# DAYTON **FORWARD**

*A Vision for the Future | Dayton, Oregon 2012*

## CONTENTS


Dayton's Role ..... 4
Goals, Planning Guidelines & Action Items:
- 1: Community ..... 6
- 2: Urban Form ..... 8
- 3: Image/Environment ..... 14
- 4: Economic Development ..... 16
- 5: Historic Resources ..... 17
- 6: Landscape/Open Space ..... 18
- 7: Waterfront ..... 22
- 8: Recreation ..... 24
- 9: Education ..... 26
- 10: Arts & Culture ..... 27
- 11: Housing ..... 28
- 12: Urban Services/Amenities ..... 29
- 13: Transportation ..... 30
- 14: Energy ..... 31
- 15: Infrastructure ..... 34

Next Steps ..... 35
Models and Resources ..... 39
Process ..... 44
Acknowledgements ..... 45



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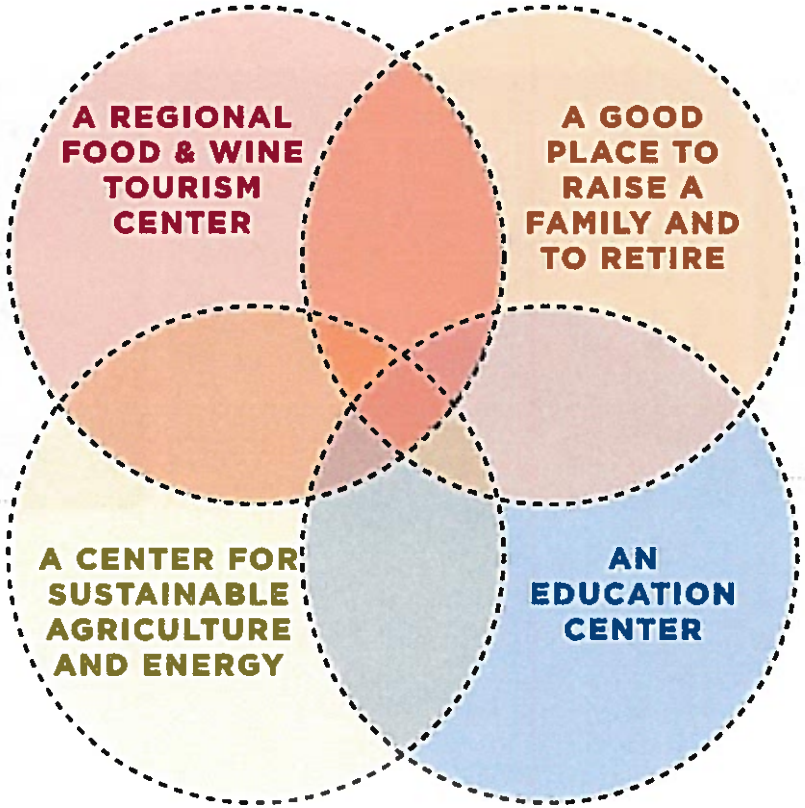
## DAYTON'S VISION

## Dayton's Future Role...

**Joel Palmer** and his son-in-law, Andrew Smith, founded Dayton in 1850, for the processing and transshipment of agricultural products grown in the Yamhill Valley and then sold to the rest of the world which, at that time, included Californian and Fraser Canyon gold miners. By 1900, however, river flooding, then railroads, and finally the age of the automobile left Dayton as a good place to live, but without a viable commercial role. Now, in 2012, Dayton's citizens have redefined their small town to prosper in the 21st Century. The four roles described below are designed to support each other and revitalize future Dayton as a unique community within Yamhill County.

Capture the wealth coming to or passing through the Dayton area by becoming an attractive and charming community showcasing historic character and locally produced gourmet food and wines.

Capitalize on Oregon's "green" image by making Dayton a center of sustainable agriculture and energy production.




Attract wealth to Dayton by becoming a quiet, safe and sophisticated community, in which to raise a family or retire to.

Provide Dayton with a population base/market that sustains its services year round.

*Dayton takes pride being a small yet diverse community. Its population of 2,500 is 30% Hispanic and 65% Anglo. There is a range of income groups and the town is home to six churches.*

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# GOAL 1: DAYTON AS A COMMUNITY

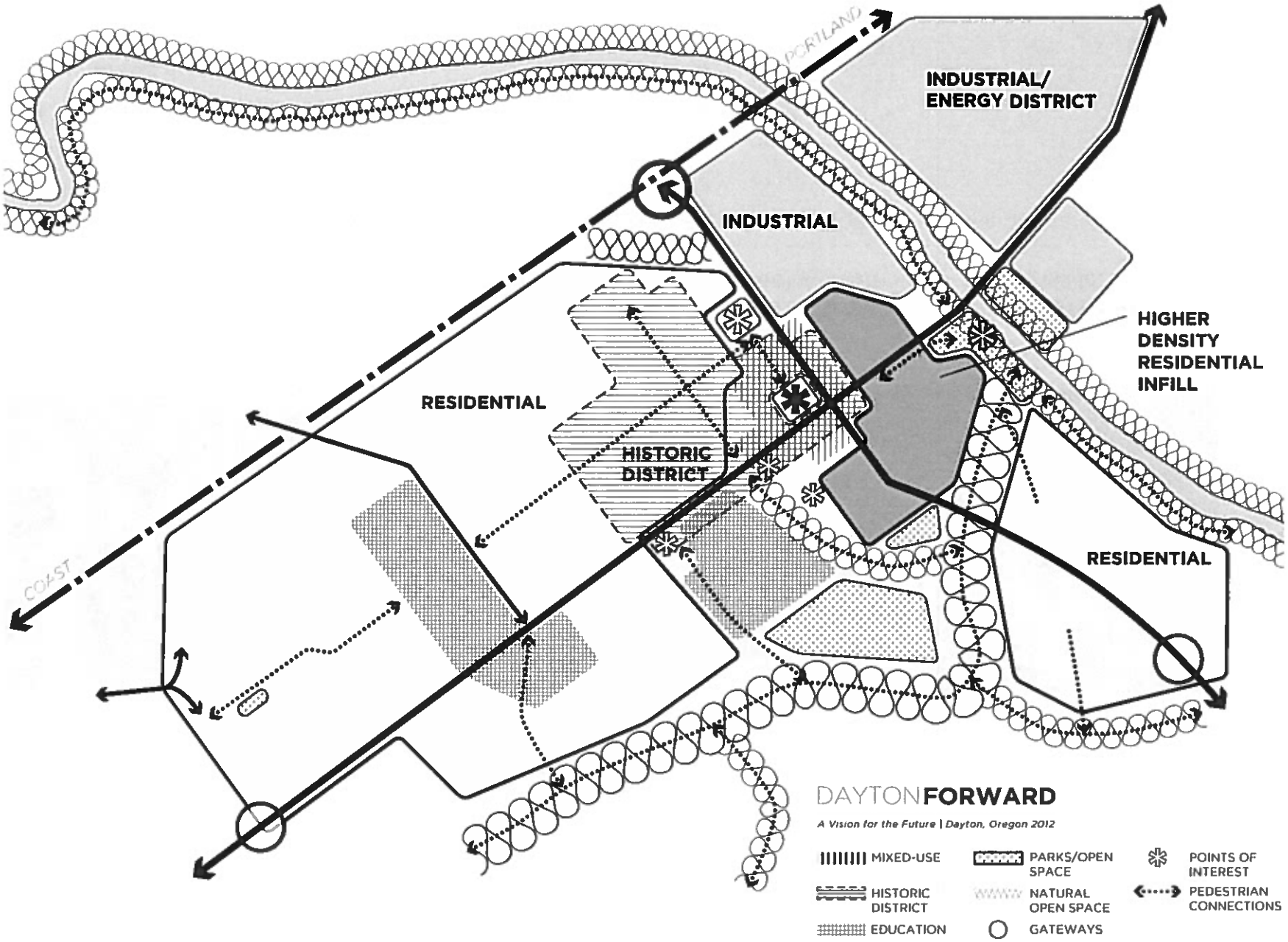
DCDA

E. Munch

DCDA

**Build an authentic, peaceful, safe and inclusive community - diverse in its culture, ages, beliefs and income levels - where citizens care for each other and all groups feel welcome and comfortable.**

- Organize diverse community events, institutions and services, which include and highlight Dayton's different cultures, ages and beliefs.
- Create a balance between quality and comfort.
- Encourage members of all groups to take on leadership roles in Dayton.
- Encourage crossover businesses.


