

STEINER
THUESEN
PLLC

LANDSCAPE ARCHITECTURE
IRRIGATION DESIGN
GOLF COURSE ARCHITECTURE

EXPERIENCE *and*
INNOVATION

LANDSCAPE ARCHITECTURE



WHAT IS LANDSCAPE ARCHITECTURE?

We often do not see the work of landscape architects because it would never occur to us to look. Can a casual observer simply “look” at a two-million-acre wildlife refuge or walk through a bustling urban plaza and see what a landscape architect has done? Does it occur to someone immersed in an exciting zoo habitat or resting at a scenic parkway overlook that these could be examples of landscape architecture?

Although the landscape is visible its design often is not.

For over a century, landscape architects have been shaping our land. Their work entails preserving, planning, designing and managing the land to successfully blend the qualities of nature with the needs of people.

Landscape architecture is one of the most diverse design fields, combining art, science, engineering and technology in a profession that creates new cities, preserves wildlife habitats and designs recreational spaces. In so many areas, the work of landscape architects shapes the environments where we live, work, relax and renew ourselves.

As landscape and golf course architects, the focus of our work is the outdoor environment. In addition to site architecture and planning, our specialized expertise includes earthwork design, horticulture, irrigation and drainage design. We are uniquely qualified to design outdoor spaces and landscapes.



“For over a century, landscape architects have been shaping our land.”

FIRM PROFILE

Steiner Thuesen PLLC is a Landscape and Golf Course Architectural Firm located in Billings, Montana. The principal is a Registered Landscape Architect who has practiced in Montana and the northern Rocky Mountain region since 1973, providing the firm with a thorough understanding of the region’s unique climate, plant materials and construction challenges. This experience is applied to each of our projects.

Founded in 1984, the practice has focused on providing creative yet practical solutions to site design and golf course architectural challenges with special attention given to client responsiveness and quality of the constructed product.

The firm provides a full range of services including master planning, site design, construction document preparation, estimating, and periodic construction observation. Recent contracts have enlisted the firm’s services for community and regional parks, sports facilities, new construction and remodeling of golf courses, site improvements for retail centers and state universities, and major irrigation projects. Our experience with construction of projects is invaluable in developing realistic budgets, buildable plans and accurate cost estimates for planning and design projects.

KALISPELL YOUTH ATHLETIC COMPLEX AND PARK

Kalispell, Montana



This project includes master planning, cost budgeting and phasing, and preparation of detailed construction documents for a large scale athletic park located adjacent to Flathead Community College between Kalispell and Whitefish, Montana. The project scope included development of the 145 acre site with eight soccer fields, eight softball fields built to ASA specifications, eight Pee Wee Baseball fields, three Babe Ruth Baseball fields, and ancillary facilities including concessions, restrooms, utilities, roads and parking, landscaping and automatic irrigation. The development will also include traditional park and green belt spaces, two playgrounds, walking paths and trails, and an interpretive area. Ultimately, the project will serve as a regional athletic complex representing an investment in excess of \$5 million.

This large project is being addressed by a team of three consulting firms including Steiner Thuesen PLLC, Sitescape Associates, and Carver Engineering. Our role on the team is to assist the local firms with park and athletic facility planning and design expertise for development of the master layout plan, cost projections and phasing. Steiner Thuesen PLLC was also solely responsible for planning and design of the parks irrigation system, drainage systems, and special playfield design elements. The first phase of construction was completed in 1998.

AMEND PARK

Billings, Montana



A multi-use park master plan was prepared for this 60 acre community park in association with Fischer Associates in 1984. This far sighted plan envisioned four groups of multiple use sports fields, traditional park uses such as picnics and trails, tennis courts, volleyball, basketball, an amphitheater and expandable parking. Storm water detention facilities were integrated with the design.

More recently the park master plan has been revised to develop the park as a dedicated soccer facility under a partnership agreement with the Magic City Soccer League and the Amend Park Development Council. The new plan provides 5 soccer field complexes of two fields each, with a centralized concession and parking field. Steiner Thuesen PLLC designed the irrigation system for the entire park under the new master plan. Construction of the soccer field complexes and associated parking fields were completed in 1999.



NORTH CASPER PARK SOCCER COMPLEX

Casper, Wyoming

A master plan for site development and detailed irrigation and planting construction documents were provided to expand this city park. Fourteen soccer fields were arranged on 35 acres, along with roads, parking, a concession and emergency vehicle access. Steiner Thuesen PLLC provided the master plan and cost estimating for the project as well as construction documents and construction observation of the irrigation system.

The master plan integrated the new fields into the existing park environment while extending the Platte River Trail along the north side of the park. In addition to the fields the plan addressed parking, emergency vehicle access, siting of a concessions and restroom building, drainage and park landscaping. The project budget was prepared based upon the completed master plan, and bidding strategies for alternatives were developed.

The irrigation system was designed to operate with the City's centrally computer controlled, radio communicating City wide control system. This state of the art system controls all irrigation scheduling for all parks within the City. Since the communication between satellite controllers and the central computer is bi-directional, it is able to constantly monitor the irrigation system performance while in operation, and to make

appropriate scheduling adjustments on the fly in response to localized precipitation events throughout the City. The irrigation system also featured an effluent water ready design for future water source conversion.



The pumping plant was custom designed for this project by our firm. It is controlled using solid-state digital logic to automatically respond to changing pressure and flow conditions out in the system.

The project hosted the Snickers Western Regional Youth Soccer Tournament in the fall of 1996. Project cost was \$2.3 million.



STILLWATER BALLFIELDS

Colstrip, Montana

An existing softball tri-plex was remodeled into two softball fields and one Legion Baseball field. Each was equipped with underground drainage and all-weather infields. Later phases of the project included installation of lighting and remotely controlled scoreboards on the Legion field and one softball field.



"We now have virtually a rain-out proof ball complex which has been torture-tested this past spring."

*Rick Harbin, Executive Director
Colstrip Park and Recreation District*



STEWART PARK

Billings, Montana



Stewart Park has long been the baseball park in Billings. In 1987 our firm was retained by the city to master plan the long range development of the park complex. The plan that evolved included a second tri-plex of fields, several outlying fields to serve specific age groups, a playground, picnic area and expansion of parking facilities and roads.

In 1988 a private concessionaire approached the PRPL Department concerning construction of a commercial batting cage facility within the park. We revised the master plan to accommodate this facility, which remains the sole private concession within the Billings parks system.

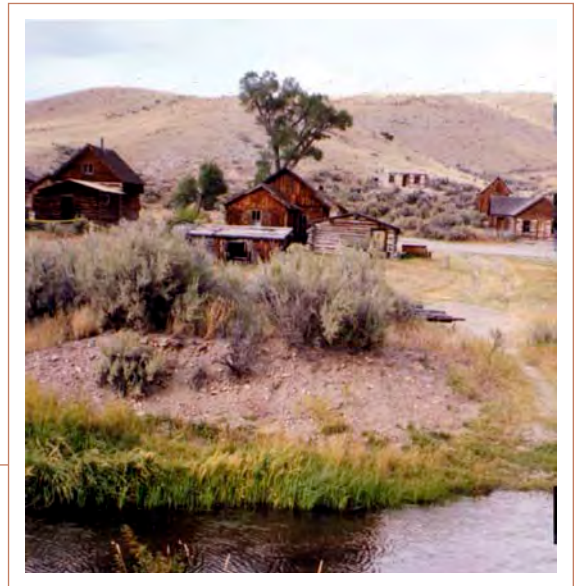
The following year the Billings MET Transit authority received funding for a passenger transfer facility in west Billings. Stewart park was the natural site for this facility since it is adjacent to major shopping facilities, high density housing and the park. The funding included mitigation monies which were used to construct the athletic oriented aspects of the park per the master plan and to complete the irrigation system. The construction design of these facilities was completed in association with Engineering, Inc. of Billings.

Our firm was retained by the Billings Department of Parks, Recreation and Public Lands (PRPL) in partnership with the Billings Men's and Women's Softball Association to renovate the five older fields at the south end of the park by fitting them with new all weather infields similar to the new tri-plex constructed from our plans on the north end. Construction of these improvements was completed in 1999.

