00
Shade Structure 1 - Prefabricated (150 SF)	EA	1	\$20,000.00	\$20,000.00
Shade Structure 2 - Prefabricated (800 SF)	EA	1	\$ 35,000.00	\$35,000.00
Shade Structure 3 - Custom (1,800 SF)	EA	1	\$ 180,000.00	\$ 180,000.00
Shade Structure 4 - Custom (400 SF)	EA	2	\$80,000.00	\$160,000.00
Restroom - Custom (900 SF)	EA	1	\$500,000.00	\$ 500,000.00
Small Playground	LS	1	\$ 65,000.00	\$ 65,000.00
Large Playground	LS	1	\$ 125,000.00	\$ 125,000.00
Bike Park Addition	LS	1	\$ 15,000.00	\$ 15,000.00
Skate Park	LS	1	\$300,000.00	\$300,000.00

Bouldering Wall	LS	1	\$60,000.00	\$60,000.00
Slackline Posts	LS	1	\$10,000.00	\$10,000.00
Picnic Tables	EA	34	\$1,500.00	\$51,000.00
Benches	EA	10	\$1,600.00	\$16,000.00
Grill	EA	20	\$ 250.00	\$5,000.00
Decorative Planters	EA	14	\$600.00	\$8,400.00
Trash Receptacles	EA	34	\$ 1,400.00	\$ 47,600.00
Split Rail Fencing	LF	440	\$15.00	\$6,600.00
Trail Entry Gates (Temporary Overflow Access)	EA	4	\$1,500.00	\$6,000.00
ADA Fishing Area	LS	1	\$32,000.00	\$32,000.00
Pump Pit / Well / Pump for Irrigation	LS	1	\$ 60,000.00	\$ 60,000.00
Park Host Site	LS	1	\$48,000.00	\$48,000.00
Ecological Restoration	AC	4	\$175,000.00	\$ 700,000.00
Bohn Park Stream Improvement	LS	1	\$ 415,000.00	\$ 415,000.00
4th Avenue Bridge (Abutments and Bridge)	LS	1	\$80,000.00	\$80,000.00
Subtotal			\$ 6,035,628.96	
15% Contingency			\$ 905,344.34	
10% Design & Permitting			\$ 603,562.90	
3% CA Services			\$ 181,068.87	
TOTAL \$			7,725,605.07	

Construction Costs...

- Detailed 50% progress designs
- Meadow Park Construction Bid Results
- Ongoing discussions with contractors and equipment manufacturers
- Construction market
- Increase in active parkland from 7 acres to 35 acres approximate
- 2nd Avenue Trailhead and Parking Lot
- Increase in irrigation

Construction Costs, Phasing and Cash Flow

Bohn Park Final Design

50% Design Cost Estimate
- July 18, 2016 -

items are currently funded by other sources

Prepared By: **DHM DESIGN** LANDSCAPE ARCHITECTURE
URBAN DESIGN + LAND PLANNING
ECOLOGICAL PLANNING



ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL	Notes	source	Planning estimate
General Conditions / Mobilization (5%)	LS			\$ 450,000.00		365000	
Miscellaneous Demolition / Debris Removal	LS	1	\$ 25,000.00	\$ 25,000.00			
Clearing and Grubbing	AC	26	\$ 3,500.00	\$ 91,000.00	sum of all areas	26	
Earthwork (Complete In Place)	CY	15,000	\$ 15.00	\$ 225,000.00	8000 from river		
Earthwork (Import / Fill)	CY	9,000	\$ 35.00	\$ 315,000.00			
Civil							
			Subtotal	\$ 496,073.50			
Electrical						AEDG	
			Subtotal	\$ 214,000.00			
River Restoration						S2O	
Area 1: Main channel	LS	1	\$ 401,631.00	\$ 401,631.00			
Area 2: South Overflow	LS	1	\$ 60,278.00	\$ 60,278.00	assuming 8000 haul off		
Area 3: Western Overflow	LS	1	\$ 105,631.20	\$ 105,631.20	may be covered by other funding pending FEMA approval		
Additional Excavator Time	LS	1	\$ 8,800.00	\$ 8,800.00			
			Subtotal	\$ 576,340.20			415000
Ecological Restoration						ECOS	
Ecological Restoration	AC	0.87	\$ 161,109.64	\$ 140,165.39			700000
Bohn Field (Lighted)							
			Subtotal	\$ 557,354.50			525000
Vasquez Field (Non-Lightd)							
			Subtotal	\$ 395,357.93			350000
Batting Cage							
			Subtotal	\$ 18,369.00			10000
Sports Courts							
			Subtotal	\$ 204,722.00			195000
Skate Park							
Skate Park (8000 SF)	LS	1	\$ 300,000.00	\$ 300,000.00	Pillar		
Skatepark (Additional 4000 SF)	LS	1	\$ 150,000.00	\$ 150,000.00	Pillar		
			Subtotal	\$ 450,000.00			300000

Construction Costs, Phasing and Cash Flow

Stone Picnic Area							
			Subtotal	\$	36,452.50	15000	
ADA Fishing Access							
			Subtotal	\$	40,590.00	32000	
Large Playground							
			Subtotal	\$	168,406.30	135000	
Small Playground							
			Subtotal	\$	33,954.30	75000	
Climbing Area							
			Subtotal	\$	115,735.20	60000	
Bike Park							
			Subtotal	\$	13,550.00	15000	
Slackline Area							
4th Avenue Bridge							
			Subtotal	\$	160,000.00	80000	
Landscape							
			Subtotal	\$	643,099.52		
Structures							
Restroom - Custom (1085 SF)	EA	1	\$	596,750.00	\$	596,750.00	BRS
Shade Structure 1 - Custom (1085SF)	EA	1	\$	238,700.00	\$	238,700.00	BRS
Shade Structure 2 - Craftsman Gable 30' X 30' with square columns and stone wrap	EA	1	\$	50,000.00	\$	50,000.00	ICON
Shade Structure 3 - Craftsman Gable 20' X 20' with square columns	EA	1	\$	25,850.00	\$	25,850.00	ICON
Shade Structure 4 - Craftsman Gable 15' X 20' with square columns	EA	1	\$	18,906.00	\$	18,906.00	ICON
Community Center / Office Buildings	EA	1	\$	850,000.00	\$	850,000.00	BRS
			Subtotal	\$	1,780,206.00	815000	
Site Furnishings/Misc.							
			Subtotal	\$	1,174,447.50		
Irrigation							
			Subtotal	\$	908,161.28	210000	

Subtotal \$ 9,234,985.11 \$ 7,207,033.69
 10% Contingency \$ 923,498.51 \$ 720,703.37

TOTAL	\$ 10,158,483.63	Modified Cost \$ 7,927,737.06	Allocated Budget \$7,500,000
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* Modified Costs assumes donated material, removal of skate park, no parks building, removed overflow channels, removed topsoil from native areas, limited irrigation to active park areas

Parks Next Steps...

- Project hurdles
 - Floodplain regulation
 - Permitting
 - Funding
 - Cash flow
 - Bidding Process
 - 1 bid package
 - Phasing based on cash flow
 - Multiple Bid Projects

Parks Next Steps...

- Final Design Bohn Park Summer / Fall 2016
- Phasing and Implementation Strategies based on available funding and cash flow
- Timelines
 - Bohn Park Construction—Fall 2016 to Summer 2017
 - LVRP – Winter 2017/ Spring 2018 (projected)

Questions and Answers?



THANK YOU!

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