PORTLAND
COAST
INDUSTRIAL/
ENERGY DISTRICT
INDUSTRIAL
HIGHER
DENSITY
RESIDENTIAL
INFILL
RESIDENTIAL
HISTORIC
DISTRICT
RESIDENTIAL
DAYTONFORWARD
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MIXED-USE
PARKS/OPEN SPACE
POINTS OF INTEREST
HISTORIC DISTRICT
NATURAL OPEN SPACE
PEDESTRIAN CONNECTIONS
EDUCATION
GATEWAYS

*Dayton has been spared the effects of automobile oriented strip development and wishes to maintain a compact, pedestrian oriented form centered on Courthouse Square. The Urban Form Goal and the Diagram shrink the Urban Growth Boundary and its infrastructure demands by excluding the area north of Oregon Route 18; create a large scale industrial and energy zone on the east side of the Yamhill River near the access point to the new bypass; focus growth around Courthouse Square and to the east; and create a district west of Courthouse Square where historic structures and urban design resources can be concentrated.*

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# GOAL 2: URBAN FORM

**Maintain Dayton's compact, pedestrian friendly, small town character. Revitalize its central business core with appropriately scaled development. Focus on infill development and placemaking within the existing fabric. Avoid auto oriented commercial strip development.**

## PLANNING GUIDELINES

- Focus Dayton on its central square and commercial district.
- Emphasize and maintain quality in all of Dayton's built environment, services and products, in a manner that is consistent with its image.
- Avoid auto oriented commercial strip development and architecture.
- Surround Courthouse Square with public, mixed-use development.
- Enhance the pedestrian environment especially in the Historic District and commercial core.
- Increase the density of housing and pedestrian activity in the district between Courthouse Square and the Yamhill River and Palmer Creek.
- Limit the retail core activity to 5th street on the west, and to the waterfront on the east.
- Develop a mid-block pedestrian connection between Legion Field and the Commercial Street retail block so that the four key blocks can work together.
- Use Legion Field for larger events which cannot be accommodated in Courthouse Square.
- Redevelop the Commerce Street alley into a unique and memorable pedestrian-oriented retail environment.
- Develop an industrial jobs center/energy district near the planned access to the bypass by consolidating the wastewater treatment plant into an energy producing methane plant.
- Avoid commercial multifamily and public development where automobile parking is located between the sidewalk and the building.
- Maintain a clear edge and pleasant transition between the City of Dayton and the surrounding countryside.
- Develop a clear system of focal points, pathways and edges within the City of Dayton that will organize its character.
- Use street trees to define districts and pathways.
- Work with Yamhill County to remove the area northwest of Hwy 18 from the Urban Growth Boundary.

## ACTION ITEMS

- Continue Dayton's Main Street program.
- Establish a historic district. (See Historic Resources Goal)
- Establish a street tree program.
- Update Dayton's comprehensive plan.

# Dayton's Four Central Blocks

The development of a mid-block connection between the Courthouse Square and Legion Field is worthy of consideration. As a pedestrian link, it could have positive impacts the redevelopment of the intervening block as well as the development of Dayton's core as a whole. A central pedestrian axis would string together four key blocks of distinctly different character and in both public and private ownership so that they could work together and present an experience unique to Dayton.

Arlington County Fair, Virginia *(flickr: Martin Kalfatovic)*

**Legion Field** is a large open space capable of accommodating active and transient activities, (carnival, farmers market, antique auto show, etc.), near Dayton's core. It could also be used as a minimally improved playing field. The north corner could accommodate a landmark, lushly landscaped greeting to Dayton.

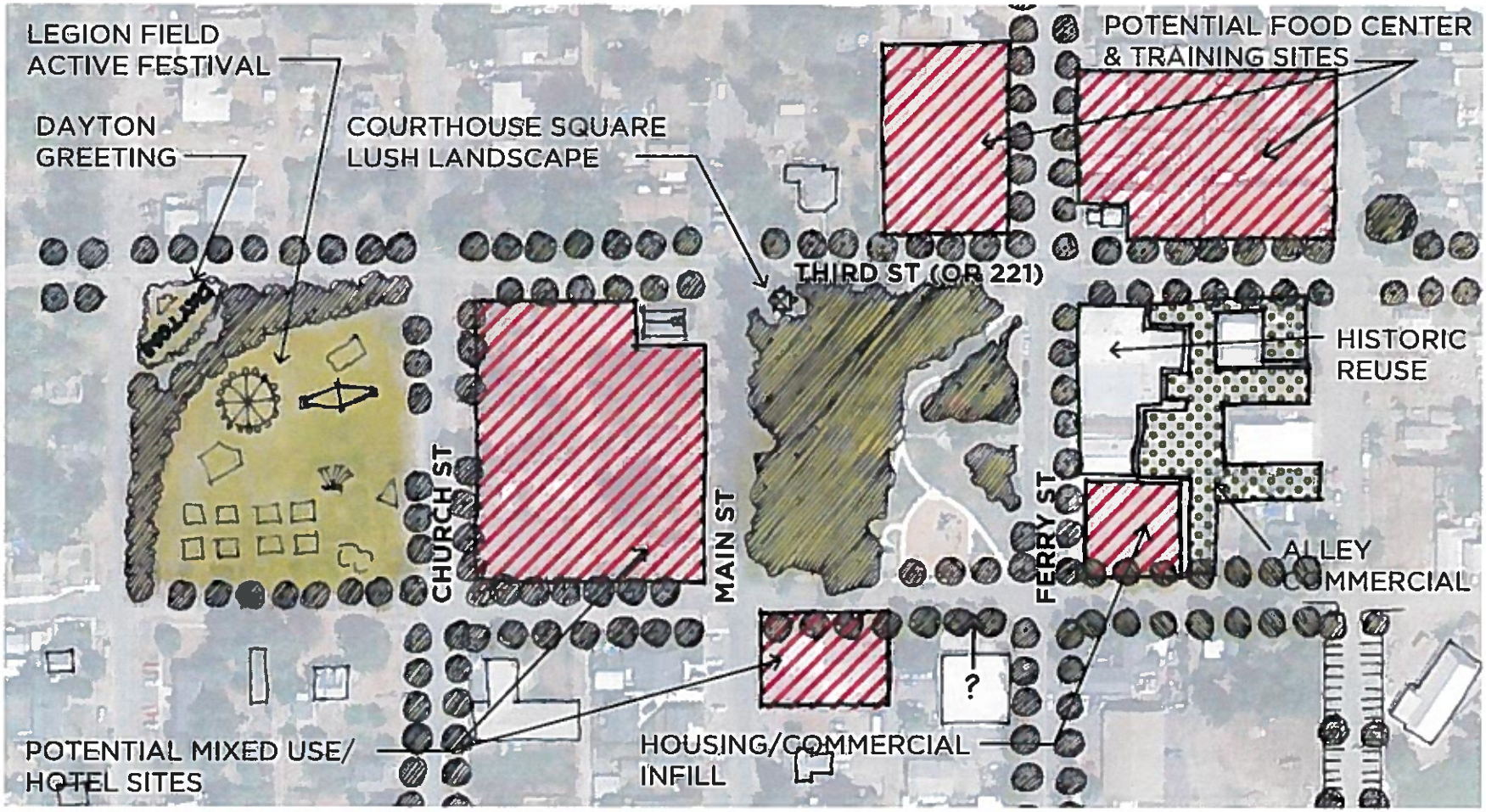
Fess Parker Wine Country Inn & Spa, Los Olivos, CA *(Tripadvisor.com)*

**The Intervening Block** represents an opportunity for a mixed use development; perhaps a boutique hotel that would architecturally relate to the adjacent residential area; create a synergy between the two public squares; and take advantage of both the views and front porch restfulness of Courthouse Square and the occasional activity of Legion Field. The block is anchored on one corner by an architectural artifact, the newly renovated Baptist Church. Two private historic residences facing Courthouse Square should be accommodated in a redevelopment or moved to the adjacent, historic residential zone.

Dayton

**Courthouse Square** has always been seen as the center of the community, reminiscent of the original landscape which greeted Dayton's founders. It is appropriate as a lush landscape representing to the world Oregon's long-standing reputation as an Eden.