BANNACK STATE PARK

Bannack, Montana

Preliminary studies were conducted, laying the groundwork for a master plan for the park. Current park usage and management practices were researched, alternative land use plans were developed, and charette style workshops were held to assist setting goals for future park management and appropriate facilities development. An informal inventory of park visual resources and viewsheds was also conducted, resulting in preliminary siting recommendations for facilities suggested by the workshops.

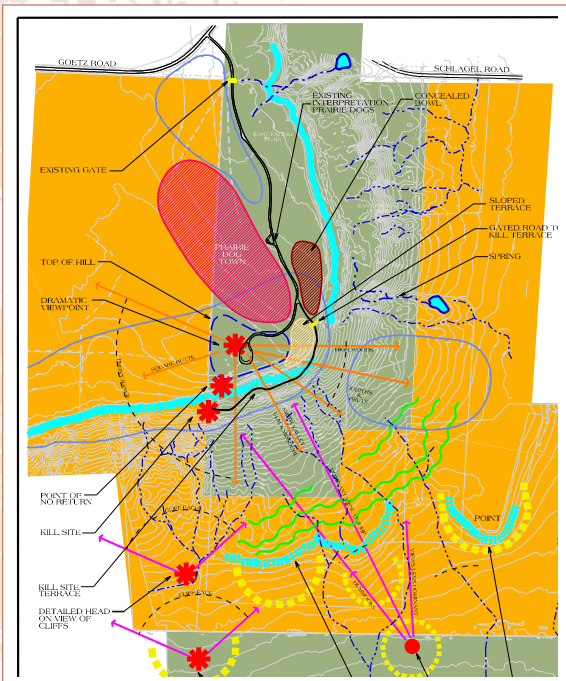


ULM PISHKIN STATE PARK

Ulm, Montana



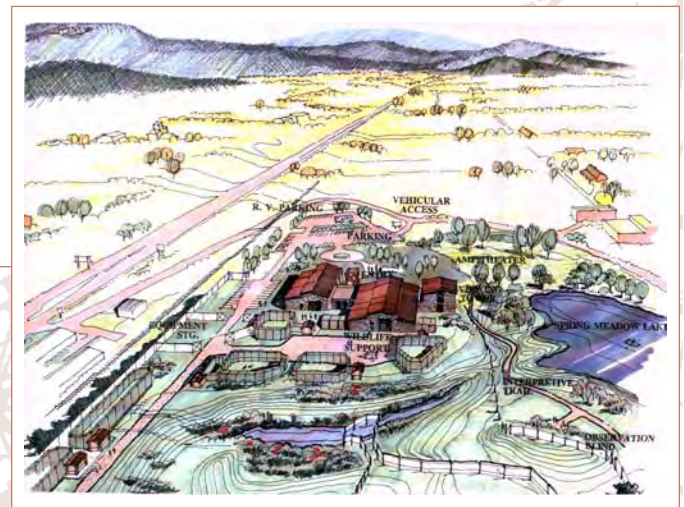
Master planning was completed for this historic buffalo jump as part of an overall park improvements package. The plan, prepared in association with Place Architecture, was responsible for siting the proposed visitor center and conceptually resolving visual resource issues. Vehicular and pedestrian circulation on the site were addressed by the plan as well.



SPRING MEADOW LAKE STATE PARK

Helena, Montana

Steiner Thuesen PLLC and Davidson Kuhr Architects teamed up to prepare a long term master plan for this state park located in a developed urban area. The plan, prepared for Montana Department of Fish, Wildlife & Parks, and the Mikal Kellner Foundation for Animals, proposed creative re-use of the historic Stedman Foundry buildings as expanded facilities for the Department's Wildlife Rehabilitation Center, an interpretive and outdoor classroom facility, and a sub-regional office for the agency. The plan also addressed the park development including trail systems, vehicular systems and management, and activity zoning.



The design firms have recently been retained to prepare construction designs for phase one of the Wildlife Rehabilitation Center, which is scheduled to be operational in this location beginning in spring 2002.

HAWTHORNE PARK

Billings, Montana

Construction documents and project management were provided to build an accessible playground, wading pool and restroom/shelter building in this city park. The wading pool was the first in Montana to be constructed under the new 1992 Department of Health rules, and complies fully with all turnover, chlorination and filtration requirements.



LANDSCAPE ARCHITECTURE

BILLINGS PARK MASTER PLANS

Billings, Montana



This project, completed in the spring of 1995, involved preparation of neighborhood park development master plans for four west-end parks. The planning process used actively involved the neighborhoods in formulation of the programs and drawing out the plans. Workshop materials from early meetings were built upon throughout the process, illustrating the design evolution and response to issues, leading to rapid and enthusiastic acceptance of the proposals.

Palisades Park: PROGRAM RESPONSE

Neighborhood Park Development

- address drainage
- playground/tot lot
- multi-purpose open space area
 - field sports
- picnic tables & park furnishings
- trails/circulation system
- landscaping and trees
 - buffer neighboring properties

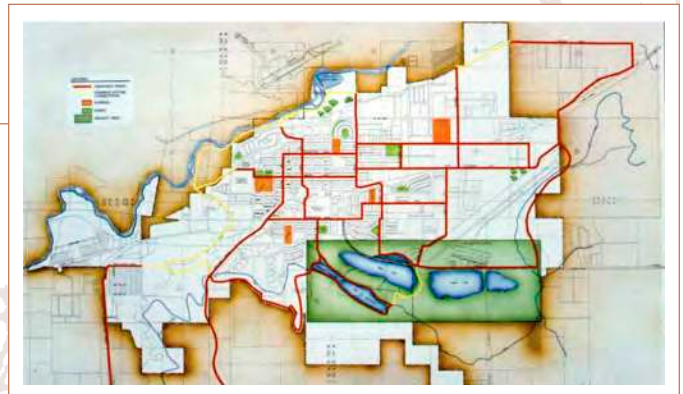


BECK LAKE RECREATION AREA MASTER PLAN

Cody, Wyoming



A master plan for long-range development of this 2,000 acre natural area containing four lakes was prepared. The low impact plan provides an extensive trail system, with strong linkage to the city trail and bikeway system, as well as a full compliment of day-use facilities. The master plan was instrumental in creating strong support for the project, paving the way for funding and facility construction.



"The public meetings you conducted were very professional and accomplished our goal of getting positive public support for the project."

Stephen M. Hollingsworth, Director of Parks & Public Facilities

RIVERSIDE PARK MASTER PLAN

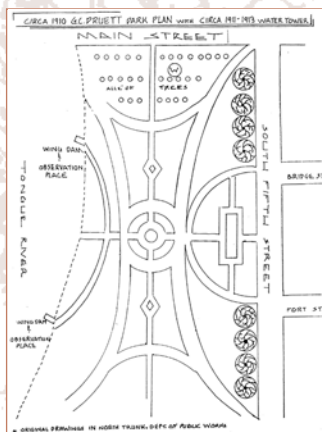
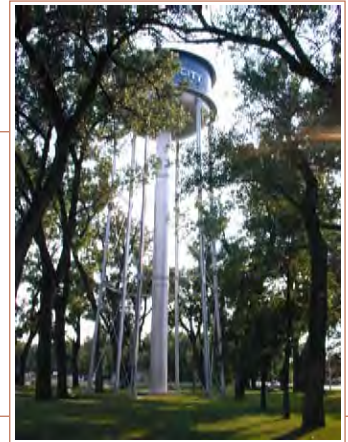
Miles City, Montana

Riverside Park has served Miles City as a place of gathering and recreation since its establishment in 1850. Steiner Thuesen PLLC and Stevenson Design, a local architect, were commissioned to develop a Master Plan for the revitalization of the nine acre park. The two primary goals of the plan were: 1) to provide a quality park development for the citizens of Miles City, and 2) encourage visitors to stop and learn about the past, present, and future of Mile City.

A public meeting was held to receive input and discuss ideas for improving the park. The following main program items are a result of the meeting: park image, restroom/visitors center, traffic and parking, signage, pedestrian circulation, plant material, security, and improvements/amenities.

Using the original Circa 1910 G.C. Pruett Park Plan as a reference, a series of tree-lined pathways were developed through the park providing pedestrian circulation to each key area of the park. In addition to the proposed circulation enhancements, the following improvements are planned:

- Seating and lighting along pathways.
- Boardwalk with viewpoints across Scanlan Lake.
- Entry plazas enhancing curb appeal.
- Signage
- Interpretive displays.
- Group activity areas.
- Semi-private and group areas.
- Amphitheater and stage.
- Relocated playground.
- Restroom facilities.
- Visitor information area.
- Two new parking lots.
- Tree replacement plan.