## Downtown Development Opportunities



## Placemaking

**Commerce Street/Alley - Present**

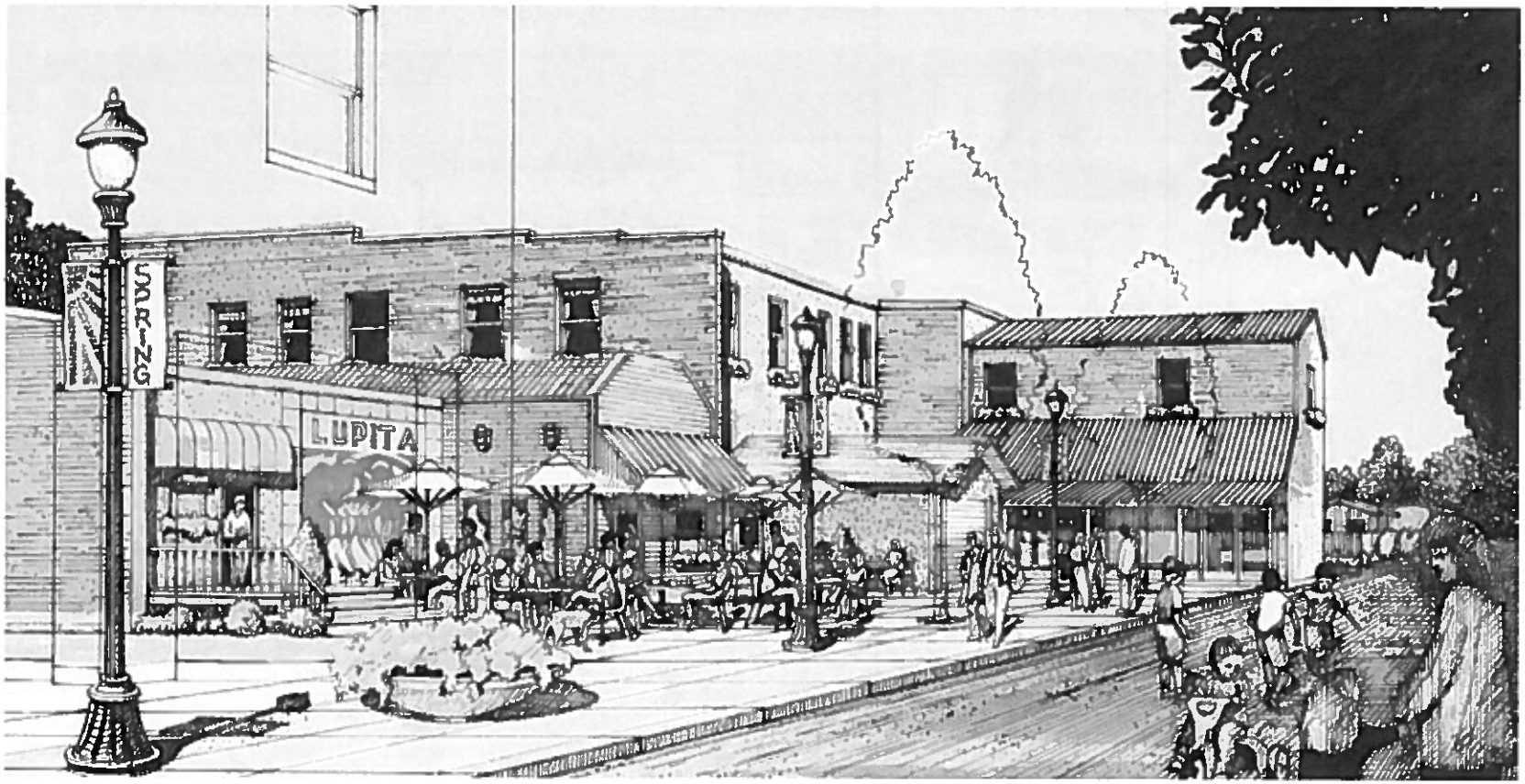


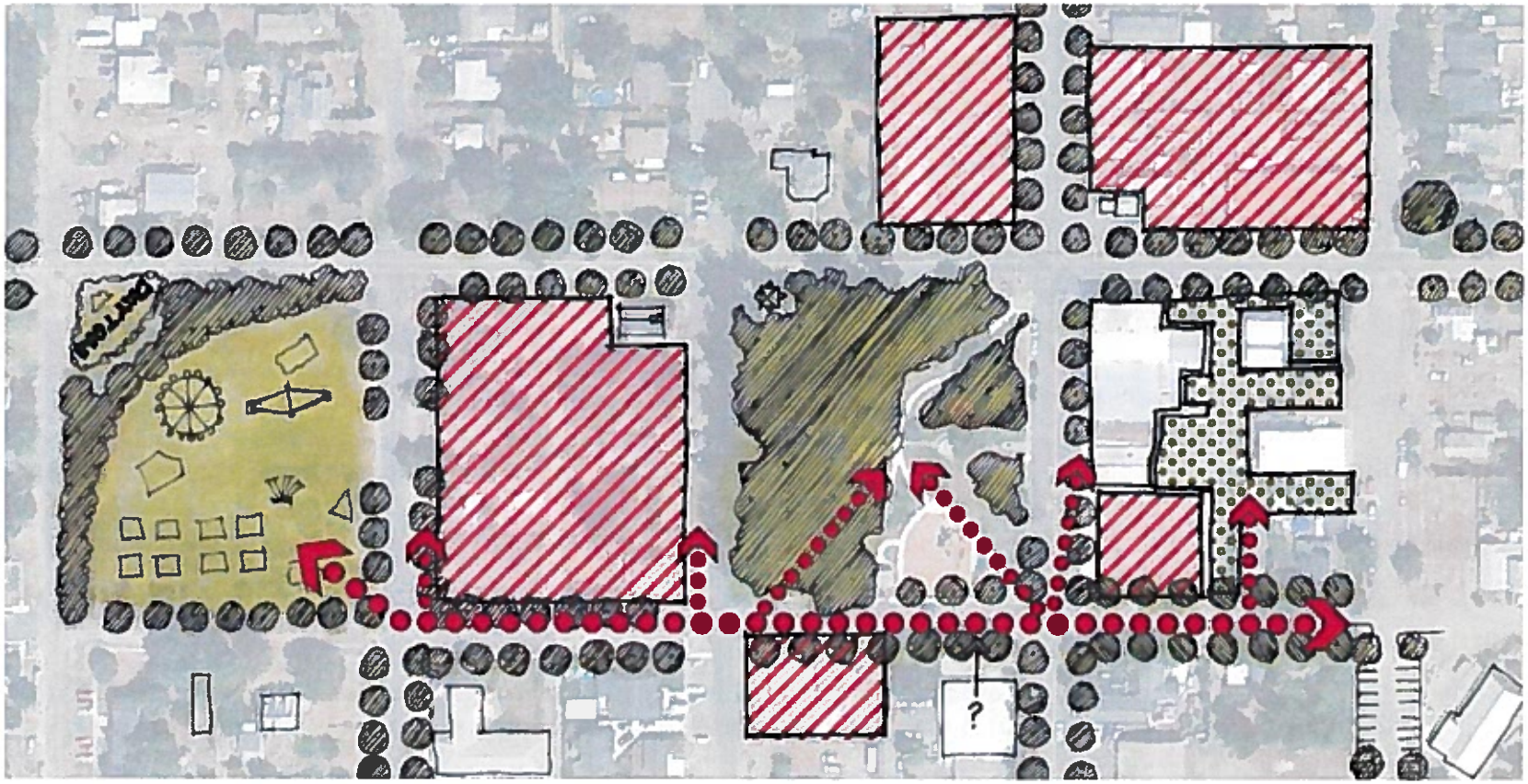

*Illustration by Martin Kyle Millward*

**Commerce Street/Alley - Future**

## Pedestrian Improvements

The decisions to build a mid-block connection between Courthouse Square and Legion Field; where it should be located; and what its character will be, should be made when, and if, the intervening block is redeveloped. Those decisions should be based on the disposition of the existing land owners and the nature of the proposed redevelopment.

## Key Blocks - Mid-block Passageway




If a mid-block connection between the four blocks cannot be achieved, Fourth Street could be developed as an alternative link. Fourth Street could also supplement a mid-block connection between the four key blocks.

## Key Blocks - Fourth Street Improvements

*Dayton seeks to attract more visitors and families by improving its physical appearance and striving for quality in all that it provides for its residents and visitors.*

# GOAL 3: IMAGE/ENVIRONMENT

**Use Dayton's historic, cultural, and natural resources to transform it into an authentic and charming community which appeals to individuals with high disposable incomes.**

## PLANNING GUIDELINES

- Develop a pedestrian-friendly, well cared-for look for Dayton's streets.
- Involve the schools and churches through combined community service projects and environmental education.
- Eliminate substandard housing and structures focusing first on Dayton's urban core.
- Utilize quality urban and architectural design which is in keeping with Dayton's character.
- Maintain a high level of quality for food served and services offered.
- Involve youth through the schools to create a culture of a clean environment and community service.

## ACTION ITEMS

- Implement a block-by-block community wide clean-up.
- Establish free locations for residents to dispose of yard debris and large unwanted objects.
- Establish quarterly or semiannual community clean-ups.
- Develop a referral information service for the recycling of large and unusual items.
- Strengthen enforcement of existing building and parking codes.
- Enrich the streetscape through public plantings and private gardens.
- Coordinate cohesive directional signage within the community.
- Amend sign ordinance and adopt urban design guidelines.
- Initiate an "Adopt a Park" program, for park maintenance and improvements.
- Establish a "Model Block" within the historic district.

## Dayton Today

*Dayton is surrounded by highly productive farmland and a burgeoning, ultra premium wine industry. It also lies along the route to a number of outdoor recreation and cultural destinations. Despite these factors, it has yet to take full advantage of the wealth flowing around it.*

# GOAL 4: ECONOMIC DEVELOPMENT

**Create a vibrant employment base through the development of small commercial businesses that serve residents and tourists, with industries that highlight the quality of surrounding agricultural products and sustainable practices.**

## PLANNING GUIDELINES

- Encourage sustainable, profitable businesses that focus on quality products of local origin serving resident needs and visitor interests.
- Promote commercial business investment for building reuse and infill including live/work opportunities in proximity to Courthouse Square and Ferry Street.
- Encourage diversity in the types of businesses recruited to Dayton.
- Expand hospitality options including restaurants, bed & breakfasts and recruitment of a boutique hotel.
- Pursue "Good Food" concepts such as an artisanal food center, or ag-incubator, capitalizing on Oregon's reputation for sustainable, healthy "foodie culture".
- Foster the development of a local and regionally integrated food and wine industry cluster, with opportunities for value-added processing, on-site retail and event capability within or in close proximity to Dayton's downtown.
- Re-localize food and employment.

## ACTION ITEMS

- Form a private investment group that will act to purchase, assemble, make "shovel ready", and then promote parcels of land that further the vision of DAYTON **FORWARD**.
- Focus on water and sewer infrastructure improvements to allow for growth in Dayton.
- Cooperate with Dayton schools for "employment ready" magnet programs that emphasize hospitality, craft and ag-business vocational opportunities.
- Make recreation and trail investments attracting residents and visitors who value small town and rural quality of life.
- Investigate and promote, if feasible, an industrial jobs center north of the Yamhill River, near access to the bypass project, which emphasizes sustainable energy and food processing.
- Organize events that involve Dayton residents and businesses while drawing tourism, including a Farmer's Market.
- Retain a small business consultant to work with established and new small businesses in Dayton.
- Investigate Tax Increment Financing as a tool for Dayton.

*Dayton possesses a large number of historic commercial and residential structures that could be used to tell its story to residents and visitors. Forming a coherent district by concentrating and restoring these structures and encouraging compatible development could work to Dayton's advantage.*

# GOAL 5: HISTORIC RESOURCES

**Use Dayton's heritage and historic resources to forward its image as an authentic and charming town.**

## PLANNING GUIDELINES

- Concentrate resources and improvements to assure property owners that if they invest in their historic properties, they will be supported by the city and their neighbors.
- Encourage the maintenance of historic properties and the correction of design errors.
- Encourage a pedestrian environment and streetscape.
- Encourage small scale and compatible business within the historic district which cater to tourists including bed and breakfasts, and gourmet restaurants.
- Encourage design elements which give pedestrian scale to the historic district including picket fences, specialty street lighting and signage.
- Obtain quality design services for the built environment within the historic district.
- Relocate historic structures from other parts of Dayton into the historic district.
- Encourage infill development in the historic district which is compatible with historic housing stock.
- Encourage Seismic upgrades of historic structures.

## ACTION ITEMS

- Create a historic district.
- Develop design guides which make the historic district and urban core particularly attractive to outside visitors. Explore enhancements to existing 1993 guidelines.
- Develop a prototypical design for the space between the street pavement and the property line within the historic district.
- Explore feasibility of historic walking tour smartphone app.
- Create an amphitheater to use for chautauquas and other historic and contemporary presentations.
- Showcase the river as a part of Dayton's history.

*Dayton has many natural features that can be improved to provide an urban realization of Oregon's Eden-like image. Its Central Square, waterfront, and natural areas along Palmer Creek and Lippincott Gulch provide recreational opportunities for residents and tourists alike. Dayton can regain the appearance of a sylvan, peaceful community by replanting its shade trees and encouraging private gardening.*

# GOAL 6: LANDSCAPE & OPEN SPACE

**Transform Dayton's character through the use of landscape elements such as street trees, public parks and trail systems.**

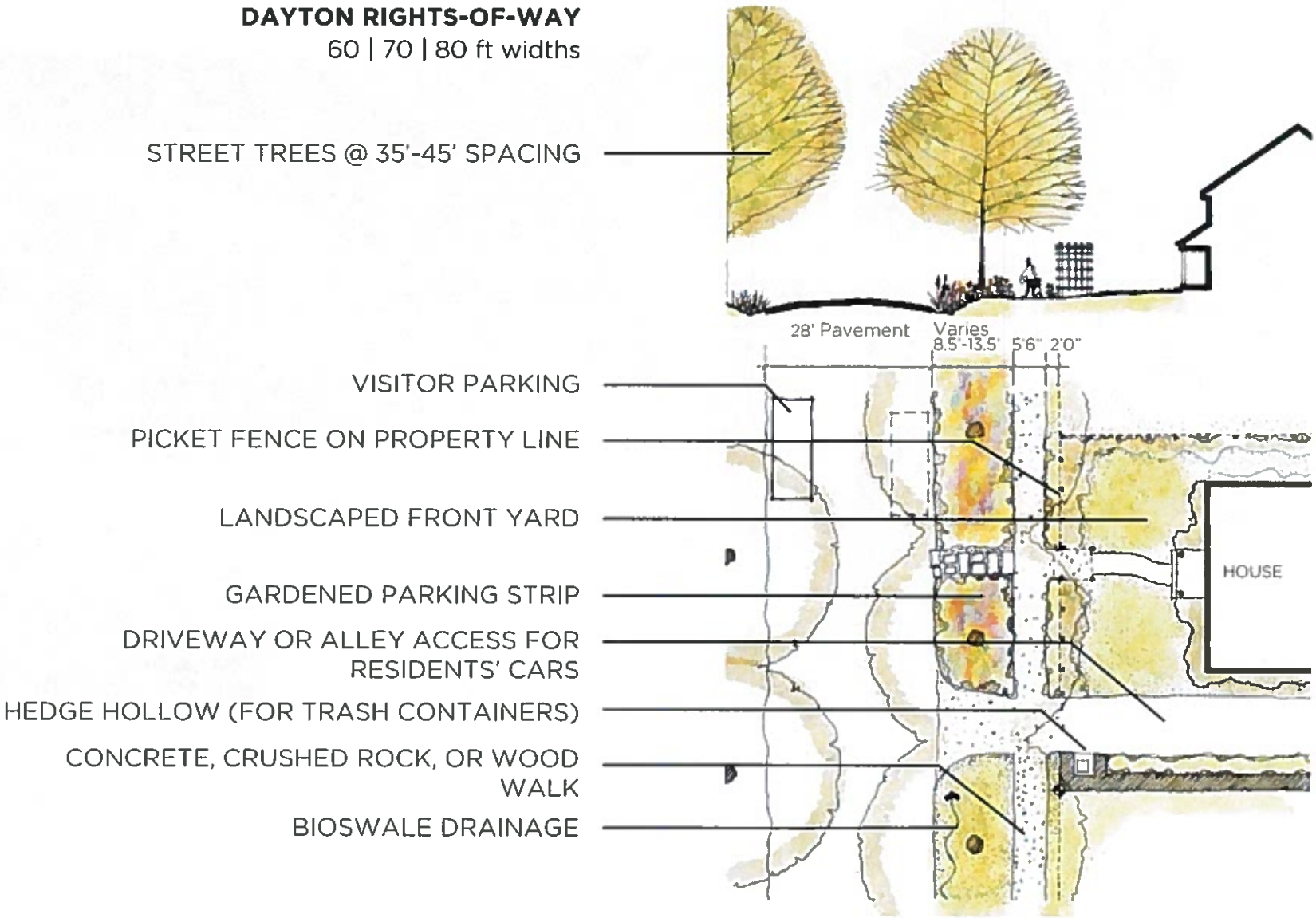
## PLANNING GUIDELINES

- Develop the Lippincott Gulch and Palmer Creek trail networks connecting the Yamhill River to the central business district and different neighborhoods to each other.
- Plant street trees to provide shade and promote a sense of community.
- Maintain the Yamhill River's vegetative fringe and natural beauty.
- Transform Courthouse Square into a lush and active garden.
- Provide lushly landscaped entrances to Dayton, especially at the OR 18 and OR 221 interchange.
- Obtain quality landscape design for notable public space and buildings.
- Promote private and community gardening

## ACTION ITEMS

- Appoint a "Shade Tree Commissioner".
- Establish a Street Tree Program
- Select a Dayton street tree to unify the appearance of the town.
- Promote private gardening in the Historic District and along primary public routes by forming a Dayton Garden Club.
- Appoint a "Mayor of Courthouse Square" to coordinate maintenance of the square and schedule public events and activities.
- Consider renaming "Courthouse Square", "Palmer Square".
- Evaluate the inventory of public lands for its role in Dayton's future.
- Repair the Courthouse Square fountain or replace it with a landmark landscape feature.
- Consider the use of river water or non-potable wells for the irrigation of public parks and landscape areas.

**DAYTON RIGHTS-OF-WAY**
60 | 70 | 80 ft widths



## Streetscape

Credit: Oregon Historical Society

**Fifth Street - Present**

**1921**

*Illustration by Martin Kyle-Millward*

**Fifth Street - Future**

*The Yamhill River is an important resource for Dayton. Historically it provided a route for the transfer of the Yamhill Valley's produce to the outside world. Now it can be developed as a scenic and recreational resource.*

# GOAL 7: WATERFRONT

**Preserve, enhance and develop the scenic qualities of the Yamhill River by improving public access, creating recreation opportunities, and maintaining its natural beauty.**

## PLANNING GUIDELINES

- Reconnect Dayton to an active Yamhill Riverfront.
- Work with Yamhill County and the Cities of Dayton and Lafayette to adopt riverfront development regulations that preserve the River's vegetative fringe and mask existing and future adjacent commercial and residential development.

## ACTION ITEMS

- Create a waterfront open space appropriate for events.
- Establish a boat landing and a boat rental facility.
- Improve the existing boat launch.
- Work with other nearby river towns to establish a scenic boat route, with Dayton as one stop.
- Appoint a citizen Riverkeeper to promote Dayton's interest in the Yamhill and Willamette Rivers.