With the implementation of the Master Plan, access to Riverside Park will be enhanced, the overall image improved and the park and the surrounding area will be increasingly inviting to the public while providing a means of telling visitors about the past, present, and future of Miles City. The cost to implement the improvements included in the Master Plan is estimated at \$1,500,000.

LANDSCAPE ARCHITECTURE

CENTENNIAL PARK CONCEPT PLAN

Powell, Wyoming

The Centennial Park Concept Plan represents an effort to provide a quality park development for the citizens of Powell. Centennial Park will provide active recreation through miniature golf, frisbee golf, playgrounds for different ages, a splash playground, walking paths, fitness stations, and sledding. Passive recreation will be provided through picnic areas, open space, seating, and a pavilion.

A public design charette was facilitated by Steiner Thuesen PLLC to receive input and discuss ideas for the park plan. The information obtained was combined with specific site information in development of the Program and Concept Plan.

The Program defines the requirements or goals that are to be accomplished through the planning process and are represented graphically in the concept plan drawing.

Park Image

- Active use
- Positive curb appeal
- Inviting

Activities

- Miniature golf course
- Active playgrounds
 - 3-5 yr. old area
 - 5-12 yr. old area
- Fitness stations
- Picnic areas
- Frisbee golf course
- Splash playground
- Sledding hills
- Walking paths
- Open play area

Amenities

- Seating in active use areas
- Drinking fountains
- Grills at picnic areas
- Street and shade trees
- Evergreen trees
- Ornamental landscaping
- Trash receptacles
- Plaza area for public events.
- Berms to provide character and aid in drainage.
- Signage
 - Entry
 - Informational signage with maps of the site, golf course, frisbee golf course, and trail routing.
 - Safety

Facilities

- Main entrance
- Restroom facilities
- Miniature golf rental
- Pavilion & Plaza
- Covered group area
- Donor Area
- Concessions
- Frisbee golf rental
- Portable stage

Facilities (cont.)

- Parks maintenance facility
 - Office space
 - Fenced equipment yard
- Parking
 - 50 interior spaces
 - Parallel along Cedarwood Street & Springhill Road
- Automated irrigation
- 3 Bay shop
- Parking

Security

- Lighting at miniature golf course
- Pathway lighting



CENTENNIAL PARK

Helena, Montana

Conversion of the old City landfill to a community park has been an on-going process in Helena for the past 14 years, dealing with a variety of planning, environmental and political issues. These efforts will come to fruition when construction begins on the initial phase of the \$9.1 million plan in early spring 2010.

The project is enabled through a unique public/private coalition, lead by the City and involving several active user group development partners. Steiner Thuesen PLLC was the lead consultant on the design team providing the final master plan, design development drawings, construction drawings, and full construction period services for the 50-acre multi-use park. Other team members included Great West Engineering, Design 3 Engineering, and PRZ International.



The planning process included meetings with individual stakeholders, community members, as well as review meetings with multiple City departments, consultants, and governmental agencies. The park master plan includes a softball complex, soccer fields, sport courts, shelters, a playground, multi-use trails, a free ride bicycle course, bouldering/rock climbing facility, dog park, landscaping, and irrigation.

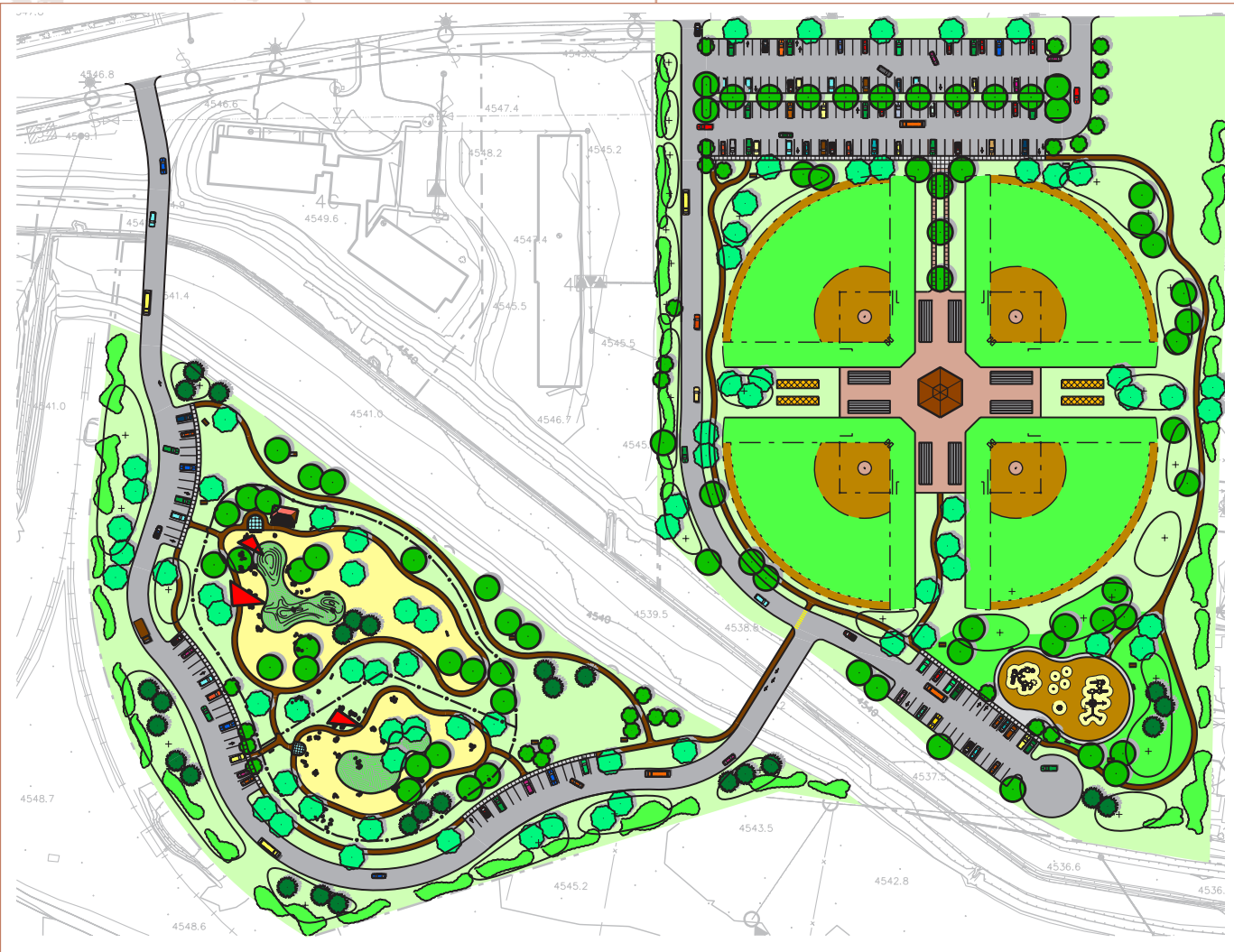


LANDSCAPE ARCHITECTURE

CAMPBELL COUNTY WOMEN'S SOFTBALL PARK MASTER PLAN

Gillette, Wyoming

Steiner Thuesen PLLC provided master planning and cost estimating for a new \$4.6 million women's softball complex and park. Park amenities include four softball fields, restroom and concession building, trails throughout the development, playground, multi-use areas, dog park, parking, landscaping, and irrigation. Benches and picnic tables will be placed throughout the park. Native grass will be planted in the majority of the non-athletic use areas in order to reduce the amount of irrigated turf on the site consistent with the City of Gillette's conservation initiative.



UNIVERSITY OF MONTANA INTRAMURAL PLAYFIELDS

Missoula, Montana



When construction of the new Business Administration Building displaced the “Clover Bowl” lawn a new site for intramural sports was needed. The site selected by the University was sloping, rocky and without irrigation service. As consultants to L'Heureux Page Werner Architects, a concept was developed siting four touch football soccer sized fields in two groups, so that the grade could be absorbed. This arrangement also permitted each terrace to host one regulation sized softball field. Vegetative waste delivered to the site by the University was supplemented with locally available composted sawmill shavings to create a resilient topsoil surfacing where none existed previously. The fields were irrigated by accessing two stubs from the University Golf Course irrigation system, which we had previously designed.