## Dayton Waterfront Park

PED. BRIDGE OR 2 LANE VEHICULAR BRIDGE

NEW PUBLIC PIER

LAWN/GATHERING SPACE

CONCESSION & RESTROOMS

SHELTER & PICNIC TABLES

BOCCE BALL/HORSESHOES

PARKING

PEDESTRIAN ACCESS

TRAILER PARKING

BOAT LAUNCH

PALMER CREEK ACCESS

N

*Dayton's abundant natural surroundings present a multitude of outdoor recreational opportunities which, if developed, could attract visitors and permanent residents. Flat rural roads are ideal for cycling. Wooded creeks and gulches perfectly suited to nature trails while the Yamhill and Willamette Rivers offer water-sport opportunities. Athleticism, as it leads to aspiration and then accomplishment, can serve as a model for Dayton's youth and the community as a whole.*

# GOAL 8: RECREATION

**Capitalize on Dayton's natural resources to provide recreational opportunities for residents, tourists, and retirees.**

## PLANNING GUIDELINES

- Develop the Lippincott Gulch and Palmer Creek recreational trail networks suitable for residents and tourists, connecting the Yamhill River to the Central Business District and to different neighborhoods, and using bridges as necessary.
- Create tourist-friendly "bike tour" for Dayton and surrounding attractions.
- Coordinate with ODOT, State Parks and Cycle Oregon to provide on-street bike routes between Dayton and surrounding towns.
- Make Dayton a destination for bicyclists and motorbikers, by establishing bike friendly businesses.
- Market Dayton's recreational opportunities to wine tourists and others.
- Continue to build youth athleticism as a community focus.

## ACTION ITEMS

- Acquire the property along Lippencott Gulch and Palmer Creek necessary to build a recreational trial and preserve their natural scenic qualities.
- Create public access to the Willamette River near the end of Neck Road and at the Grand Island Loop as destinations for bicyclists.
- Recruit a bike and boat/kayak rental business to Dayton, (See Waterfront goal)
- Explore feasibility of a "Rails to Trails" pathway along former Dayton/ Sheridan/Grand Ronde narrow gauge railway.
- Partner with Yamhill County to establish "destination" park and access to the Willamette River at the county-owned water source site along Mallard Road.
- Create access to Yamhill Landing State Park on the Willamette River.
- Feature Dayton on published wine tourism information and websites.
- Update city Parks Master Plan.

*Illustration by Jenn Pacenka*

*Dayton's public schools play a large role in attracting and retaining families. Existing schools could be improved. Post-secondary educational programs and facilities could add vitality to Dayton, supply skilled labor for the surrounding agricultural industries and lift incomes.*

# GOAL 9: EDUCATION

**Support and improve the quality of existing local school system. Attract higher education opportunities which will focus on local agricultural products, and will have a student population which will support Dayton businesses after-hours and off-season.**

## PLANNING GUIDELINES

- Encourage parents to become more involved in school system in order to raise test score, improve study habits, and prepare for entry into the higher education system.
- Start environmental education early in the Dayton school system.
- Create an educational link between Dayton and the surrounding agriculture industries.

## ACTION ITEMS

- Establish a magnet high school curriculum with a focus on "mechatronics" and other marketable trade skills that can satisfy qualifications for agriculture related manufacturing jobs.
- Serve local food at school cafeterias.
- Partner with OSU or Chemeketa to open a branch campus in Dayton focusing on sustainable agriculture. Build on in place OSU programs engaging the Dayton agricultural community.
- Seek university partnership on such projects as the artisanal food center.
- Establish a Latino cooking class and demonstration cooking kitchen.

*Art is an individual's creative expression of culture. Art can inspire, promote, elevate, and bring a community together.*

# GOAL 10: ARTS & CULTURE

**Develop an arts program which promotes the vitality, identity and commence sought by Dayton's community.**

## PLANNING GUIDELINES

- Celebrate Dayton's diversity through cultural events which will bring tourists and enthusiasts to Dayton.
- Enlist the performing, visual and culinary arts in efforts to create memorable places and events within Dayton's core.
- Coordinate with Dayton grade schools and post-secondary institutions to facilitate a broad, comprehensive arts education for all ages in the greater Dayton area.
- Insist on quality in public art projects, whether on public or private property.

## ACTION ITEMS

- Attract a countywide arts advocacy organization to locate their headquarters in Dayton's historic core.
- Use the newly improved Dayton Community Center as a performing arts venue.
- Explore the possibility of leasing the vacant second stories of Dayton's historic commercial buildings as artist for studios until those building can be repurposed.
- Establish a Chautauqua to further Dayton's heritage and advancement into the future.

*Dayton's proximity to the jobs-rich "Silicon Forest", and the Oregon wine industry, presents an opportunity to attract a diverse group of new residents and visitors who could bring new wealth to the community. Dayton's housing stock must be attractive to this diverse pool of potential residents and visitors*

# GOAL 11: HOUSING

**Provide a range of quality housing opportunities that will be attractive to young families, retirees, students, tourists and those employed within greater Dayton.**

## PLANNING GUIDELINES

- Integrate higher density housing near and within the retail core as way of supporting activity and commercial services.
- Coordinate student housing as a way of expanding a year-round market for Dayton's services.
- Encourage Bed and Breakfasts within the Historic District.
- Create multi-use projects downtown with housing, retail and professional space.
- Pursue energy efficiency in all housing, existing and new.
- Concentrate on providing higher density, infill housing between the business core and the riverfront.

## ACTION ITEMS

- Rejuvenate or replace all substandard housing in Dayton through enforcement of the building codes and targeted investments in low-income housing.
- Recruit a small-scale hotel/spa to locate on the block across Main Street from Courthouse Square Park.

*Dayton can attract new wealth and keep it within the community by providing a range of urban services such as grocery outlets, a gas station, health care facilities, professional services and specialty retail.*

# GOAL 12: URBAN SERVICES/AMENITIES

**Make Dayton a more self-sufficient community by improving residents' access to basic daily retail services.**

## PLANNING GUIDELINES

- Emphasize the revitalization of the Downtown Core as a place with character which is attractive both to outsiders and Dayton residents and is active during the day, in the evening and on the weekends.
- Encourage services for seniors, especially health care services.
- Expand the range and number of events held in Dayton.

## ACTION ITEMS

- Work with DCDA to recruit a market, gas station, laundromat and other commercial services in the retail core.
- Establish recreational and social events for teens and preteens using the community center ballroom and Courthouse Square.
- Offer informational services for tourists.

*Dayton has always been shaped in large part by transportation--from river transport to the railroad and highway bypasses. Dayton must coordinate existing and future access with the Oregon Department of Transportation to ensure that it supports the community's form and economy.*

# GOAL 13: TRANSPORTATION

**Encourage a transportation system and modes of transportation that enhance and support the character of the town.**

## PLANNING GUIDELINES

- Work with the State of Oregon and Yamhill County to assure that the Newberg-Dundee bypass is supportive of Dayton's Urban Form and other goals for land use and access.
- Support the construction of a new, well designed, two-lane vehicular bridge over the Yamhill River as a route connecting OR 155 to the Dundee bypass and a means of providing emergency services to development north of the Yamhill River.
- Work with ODOT to provide convenient and attractive access to Dayton from the state highway system.
- Encourage and improve pedestrian links between different neighborhoods, focal points and facilities within Dayton.
- Work to add amenities along the State Highways within Dayton that are appropriate to the City's revival.

## ACTION ITEMS

- Enforce existing parking codes.
- Adopt design guidelines and work to reduce the impact of parking lots in the Historic District and commercial core.
- Work with ODOT to place American Viticulture Areas directional signage, and to assign routes to the wine country through Dayton.
- Work with ODOT, Oregon State Parks and Cycle Oregon to establish an inter-city bicycle trail network with links to outlying areas and adjacent towns.

*Dayton can play a leading role as Oregon leaps headfirst into the green energy revolution. The city has the ability to use future investments in its sanitation systems, and its proximity to food and agricultural processing to foster an innovative "Energy District" featuring biogas and photovoltaic arrays to generate power for green industries and the city. Dayton could become an example of an energy independent community.*

# GOAL 14: ENERGY

**Energy independence for the City of Dayton.**

## PLANNING GUIDELINES

- Seek and develop clean, local renewable energy sources that will make Dayton energy independent.
- Market Dayton as a City focused on renewable energy.
- Attract a sustainable energy production employer to the city.

## ACTION ITEMS

- Appoint a Dayton citizen to develop an energy independence program.
- Identify renewable energy sources which are available to Dayton.
- Establish an "Energy District" for clean energy production/manufacturing companies on north side of Yamhill River, at the access to the future Bypass.
- Explore feasibility of methane capture in lieu of expanding existing wastewater treatment lagoons.
- Partner with nearby dairies and food processing plants for biogas production.
- Identify programs and resources that will assist the development of renewable energy.
- Encourage the installation of solar panels on the rooftops of private homes, civic structures and commercial and industrial buildings.
- Attract a large food processor to Dayton to supply jobs and support methane production.