MONTANA STATE UNIVERSITY BILLINGS NCAA SOCCER FIELD

Billings, Montana

A landscape master plan was prepared for the south campus area at MSUB College of Technology. Goals of the plan were to provide an attractive landscaped “front door” to the campus, using design elements and signage similar to the main campus, while siting needed athletic facilities, including a game field for the men’s and women’s soccer programs.

The soccer field is framed by mounding to provide elevated viewing for the games. Since the field was constructed of native clay soils, without amendments or underground drainage, surface drainage was extremely important to maintain field playability. Specialized underground irrigation equipment is used to eliminate the possibility of player injuries and to provide a high degree of control for the applied precipitation, enhancing the grounds staff ability to maintain vigorous healthy turf conditions.



LANDSCAPE ARCHITECTURE

GRIZZLY STADIUM RENOVATION

University of Montana - Missoula, Montana



Steiner Thuesen PLLC was retained by the University of Montana in June 1999 to renovate the natural grass turf playing field at Grizzly Stadium. This was a formidable task with only 60 days for construction and turf establishment before the first game.

From soil samples and analysis of the existing turf conditions it was determined that the inability to grow a vigorous turf on the field was related to the materials and mixing methods employed in construction of the original root zone. Since funds were extremely tight a plan was devised to recycle the existing root zone mix with new materials to create a new root zone specifically tailored to the seasonal and wear conditions experienced at this field. The old root zone was removed, and the new mix was blended and placed. The field surface was rolled and tightly graded. Specially prepared sod was then laid over the new root zone mixture.

In addition to preparing the root zone an aggressive fertilization and maintenance program was created to push rooting and development of the sod. At the time of the first game, only 40 days after the sod was laid, root development had reached 6 - 7", or more than 3 times the historic rooting depth.



MONTANA STATE UNIVERSITY- BILLINGS NCAA WOMEN'S FAST PITCH SOFTBALL FIELD

Billings, Montana



Steiner Thuesen PLLC was commissioned to evaluate and make recommendations for site selection and to design the new NCAA Women's Fast Pitch Softball Field at Montana State University- Billings.

Bjorgum Field adjacent to the field house was selected as the site for the new Softball Field. The intramural program uses this field extensively and was a major consideration in the design. The new field was successfully positioned on the site in a manner allowing for continued use by the intramural program.

In addition to the custom designed, free draining infield, constructed of locally available materials, the new design includes seating for 200 spectators with room for expansion, lighting for both the softball and intramural fields, and provisions for future concession and restroom facilities. The existing quick coupler irrigation system was remodeled and automated providing the softball field with its own dedicated irrigation system in addition to the rest of the intramural field.

Construction of the new Softball Field was completed in 2001.



POLSON SCHOOLS HIGH SCHOOL ATHLETIC COMPLEX

Polson, Montana

Steiner Thuesen PLLC and L'Heureux Page Werner Architects worked together to develop Master Planning Documents for the new Polson Athletic Complex.



Following approval of the Master Plan, construction document preparation began. The fourteen acre facility included the design and construction of a practice football field, soccer field, main football field, an all-weather



surface, 10-lane track with associated field events, automated irrigation system, and a grandstand. The site chosen for the development required the sub-surface relocation of an irrigation canal, and grad-

ing plans to accommodate an elevation change of fifty-eight feet across the site. The site development represents approximately \$825,000 worth of construction.



LANDSCAPE ARCHITECTURE

BAKER CITY SCHOOLS HIGH SCHOOL FOOTBALL FIELD

Baker, Montana

The Baker High School Football Field was replaced during the mid 1980's. Subsurface drainage, a ten inch sand base, automated irrigation, and sod were installed as part of the replacement. After several years the turf declined to an almost unplayable condition. Maintenance procedures used were unsuccessful in returning the field to its previously healthy condition.



Steiner Thuesen PLLC was retained in the spring of 2002 to provide a renovation design for the field. Soils tests revealed a shallow root zone comprised of sand high in sodium with very little organic material. Additional tests revealed irrigation water with an extremely high salt content.



In response to the poor conditions, a custom soils amendment program was developed and implemented. This program included removal of the existing turf, incorporation of topsoil, compost, gypsum, sulfur, and specialized liquid fertilizers.



Following the installation of the amendments, the field was laser leveled in preparation for installation of specially grown athletic type sod.



A program has been developed prescribing maintenance procedures and continued soils monitoring for the newly reconstructed field to assure its continued quality and playability.



GREAT FALLS YOUTH SOCCER PARK

Great Falls, Montana

The design team of Steiner Thuesen PLLC, PRZ International, and TD&H Engineering Consultants was retained to develop a master plan, prepare construction documents and oversee construction of a new 70-acre soccer complex for the City of Great Falls.

Steiner Thuesen PLLC was lead in overseeing all master planning efforts. In addition to meetings with the soccer committee, several public meetings were held. Through the process, a master plan was developed that achieved the goals set forth by the soccer committee and the community. The goals included the construction of 15 fields, adequate parking, a pavilion with a concession area, restrooms, meeting and changing rooms, covered patio area, and landscaping. Through the implementation of this project, a beneficial public-private partnership representing the AYSO, Electric City Youth Soccer, High School and Adult Soccer groups, the City of Great Falls, and the Great Falls School District has been created.

Fields can be rotated 90 degrees allowing play at concentrated wear areas to be reduced. Each field will accept multiple layouts of smaller fields allowing play for all age groups.

A system of pathways runs throughout the site providing access to all of the fields. This network of paths also serves as jogging and walking paths, cross-country ski trails, etc. A maintenance yard and shop are located at the southwest corner of the site.

The underlying goal of the soccer fields is to develop a turf that will grow as fast or faster than it is being worn off through play.



This was accomplished by strict construction standards and by the incorporation of amendments to produce a growing medium capable of sustaining healthy turf. An incubated seeding process was used resulting in germination within 4-6 days.

Following approval of the master plan, Steiner Thuesen PLLC focused on the design of a state of the art irrigation system that is supplied by city water. The control system will monitor the weather and adjust run times based on the daily weather. This will aid tremendously in keeping maintenance expenditures as low as possible by eliminating over-watering and detecting any problems that develop in the system during operation.



LANDSCAPE ARCHITECTURE

LIVINGSTON YOUTH SOCCER PARK

Livingston, Montana

Steiner Thuesen PLLC was retained to provide assistance in site selection, develop a master plan, prepare construction documents and assist during construction of a new 20-acre soccer complex for the Livingston Youth Soccer Association and the City of Livingston.

Through the process of collecting site information and meeting with different stakeholders, a master plan was developed that achieved the goals set forth by the soccer committee and the community. The goals included the construction of 4 fields, adequate parking, a pavilion with a concession area, restroom facilities, meeting and changing rooms, and landscaping.

The site that was selected presented several challenges in terms of grading and drainage as well as layout of the



fields and surrounding amenities. Steiner Thuesen PLLC provided all aspects of the site design including:

- Layout
- Grading
- Drainage
- Athletic Field Design
- Park Facility Design
- Irrigation
- Phasing Plans
- Cost Estimating

The two main fields can be rotated 90 degrees allowing play at concentrated wear areas to be reduced. Each field will accept multiple layouts of smaller fields allowing play for all age groups.

A system of pathways runs throughout the site providing access to all of the fields. Picnic areas and benches are placed along the pathway for use by soccer fans and park users.

The underlying goal of the soccer fields is to develop a turf that will grow as fast or faster than it is being worn off through play. This will be accomplished by strict construction standards and by the incorporation of amendments to produce a growing medium capable of sustaining healthy turf.

The initial phase of construction was completed in 2010.



UNIVERSITY OF MONTANA BUSINESS ADMINISTRATION BUILDING

Missoula, Montana



Overall site development concepts, and construction documents for landscaping and irrigation systems were provided to L' Heureux Page Werner Architects, of Great Falls. An addition to the project commissioned design of four intramural football/soccer fields and two softball fields off-site to replace the loss of the "Clover Bowl" lawn to the building project.