**Current Wastewater Treatment Proposal**

**Future Energy District/Job Center**

*Dayton must invest in its water supply and sanitary waste systems before it can move ahead with significant economic development and housing projects. While improvements are costly, Dayton could use this pressing need to establish itself as a leader in innovative infrastructure solutions that leverage sustainable energy and disposal systems, and produce local jobs.*

# GOAL 15: INFRASTRUCTURE

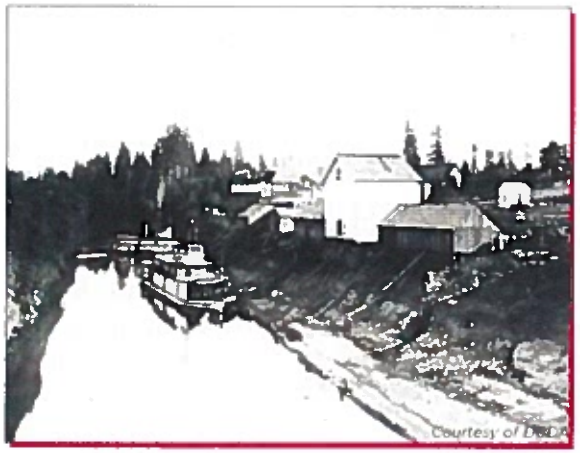
**Upgrade Dayton's infrastructure so that commercial, industrial and housing growth can be accommodated.**

## PLANNING GUIDELINES

- Coordinate increases of housing density and commercial/industrial uses with the expansion of the infrastructure to maximize efficiency and minimize cost.
- Work with other neighboring communities to find economical solutions to infrastructure improvements.
- Encourage water conservation.
- Coordinate wastewater treatment with programs for energy independence.

## ACTION ITEMS

- Implement the key recommendations of the Dayton 2010 Water System Master Plan.
- Implement the key recommendations of the Dayton Wastewater Facilities Plan while examining alternatives for wastewater treatment.
- Where possible, develop Lippincott Gulch, Palmer Creek and other natural channels as a system for storm water detention and treatment facilities.
- Undertake a program of rainwater collection for irrigation, in order to lessen the demand on the City's water system.
- Investigate the use of river water and other non-potable water sources for the irrigation of public parks and landscaped areas.
- Explore the possibility of underground or overhead utilities in the Historic District and commercial core.

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2012

Future

# NEXT STEPS

# Next Steps - City Council Actions

### GETTING ORGANIZED FOR THE FUTURE

City Council signals the plan's implementation by adopting this document, however the power to move Dayton forward must come from its citizens.

The DAYTON **FORWARD** process has identified a number of individuals who have the ideas, energy and skill to step up into leadership positions. There are, undoubtedly, others who are willing to lead and contribute.

We recommend that the City Council either appoint, anoint or otherwise empower and support those individuals to begin implementation of different Goals in this report.

We recommend that DAYTON **FORWARD** be continued in concert with the Dayton Community Development Association and regularly report back to the City Manager and City Council.

We recommend that the City Council take the following actions before the end of 2012:

### 1. COMMUNITY ACTION COMMITTEE

Action: Appoint and charge a diverse Community Action Committee.

Charge: Identify and recruit citizens to be involved in DAYTON **FORWARD**, and ensure that the work of DAYTON **FORWARD** is communicated to all segments of the community. Aid the organization of community projects and events. Generate a community urgency to move Dayton forward. Help City Council and the City Manager in the setting of DAYTON **FORWARD** priorities.

People: Kymberli Contreras

### 2. ENERGY AND INFRASTRUCTURE

Action: Appoint and charge a Public Utilities Commissioner

Charge: Work with other residents and city staff to review, revise and move forward improvements to Dayton's infrastructure. Develop a strategy to make Dayton an energy independent municipality. Identify schedule and potential funding sources.

Person: Ross Swarzendruber, Dayton Public Utilities Commissioner

### 3. IMAGE AND ENVIRONMENT

Action: Appoint and charge leaders who will improve and communicate Dayton's Image.

Charge: Organize community cleanups. Undertake other efforts to improve Dayton's image and appeal including the enforcement of its nuisance and parking codes. Communicate Dayton's improved image to the world.

People:

### 4. ECONOMIC DEVELOPMENT AND URBAN SERVICES

Action: Appoint and charge an Economic Development Committee Chair

Charge: Form a group of private investors who, by investing their private capital, assemble key parcels of land and make them ready for development consistent with the DAYTON **FORWARD** vision. Recruit businesses and industry to Dayton. Investigate Tax increment financing as a tool to pay for infrastructure improvements. Work in concert with the Dayton Community Development Association

People: Bill Stoller, Chairman

### 5. RECREATION, RIVERFRONT and OPEN SPACE

Actions: Appoint and charge a Shade Tree Commissioner

Appoint and charge a Dayton Garden Club President

Appoint and charge a Dayton Riverkeeper.

Charge: Develop a street tree program which will beautify and give a sense of community to Dayton. Coordinate with state, county and neighboring street tree programs. Involve neighboring nurseries. Develop a program to identify and protect landmark trees in Dayton. Plant trees.

Charge: Form a Dayton Garden Club to promote private and public gardening with the object of bring beauty and character to Dayton, and making it a more attractive and memorable city.

Charge: Assemble, develop and protect the natural beauty and wildlife habitat of the system of greenways and trails identified in DAYTON **FORWARD** including Palmer Creek, Lippincott Gulch and the Yamhill River.

People: Emily Osborn, Shade Tree Commissioner

Martha Goodrich, President; Kathleen Bennett, Delia Hammond, Emily Osborn, members Dayton Garden Club

Ann Marie Anderson, Dayton Riverkeeper

## Next Steps - City Council Actions (Continued)

### 6. HISTORIC RESOURCES

Action: Direct the Historic Preservation Committee as follows:

Charge: Define an historic district: boundaries, programs, and design guidelines beginning with those currently adopted.

People: Historic Preservation Committee, Judy Gerrard, chair

### 7. HOUSING

Action: Appoint and charge a Dayton Housing Commissioner

Charge: Work to ensure there is an adequate housing stock to accommodate a diverse community.

Coordinate with efforts to enforce the City Building Code.

People: Mary Ann Stoller, Housing Commissioner

### 8. TRANSPORTATION

Action: Appoint and charge a Dayton Transportation Liaison

Charge: Coordinate DAYTON **FORWARD** with the Oregon Department of Transportation and Yamhill County, specifically the Dundee Bypass Project, Yamhill River Bridge, highway signage, and the treatment of entrances to Dayton, with particular attention to the intersection of Hwy 18 and Hwy 221.

People:

### 9. LAND USE AND URBAN FORM

Action: Appoint and charge a DAYTON **FORWARD** citizen advocate for the update of the Dayton Comprehensive Plan

Charge: Work with the City's staff and planner to up-date comprehensive plan and amend city code as necessary to realize the DAYTON **FORWARD** concept. Consider the adoption of Urban Design and Development Guidelines.

People: John Collins, Land Use and Urban Form Advocate

**10. EDUCATION**

Action: Appoint a 40-40-20 Committee

Charge: Partner with Chemeketa Community College to establish a program which will train Dayton students for jobs in local industries, including but not limited to: agribusiness, food processing and preparation, and hospitality.

People: Janelle Beers, Debbie Kearns

**11. ARTS & CULTURE**

Action: Appoint an Arts and Culture Commissioner

Charge: Establish a diverse, unique and meaningful role for the arts and culture within Dayton, including the incubation of a local arts community, attracting a countywide arts organization to the downtown, enriching Dayton with public art and cultural celebrations, and working with the Dayton School District and ethnic groups.

People: Richard Thompson

**12. *FAST* FORWARD**

Action: Request the Dayton Community Development Association, (DCDA), define and seek funding for a significant package of infrastructure improvements within Dayton's core, and a Dayton based program of advanced education and job training in the fields of sustainable agriculture and food processing, in association with the Dayton School District, OSU and Chemeketa Community College.

People: Kelly Haverkate, Wendy Bennett

# Next Steps - Models and Resources

## CLEAN COMMUNITY PROGRAM

A DAYTON **FORWARD** visual survey of the city' core, determined that roughly 10% of the properties needed to "clean-up". Large and small trash items were piled or scattered around yards, sometimes spilling into the street. Invasive plants were taking over junk cars which littered many properties, and in some cases were being repaired on the street. Structures were not well maintained and sometimes dangerous.

The visual survey offered two conclusions: First, the 10% of the properties that needed to clean up made a "90% impression" on the newcomer. Second, landscaping played a large role in moving a property into the highest rated category--landscaping of the yard, and in the right-of-way in front of the property. A well tended garden, of either ornamentals or vegetables, demonstrated that the owner cared about his or her property and the community. A line of street trees also tied properties together and gave the street a sense of community. Landmark trees became exclamation points in the cityscape. Ravines, gulches and creeks are recreational opportunities awaiting trails.

There are many things that Dayton must do which require large sums of money. Infrastructure improvements and economic investment are principal among them. However, the residents of Dayton can greatly change a visitor's impression by caring for their individual parcels of property and the streets in front of them. That said, a cleanup must be a community effort because many individuals of advanced age, low income or disability need assistance.

**IDEAS:**

1. Change community norms and values with respect to trash. This can be done in two ways; through childhood education and thru civic leadership. Environmental education should seek, at an early age, to change attitudes toward litter and to care for Dayton as a community. City leaders must make improving Dayton's image an accepted community norm, and offer encouragement and assistance to those responsible for implementing a community clean-up.
2. Organize a block-by-block, or neighborhood-by-neighborhood cleanup by designating a leader or committee for each area.
3. Keep records and receipts. Take photos of troublesomely littered locations before and after each clean-up event or action. Keep this record over a period of years to document progress.
4. Involve existing community organizations such as churches, clubs and schools in the effort. Coordinate and combine individual programs that may already exist.
5. If neighborly persuasion does not work, be prepared to enforce, or amend existing city ordinances regulating parking, unsafe buildings, and abating public nuisances. Be prepared to enact additional codes and ordinances.
6. Find funding for the disposal of large trash items, and drop-boxes used in community cleanups.

7. Undertake a model block project with several community service organizations. Choose an area of public importance, such as an important street face of a residential block in the historic district. Document individual property needs within that area such as trash removal, property and street landscaping, painting, building repairs, etc. Make the improvements over a series of weeks to demonstrate and test their combined impact. Document the appearance before, during, and after.

8. Advertise the Clean Community Program with, "Dayton is Cleaning Up", and children's posters so that it becomes a community ethic with palpable results.

9. Create an information bank at City Hall to inform residents as to how to dispose of large items and recyclable material.

**RESOURCES:**

**Oregon Metro**

Portland's METRO regional government has an on-line manual explaining how to organize a neighborhood, an open space or a civic event clean-up at: http://library.oregonmetro.gov/files//neighborhood_cleanup_guide_2012.pdf

**Keep America Beautiful**

Keep America Beautiful, (KAB), was established in 1953, and has 600 affiliates throughout the country, but none in Oregon. Their web site; http://www.kab.org explains how to organize an affiliate and offers training for local leaders. KAB also offers grants and advice on how to organize clean-ups, and information about environmental education.

**SOLVE**

SOLVE provides education, training and resources for Oregonians to improve our environment and build a legacy of stewardship. It was founded in 1969 by Governor Tom McCall to keep the public beaches clean and now also addresses illegal dump cleanup, native tree planting, invasive plant removal, and other environmental maintenance projects by organizing volunteer efforts. SLOVE's "Green Team" is a yearlong service-learning program engaging K-12 science classes in high priority stream and wetland enhancement projects. SOLVE's "Project Oregon" helps individuals, groups, students, and teachers organize volunteer projects throughout Oregon that engage volunteers in restoration and cleanup efforts. SOLVE's "Project Oregon" helps individuals, students, groups, and teachers organize volunteer projects throughout Oregon that engage volunteers in restoration and cleanup efforts.

Visit: www.solv.org

## Next Steps - Models and Resources (Continued)

### ECONOMIC DEVELOPMENT

Without an organization to promote economic development, by assembling property, recruiting businesses and making key and timely investments, a city's potential vitality can be dissipated by missed opportunities. Dayton is not large enough to support a redevelopment agency, and its tax base cannot support an urban renewal program. However, another model exists nearby.

Community business leaders formed **McMinnville Industrial Promotions** in the early 1950's when McMinnville faced a series of plant closures and layoffs of about 300 workers. Their mission was to assemble industrial land, make it "shovel ready", then recruit outside industrial investment. It began as a not-for-profit, and then within a matter of years, became a community corporation and then a for-profit with a board and the mission of attracting new industry to McMinnville. It worked in the 1950's and is still in motion almost 60 years later. It attracts businesses that supply jobs which pay mortgages.

DAYTON **FORWARD** recommends that a similar group be formed for Dayton, but with a broader mission that would also include historic restoration, and the development of other amenities that would attract tourists to the City. The DAYTON **FORWARD** report is intended as a recruiting tool for the city and for this group.

The web-site for McMinnville Industrial Promotions is: www.mcminnvilleindustry.com

The **Historic Savannah Foundation** offers another economic model for historic preservation which may in part apply to Dayton. The organization began in 1955 when a beloved public market was torn down. Historic Savannah makes use of a revolving fund to buy, restore, and then sell landmarks and other significant structures in historic districts in the city. It also campaigns for compatibly designed infill development. The revolving fund is periodically replenished through funding drives.

Their web site is: www.myhsf.org

## URBAN FORM

Residents of Dayton have visited **Healdsburg CA**, population 11,000, and are familiar with the efforts of nearby **Carlton OR** population 2,024, and **McMinnville OR**, population 32,451. **Los Olivos CA** is a town about half the size of Dayton, and it benefits from being an arts center and catering to wine tourism.

## ENERGY AND INFRASTRUCTURE

**Wildpoldsried, Germany** with its population of 2,600 has been offered as a model for Dayton. The citizens of Wildpoldsried started building projects which generated renewable energy in 1997. The town now generates 320% of the energy it requires from a variety of sources which include wind turbines, biomass digesters, small hydro projects and photovoltaic arrays. The energy generated by these projects of sold to the grid, and generates a profit of about $5 million annually for the town.

It is postulated that Dayton could treat its wastewater, and waste from food processing and surrounding dairy or cattle operations, to generate both heat and power. This more sophisticated means of treatment may generate a profit and require less land which could then be used for industrial development.

## TRAILS AND OPEN SPACE

The recreational trail system envisioned for the Palmer Creek, Lippincott Gulch and the Bank of the Yamhill River has models in Portland's **Marquam Nature Park**, **Hoyt Arboretum** (pictured below), and **Forest Park.** Marquam Nature Park was assembled by citizens using a mix of parcel acquisition and tax benefits gained from the donation of steep, wooded backyards, which were difficult to develop. It is one link in Portland's 40 Mile Loop trail system.

# DAYTON **FORWARD** Process

DAYTON **FORWARD** was a 24 week visioning process sponsored by the Dayton Community Development Association, (DCDA), and the City of Dayton. It was inspired and supported by city residents and surrounding neighbors who wanted to see Dayton thrive economically while preserving its most treasured physical and social assets. The visioning process was organized around three meetings and undertaken between June and December of 2012. Prior to beginning, a detailed work program and schedule were adopted by the Dayton City Council.

**18 JUNE 2012**

City Council reviewed and approved DCDA's proposal to develop a vision for Dayton.

**8 AUGUST 2012**

The first meeting began with an historical description of how and why Dayton became what it is today, as well as a snapshot of Dayton's current character and its possibilities. That was followed by an hour's discussion among the 65 attendees. They talked about Dayton's current issues and their ideas for the City's future. About 30 questionnaires were filled out and returned.

**27, 28, 29 AUGUST 2012**

The second meeting was really a series of three small workshops each attended by 8-12 volunteer citizens plus city staff. Each workshop reviewed, in detail, a draft of a dozen goals and descriptive bullet points which were derived from the first meeting and the questionnaires. Each group then sketched a diagram of future Dayton over a large city base map.

**4 SEPTEMBER 2012**

Following the workshops thirteen main goals were edited and then adopted by the Dayton City Council.

**2 OCTOBER 2012**

The third meeting was attended by about 40 residents and neighbors of Dayton. About 80% had attended an earlier meeting. After a quick review of progress to date, there was an open discussion of issues and issue areas, and a general discussion of the Diagram, Goals, Planning Guidelines, and Action Items.

**8 NOVEMBER 2012**

The Dayton Planning Commission unanimously adopted the DAYTON **FORWARD** draft after being briefed on the Arts & Culture goal; hearing citizen comments on how the public pathways between Courthouse Square and Legion Field, and within Lippincott Gulch and Palmer Creek, would be implemented; and what would happen next, what would be the plan of action.

**3 DECEMBER 2012**

The Dayton City Council unanimously adopted DAYTON **FORWARD**, including the ***FAST* FORWARD** component, with enthusiasm. Comments from citizens and Council members focused on the document serving as a guideline for the future, not a set of imperatives; implementation efforts; and the need for infrastructure improvements.

# Acknowledgements

DAYTON **FORWARD** is a citizen led initiative! Thanks to everyone who participated:

## WORKSHOP ATTENDEES

**August 27th**

Ross Swarzendruber
Steve Hesseling
Carol Hesseling
Sandra Utt
Kymberli Contreras
Teresa Shelburne
Jim Seufert
Carol Hottle
Judy Gerrard

**August 28th**

Emily Osborn
Martha Goodrich
John Collins
Pieper Sweeney
Wendy Bennett
Kathleen Bennett
Delia Hammond

**August 29th**

Jolie White
Caye Poe
John Francis
Angel Aguilar
Lupita Villa
Trini Marquez
Tim McDaniel
Mary Ann Stoller
Yazmin Valencia-Castro
Jacob Janssen

## OTHER MEETING ATTENDEES

Scott Archibald
Michelle Archibald
Lindsey Archibald
Ashley Archibald
Jason Aust
Erin Aust
Janelle Beers
Jim Bennett
Channing Bennett
Debbie Chapman-Ramirez
Lindsay Menard-Carothers
Andy Charles
Jody Christensen
Yvonne Craig
Andy Crowder
Karol Crowder
Scott Cunningham
Mary Czarnecki
Bob Dickson
Denice Drushella
Lorri Flores
Evonne Foshee
Annette Frank
Jim Griffin
Dave Hakola
David Hammond
Amy Janson
Marie Koval
Debra Lien
Kathy Miller
Tim Parson
Andy Patton
Malou Peabody
Anna Philipsen
Jeannie Putman
Beth Satterwhite
Darren Shelburne
Shawn Sutton
Hal Tanaka
Sharon Tanaka
Richard Thompson
Jake Tompkins
Maria Vigil
Michelle Wasner
Jo Windish