LANDSCAPE ARCHITECTURE

CAMPBELL COUNTY SCHOOL DISTRICT ELEMENTARY SCHOOLS

Gillette, Wyoming



As a consultant to JGA Architects, Steiner Thuesen PLLC provided planning and design services for Hillcrest, Prairie Wind, Buffalo Ridge, and Lakeview Elementary Schools in Gillette, Wyoming. Specific input from teachers and other school district employees were incorporated into the playground designs. Two separate play structures were provided at each school to provide safe play for kindergarten through second grade students and the third grade through sixth grade students. Attention was given to play events that encouraged social interaction in addition to providing a high level of play value.

Landscape and irrigation plans were developed for the site as well. The landscape plan utilizes a combination of large shade, smaller ornamental, and evergreen trees throughout the site to create an inviting atmosphere. Small sports fields were provided at each of the sites for use during physical education classes and as neighborhood soccer fields. Matching benches and trash receptacles are provided at the school entrance and the playground areas.



The irrigation system was designed in a manner that allows all irrigation to take place within the current time frame prescribed by the City of Gillette. The system is fully automated and designed to take advantage of the school district's future implementation of a central irrigation control system.



HELENA AVIATION READINESS CENTER

Helena, Montana

Steiner Thuesen PLLC was retained by Schlenker & McKittrick Architects as an integral member of the design team responsible for site planning and design associated with the Helena Aviation Readiness Center renovation. The design provides a clean and simple, yet interesting solution that emphasizes grassing varieties and sculpted earth contouring as functional design elements. Trees and ornamental plantings are used sparingly. The circulation patterns and lines are also key design elements, as are the circular forms, keyway shaped front walk and compass vectors integrated into the paving. Additional design features include a water feature, retaining walls, sunken and elevated plazas, and colored concrete. The sculpted earth mounds and retaining walls contribute to the force protection goals of the project.



Storm water is collected from the parking lot, building, and site and directed through a series of depressions or bio-swales that pre-filter the water as it drains to a centrally located storage location. Water is pumped from the storage pond to provide irrigation for the plants and lawn areas as needed. The use of plant materials with low water requirements and rainwater capturing efforts are integrated for passive and active irrigation methods. Additional storage for water harvesting is located under the parking areas.

The project is designed to achieve a LEED rating of Silver.

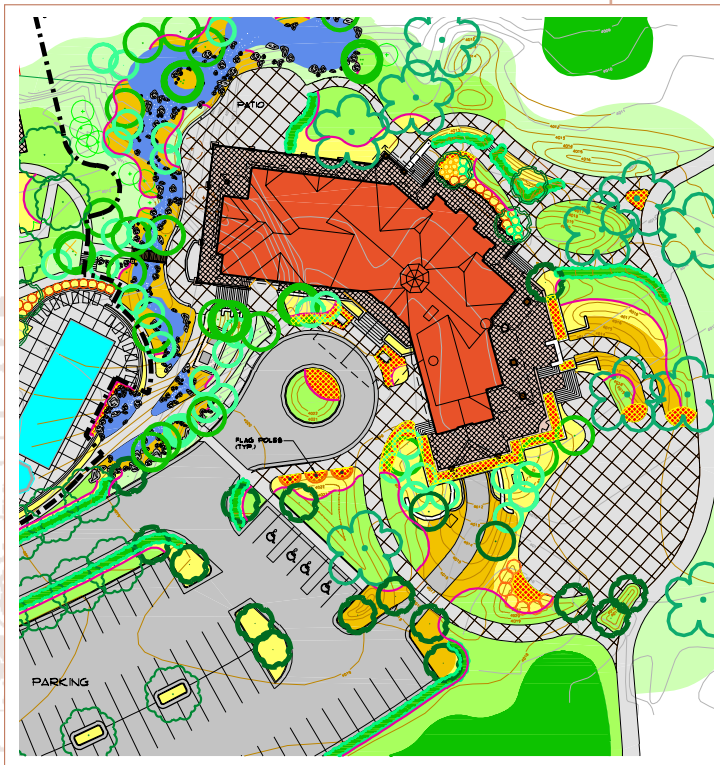


LANDSCAPE ARCHITECTURE

THE POWDER HORN CLUBHOUSE

Sheridan, Wyoming

When Sheridan, Wyoming architect Dan Stalker called to request our help with landscaping for the new clubhouse at The Powder Horn, we jumped at the opportunity to become involved. The Powder Horn development combines residential properties and a championship 27-hole golf course on a historic ranch property with spectacular views of the Big Horn Mountains. The golf course has been recognized by Golf Digest as one of the best new layouts in the west, and the clubhouse would be the finishing touch for the golfing experience.



Dan had envisioned a water feature to separate the clubhouse from the adjacent pool and spa, and to add drama to the arrival experience at the clubhouse. This concept was expanded; wrapping the lower section of the water feature around a patio located off the locker rooms and then bringing it into play along the right side of the approach to the ninth green.



THE POWDER HORN CLUBHOUSE

Sheridan, Wyoming



A naturalistic water feature design was developed to be reflective of spring fed mountain brooks common along the east slope of the Big Horn Mountains. Along this same theme, the water feature was developed without filtration. An infiltration gallery adjacent to nearby Little Goose Creek was developed to provide the water source. Fiber-optic lighting, which can be programmed to produce a variety of effects, was incorporated in the water feature design and field located during construction. The water feature was published in the national magazine Landscape Architect and Specifier News. The article may be viewed at <http://www.landscapeonline.com/research/article/9163>.

While the water feature was under construction we developed site landscaping plans for the remainder of the clubhouse area, including the arrival designation, pool and parking facilities. A landscape lighting plan was completed to artistically light the grounds and building. Installation of the custom entry signage, irrigation, plantings and landscape lighting completed the clubhouse and pool environment.



LANDSCAPE ARCHITECTURE

STOCKMAN BANK

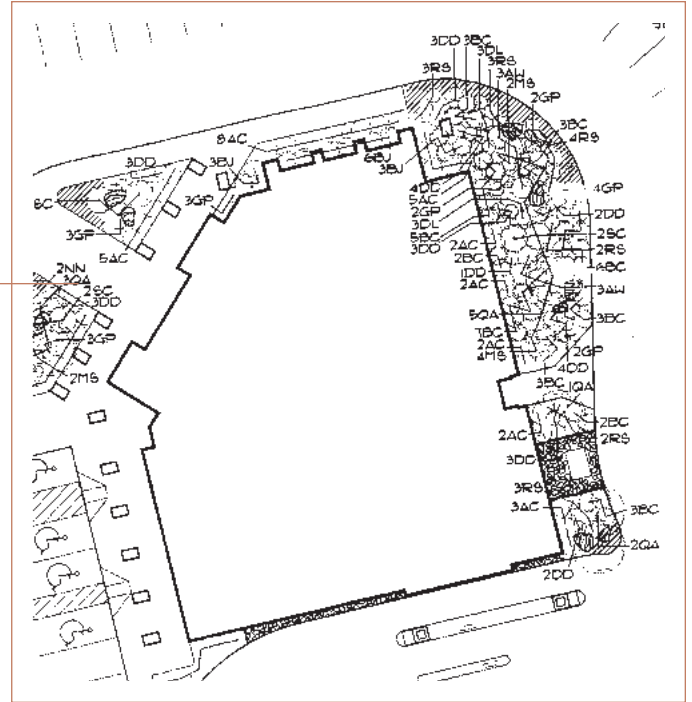
Billings, Montana

Landscape development plans were prepared for this commercial property as a consultant to CTA Architects Engineers. Rolling earth forms were created, in conjunction with naturalistic rock work and application of plant materials derived from native stock to invoke an eastern Montana prairie presence in this landscape setting. The landscaping was carefully designed as a setting and frame for the bronze sculpture, which graces the main approach walk, and for the building itself.



JACKSON STATE BANK

Jackson, Wyoming



This intensively developed commercial property was designed as a consultant to CTA Architects Engineers. It was the first project to be reviewed under the City's demanding new landscape ordinance. Approvals were granted following a rigorous design review process where landscape elements were substituted in part for plant units to achieve the design goals.



The plan features extensive use of native and sub-arctic plant materials in response to the weather extremes common in this part of Wyoming.

CIVIC CENTER ENHANCEMENTS

Great Falls, Montana

Needing additional parking, handicapped and vehicular access to serve municipal offices and a newly re-modeled exhibit hall within the Civic Center, the City commissioned a master plan to study the alternatives. The plan selected proposed sensitive development of pedestrian and vehicular systems within Margaret and Whittier Parks, which flank the building, and expanded parking off site. During non-business hours the development hosts the Farmer's Market, the Taste of Great Falls, and other outdoor civic events.



This project was awarded first place for New & Unusual Design of Concrete in the 1992 Concrete Excellence Awards by the Montana Concrete Producers.

BILLINGS DOWNTOWN STREETScape

Billings, Montana

A theme for long-range development of the downtown business district was conceived and applied in the initial pilot project to six City-owned properties. The proposal included the use of decorative concrete pavers as a key design element. In addition to their colorful patterns, the pavers provide re-enterable access to necessary infrastructure. The pavers were laid on a sand leveling bed supported by a special foamed concrete, which yields uniform bearing yet can be easily dug up with hand tools.



"The theater has gone from having the worst sidewalks in downtown to now having perhaps the best."

Barry Bonifas, Director
Alberta Bair Theater



MALMSTROM AIR FORCE BASE

Great Falls, Montana

Steiner Thuesen PLLC was retained as the Landscape Architectural consultant to local engineering firm SMD Engineering, Inc. to assist in fulfillment of their open-end contract with Malmstrom Air Force Base. Three major landscape and irrigation projects were completed during the previous three years.

The first of these projects was the Museum Irrigation System. A new, automated irrigation system was designed and constructed in the 6 acres of landscape and turf at the Museum.

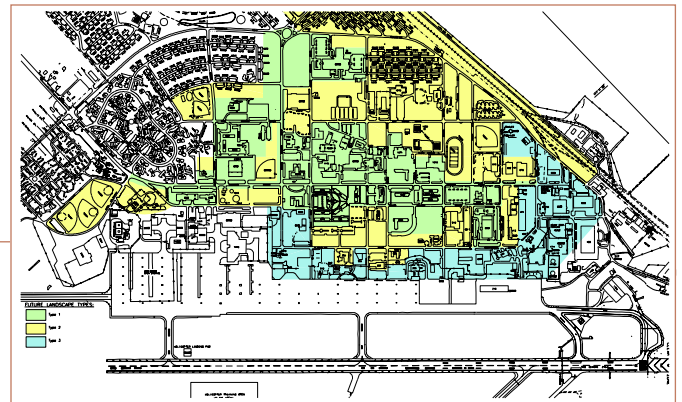
Shortly after the Museum project, design work began on the Central Irrigation Control System. This project, allows all covered irrigation sites to be programmed and monitored from one central location. Installation of the weather station provides constant monitoring of environmental conditions. The central computer uses this information daily to calculate and adjust irrigation run times for each individual irrigation zone based on evapotranspiration as well as other weather conditions. The updated times are downloaded to each of the field controllers ensuring that plantings and turf receive only the amount of water needed to maintain health and vigor.

The implementation of the Toro Sentinel Central Control System (formerly *Eicon Ceres*) augments water conservation while reducing maintenance costs and enhancing the areas included in the project. The existing irrigation systems at approximately 50 sites were modified and brought on line with the central control system.

The final project of the open-end contract is the development of a Landscape Implementation Master Plan for the entire Base. Phase I of the project included investigative services to break the site down into zones and recommend priorities for implementation of the Master Plan. Three 'types' of landscaping and the associated 'levels of effort' were defined.



The Plan addresses aesthetics, conservation, maintenance, plantings, irrigation, and provides recommendations for planting types, soil amendments, turf seed mixes, and irrigation treatments.



Phase II of this undertaking is the development of construction documents that implement the Master Plan along Goddard Drive, the main vehicular and pedestrian corridor on the base. Demolition, landscape, and irrigation plans for several sites adjacent to this main street were produced for visual enhancement of the corridor.

Site inventories of the affected areas were completed to locate and identify existing plant material, evaluate current means of irrigation, and analyze overall site conditions. Soils tests were performed and evaluated allowing recommendations to be made for soil amendments to promote healthy turf and plant material.

Booster pumps are incorporated in the project to provide the necessary water pressure ensuring successful performance of the irrigation systems. The proposed irrigation systems will be incorporated into the existing Central Irrigation Control System.

These three projects represent approximately \$2,100,000 of construction.

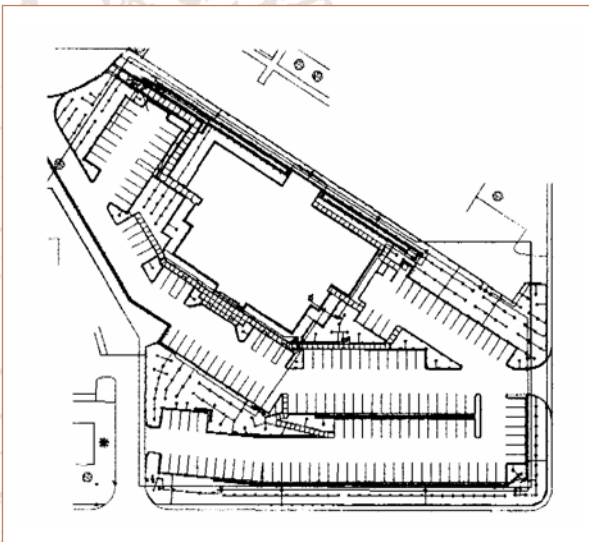


COLUMBUS HOSPITAL OFFICE BUILDING

Great Falls, Montana



Site development conceptual design and construction documents for landscaping and irrigation were provided to the Architect, D. H. Briant & Associates of Seattle, a medical office specialty firm. Due to the steeply sloping topography, the site development grading scheme proposed the use of several retaining walls built of modular materials to accommodate the building and parking areas.



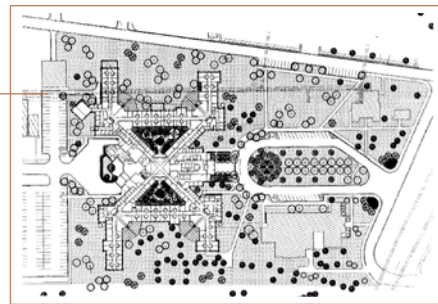
WARM SPRINGS STATE HOSPITAL

Warm Springs, Montana

Consolidation of many of the Warm Springs State Hospital functions into a single new building triggered a need to address the campus landscape and irrigation systems in a comprehensive manner. Steiner Thuesen PLLC provided this service to the state of Montana as a consultant to the project architects, Schlenker & McKittrick of Helena. The project budget for landscape and irrigation was \$250,000.

Landscape plans were prepared for the 12.5 acre grounds for the new building. These plans and the building siting were designed to maximize the use of existing mature trees to maintain the present campus character. Special consideration was given to two enclosed courtyards within the building.

Development of the irrigation plans involved a broader look at the whole campus environment. In doing so, the water supply, irrigation mainlines and irrigation controls were sized to serve the entire campus, although only the new building area would be constructed initially.



The old campus water well was being abandoned, since new water service was being piped in from the Anaconda municipal system. New high efficiency motors and vertical turbine pumps were used to replace the old pumping equipment. The new pumps are controlled by a digitally activated variable frequency drive responding to downstream pressure and flow.

An expandable master / satellite control system was used, and was conceptually designed to serve the entire campus. This easy to operate system offers digital timing accuracy at the satellite controllers and basic global operations from the electro-mechanical central controller. The system serves the sizable turf areas with rotor sprinkler heads, while spray heads are used to irrigate planted beds and small areas.

LANDSCAPE ARCHITECTURE

ST. VINCENT HOSPITAL

Billings, Montana

Completion of a new chapel created a small outdoor space framed by the chapel and the main hospital lobby. A naturalistic setting was created as the focus of the space which included three small seating areas. The landscape featured a recirculating fountain, and underwater as well as overhead lighting, for stage like nighttime effects.



"As a result of their skill and imagination, Saint Vincent Hospital and Health Center is the proud owner of the premiere piece of landscape artwork in the state. We are very pleased."

Phil Sparks, Manager
Engineering Services

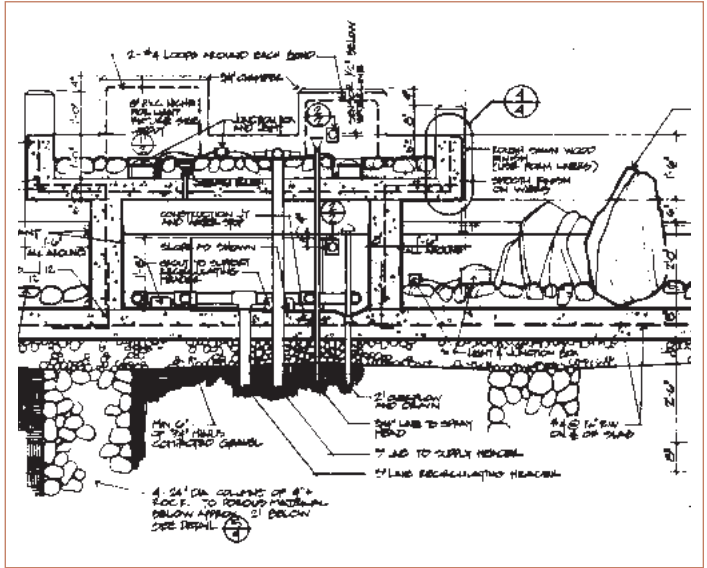
EASTERN MONTANA COLLEGE STUDENT UNION BUILDING

Billings, Montana

Working closely with Drake-Gustafson Architects, of Billings, the central Galleria space was conceived for the SUB. The Galleria features a small grotto, built-in stage/performance area, generous seating, and soft, diffused natural lighting. Dense interior plantings lend a natural feeling and human scale to the Galleria space.

DEACONESS HOSPITAL FOUNTAIN PLAZA

Billings, Montana



Carl Thuesen was project manager responsible for design of site improvements around the Deaconess Hospital Phase II Expansion. The project included design of the fountain plaza, located adjacent to the cafeteria on the south side of the building, and an ambulatory rehabilitation garden north of the building.



The fountain plaza has become one of several heavily used outdoor gathering spaces within the Billings Medical Corridor designed by the firm.



Continuing the consulting relationship with DGA, plantings were selected and the spaces for plants were designed and sited to accommodate plant growth needs. Plant life support systems were provided to assure success of the plantings and provide for their maintenance easily. Plant support systems designed include supplemental lighting, drainage systems, automatic and manual watering systems and structural support. Plans and specifications for interiorscaping were completed for the Galleria, student lounge and study spaces.



LANDSCAPE ARCHITECTURE

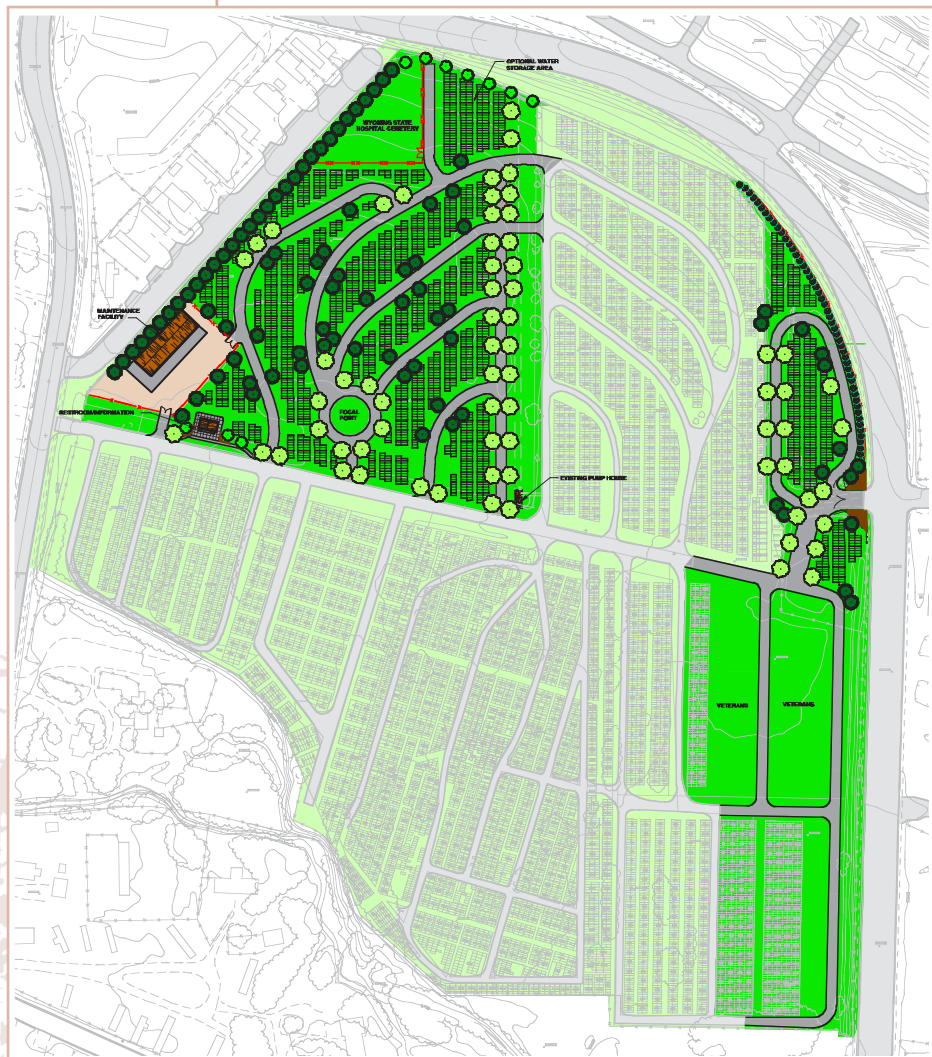
EVANSTON CEMETERY EXPANSION

Evanston, Wyoming



Steiner Thuesen PLLC was commissioned to develop a Master Plan for the 10-acre expansion of the Evanston City Cemetery. The plan includes plots for approximately 2,412 new graves. Paved streets will tie to existing streets to provide access throughout the cemetery. A secondary entrance is planned off of US Highway 89 enhancing circulation throughout the site. New accessible restroom facilities will be provided. A new 4,800 s.f. maintenance facility will provide public and private office space, restrooms, service bays, and a heated storage area for bulk materials.

Landscape materials consist of large-scale evergreen and deciduous trees, smaller ornamental trees, ornamental plantings, and turf. Ornamental fencing and masonry columns compliment the secondary entrance. The existing irrigation central control system will be expanded to take in the new development. The anticipated cost for implementation of the Master Plan is \$1,750,000. Phase 1 design and construction was recently completed.



RIVERSIDE CEMETERY - GRAHAM EXPANSION

Cody, Wyoming

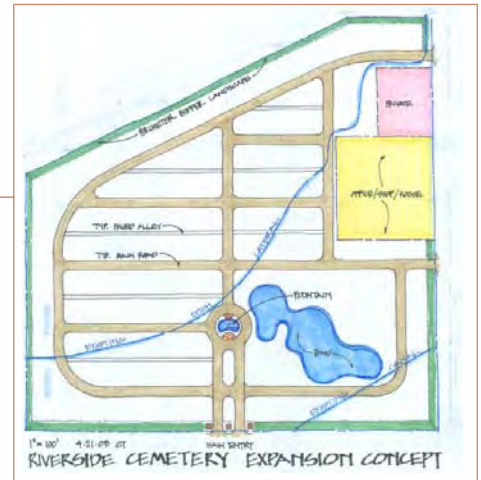
Steiner Thuesen PLLC has had an ongoing relationship with the Riverside Cemetery District since 1991. The firm was recently commissioned to develop a Master Plan for the expansion of the Riverside Cemetery on a 30-acre parcel located on the northeast edge of Cody. The master plan includes plots for approximately 9,325 graves. Paved streets will provide access throughout the cemetery. Treated effluent from the city sewage lagoons will be pumped to a reservoir located on the property and will be used for irrigating the cemetery.

The initial phases of the planned development included construction of E Avenue, concrete lining of the canal that crosses the site, construction of the reservoir and pump house, installation of the effluent supply line, rough grading of the entire site, and perimeter fencing.

Nine acres of the cemetery are fully developed and ready for use. Completed improvements include entry signage, paving of roads, landscaping and irrigation, installation of effluent pump and ultraviolet treatment equipment, and the irrigation pump station.

A memorial area has been developed providing a space where an individual or group of people can come and relax in a comfortable setting while they reflect on a loved one. The memorial circle includes the following design elements:

- Decorative hardscape
- Overhead shade structure
- Masonry seatwalls
- Site furnishings
- Flagpoles
- Lighting
- Landscaping
- Water feature
- Directory



LANDSCAPE ARCHITECTURE

PARK PLACE

Salmon, Idaho

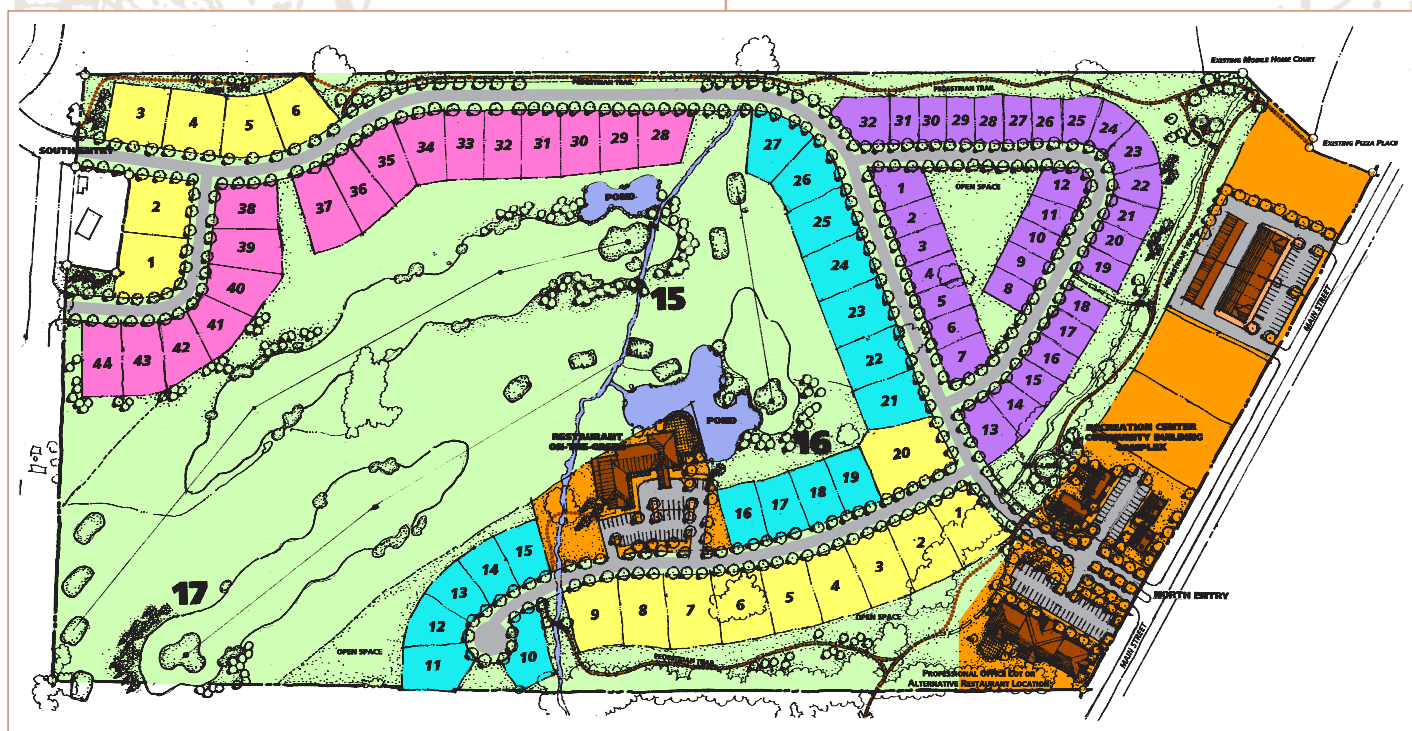
Steiner Thuesen PLLC provided master planning services for the Park Place multi-use development in Salmon. The development includes commercial/office space, residential housing, multi-use open space, three golf holes that connect to the neighboring golf course, and a trail system with links to the existing and proposed city trails.

During the planning of this project, Steiner Thuesen PLLC was also in the process of planning the golf course expansion for the adjacent Salmon Valley Golf Course. The golf course expansion required additional property to be successful. The Park Place property owner agreed to allow a portion of the golf course expansion to be located on their property. Three of the nine new golf course holes were planned for the Park Place development.

This solution provided enhanced amenities and increased property values for the Park Place development while making it possible for the golf course expansion to move forward. The final subdivision plan included three new golf holes at Park Place which satisfied park land dedication requirements for the development resulting in a win-win design solution.



Our involvement in both the Park Place planning and golf course expansion master plan resulted in a well-integrated plan that provided better benefits to both clients.

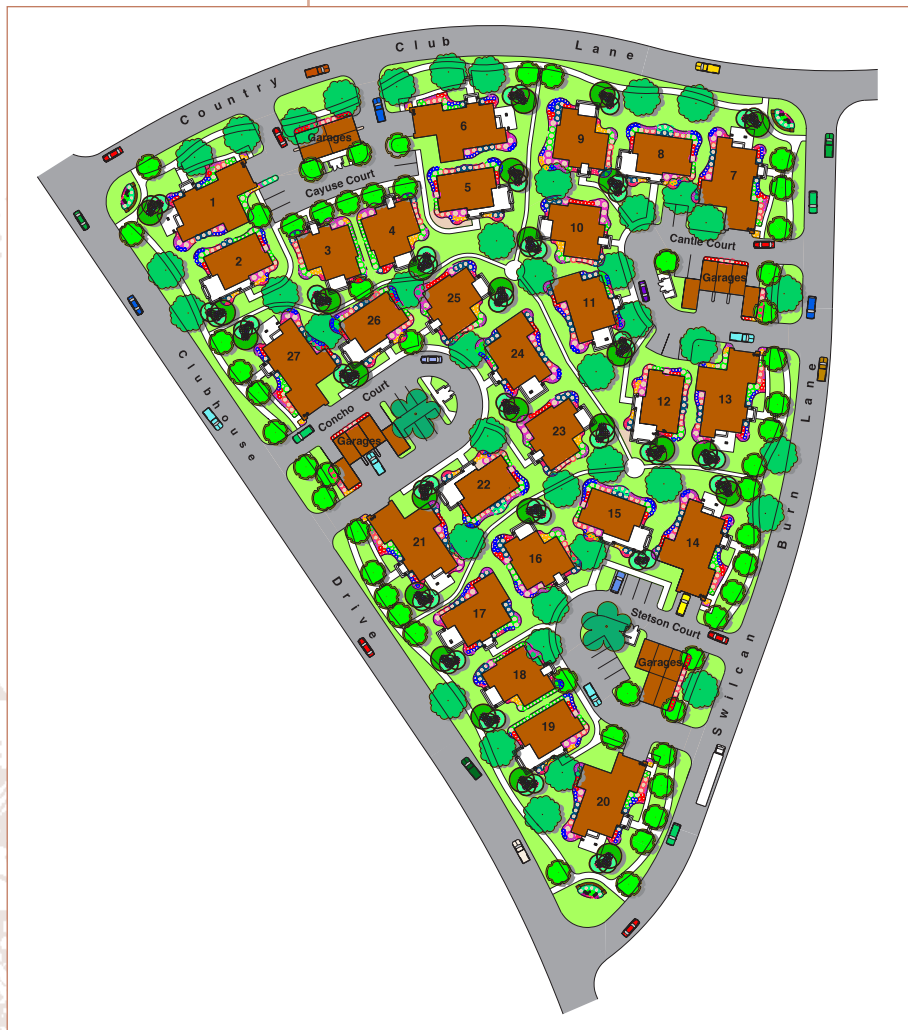


THE POINTE & COTTAGES AT THE POWDER HORN

Sheridan, Wyoming

The Pointe and Cottages at the Clubhouse are two different developments within the 900 acre Powder Horn Golf Community. The goal of both of these higher density projects was to create a unified sense of place through landscape materials. Initially, concept plans and budget cost estimates for construction were developed. Ultimately, a Landscape Master Plan that complimented the surroundings yet was unique to each development was completed. The master plans not only focus on the immediate surroundings but also capitalize on breathtaking views of the nearby Big Horn Mountains and the adjacent golf course.

The master plan for the Pointe was further developed to create construction documents allowing the implementation of the master plan to take place. The final design included grading, planting, and irrigation design for the entire development. Landscape construction was completed in-house by the Powder Horn grounds staff.



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