SPECIAL THANKS TO

**Kelly Haverkate** - DCDA Program Coordinator
**Christy Ellis Wurster** - Dayton City Manager
**Renata Wakeley** - Planner, Mid-Willamette Valley COG

**Dayton City Council**

Jolie White - Mayor
John Bixler
Monte Blackburn
Hank Evers
Annette Frank
Beth Wytoski
Sandra Utt

**Dayton Planning Commission**

Tim Parsons - Chair
Darrick Price
Josh Hatfield
Scott Mansfield
Scott Peterson

**City of Dayton**

**Dayton Community Development Association (DCDA)**

## Citizens make the difference!

(Left to right): Delia Hammond, Emily Osborn, Martha Goodrich, Kathleen Bennett

**"I had aspirations above my prospects"**

- Joel Palmer, founder of Dayton

# Attachment 2 - Transmission Line Easement 1

OFFICIAL YAMHILL COUNTY RECORDS
BRIAN VAN BERGEN, COUNTY CLERK
201402055

$71.00

00432904201400020550070070

02/24/2014 03:23:36 PM

DMR-EDMR Cnt=1 Stn=2 MILLSA
$35.00 $5.00 $11.00 $20.00

After recording, return to:
City of Dayton
PO Box 339
Dayton, OR 97114-0339

## WATERLINE EASEMENT & MAINTENANCE ACCESS EASEMENT

WHEREAS, the City of Dayton, Oregon ( "City") owns and operates a municipal water supply pipeline between the City owned watershed area and the City of Dayton, and a portion of said water supply pipeline is situated on a tract of land described in a deed executed 5/17/1966 & recorded in vol 52, page 854, deed reference A/0/5994), Yamhill County Deed Records, Tax Lot 4309-1600 (McDougall Property); and

WHEREAS, the portion of the water supply pipeline on the McDougall Property was authorized and installed based on a 99 year lease agreement granted to the City of Dayton by William Milne on April 4, 1904, with said 1904 lease agreement (1904 Lease) recorded in Volume 50, page 517, Yamhill County Deed Records; and

WHEREAS, although the term of the 1904 Lease expired on April 4, 2004, the City water supply pipeline remains in place and in use under prescriptive easement rights, since said pipeline conveys water to the City of Dayton from springs and storage reservoirs located in the City watershed, with said springs being defined by the State of Oregon as part of the City's "primary" water supply system; and

WHEREAS, the existing water supply pipeline has reached the end of its design life, and the City needs to replace the existing water supply pipeline with a new water pipeline in order to maintain the reliability of the City water system, and said pipeline replacement requires excavation on and across the McDougall Property; and

WHEREAS, the 1904 Lease granted the City "the right ingress and egress along said pipe line for the purpose of building . . . and keeping the same in repair" and specified that the City was to "pay all damages caused by reason of laying down said water main or pipe line, or renewing or repairing the same."; and

WHEREAS, grading, farming and logging operations since 1904 have resulted in steep slopes, fills and large stumps located on, over and along the existing water supply pipeline alignment, making it impractical to replace said pipeline along the existing alignment without significant additional excavation and expense, and significant impacts to adjacent properties; and

WHEREAS, the previous owner of the McDougall Property, Winnie & Rosa McDougall executed an agreement in 1949 with the City (1949 Agreement) to authorize installation of a domestic water service connection to serve two existing residences located on the McDougall Property. . The 1949 Agreement provided that the water service connection is subject "to such rules and regulations as may be applicable to all users of water outside of the City Limits of Dayton". The 1949 Agreement also provided for domestic use by the McDougalls without charge or compensation of up to 600 cubic feet per month of water at each of the two dwellings that existed in 1949 (or new dwellings thereafter located on the same sites); and

WHEREAS, the current owner of the McDougall property, Arland McDougall, (Grantor) recently installed a water service line from the City Waterline to the one of the residences listed in the 1949 Agreement but the City cannot legally provide a service connection until completion of certain state mandated improvements to the watershed spring sources (Improvements); and

After recording, return to:
City of Dayton
PO Box 339
Dayton, OR 97114-0339

00432804201400020550070070

$71.00

02/24/2014 03:23:36 PM

DMR-EDMR Cnt=1 Stn=2 MILLSA
$35.00 $5.00 $11.00 $20.00

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WHEREAS, although the term of the 1904 Lease expired on April 4, 2004, the City water supply pipeline remains in place and in use under prescriptive easement rights, since said pipeline conveys water to the City of Dayton from springs and storage reservoirs located in the City watershed, with said springs being defined by the State of Oregon as part of the City's "primary" water supply system; and

WHEREAS, the existing water supply pipeline has reached the end of its design life, and the City needs to replace the existing water supply pipeline with a new water pipeline in order to maintain the reliability of the City water system, and said pipeline replacement requires excavation on and across the McDougall Property; and

WHEREAS, the 1904 Lease granted the City "the right ingress and egress along said pipe line for the purpose of building . . . and keeping the same in repair" and specified that the City was to "pay all damages caused by reason of laying down said water main or pipe line, or renewing or repairing the same."; and

WHEREAS, grading, farming and logging operations since 1904 have resulted in steep slopes, fills and large stumps located on, over and along the existing water supply pipeline alignment, making it impractical to replace said pipeline along the existing alignment without significant additional excavation and expense, and significant impacts to adjacent properties; and

WHEREAS, the previous owner of the McDougall Property, Winnie & Rosa McDougall executed an agreement in 1949 with the City (1949 Agreement) to authorize installation of a domestic water service connection to serve two existing residences located on the McDougall Property. . The 1949 Agreement provided that the water service connection is subject "to such rules and regulations as may be applicable to all users of water outside of the City Limits of Dayton". The 1949 Agreement also provided for domestic use by the McDougalls without charge or compensation of up to 600 cubic feet per month of water at each of the two dwellings that existed in 1949 (or new dwellings thereafter located on the same sites); and

WHEREAS, the current owner of the McDougall property, Arland McDougall, (Grantor) recently installed a water service line from the City Waterline to the one of the residences listed in the 1949 Agreement but the City cannot legally provide a service connection until completion of certain state mandated improvements to the watershed spring sources (Improvements); and

WHEREAS, the completion of the Improvements by the City will allow the City to allow the domestic water service connection for the residence located on the McDougall Property; and

WHEREAS, the City and Grantor desire to update the area designated for the pipeline alignment to reduce clearing and excavation required to replace the existing pipeline and to document the new alignment in an easement.

NOW, THEREFORE, Owner and the City agree as follows:

SECTION 1. Grant of Easement.

1.1 The Grantor grants to the City a non-exclusive, perpetual easement in gross, on, over, across and along a portion of the McDougall Property (the Easement Area). The Easement Area is more particularly described and depicted on Exhibit A (legal description) and Exhibit B (map) attached and incorporated by reference herein.

1.2 The purposes of this Easement are to give City the right to enter the Easement Area at any time to establish, install, construct, maintain and repair a water supply pipeline, associated utilities), and all necessary related facilities (the Facilities)

1.3 The parties acknowledge and agree that the grant conferred by this Easement is intended to and does constitute an encumbrance that runs with the McDougall Property and inures to the benefit of and is binding upon the parties and their respective grantees, heirs, successors, and assigns.

SECTION 2. Termination. .

2.1 If the Dayton City Council, by resolution, shall at any time in the future permanently abandon and discontinue use of the Facilities this Easement will terminate and will no longer be in force and effect, and all the rights, title and interest of the City, its successors or assigns in and to said Easement shall cease and be of no further force and effect. 2.2 If the City permanently abandons the Easement as set forth in Section 2.1 above, the City will record a quitclaim deed (or other instrument as applicable) in the deed records of Yamhill County, to formalize the termination of all of the City's rights, title and interest to the Easement .

SECTION 3. Ownership of City Waterline.

3.1 TheFacilities) will be a City owned, operated and maintained and the Grantor shall have no obligation, express or implied, to maintain or service the Facilities.

3.2 Ownership of the City Facilities does not include ownership or responsibility for any water service line connected to the City Facilities for service of the McDougall Property. The Grantor is responsible for all maintenance of those waterlines.

SECTION 4. Installation, Restoration & Maintenance Responsibilities, Permitted Uses by Grantee & Grantor.

4.1 The City Facilities shall be installed with a minimum of 36-inches of cover below the existing surface of the ground, to minimize potential impacts to the Facilities by above-ground activities. . All Facilities shall be placed underground to the extent feasible except for the following:

4.1.1. Valve boxes for isolation valves. To the extent feasible, valve boxes will be set flush with the surrounding grade, and will include a concrete collar around the valve box to prevent dislocation or damage to valve boxes under traffic conditions, and may include a marker bollard for protection and marking. To the extent feasible, valve boxes will be installed within 10 feet of property lines or within 10 feet of the edge of crop boundaries

(boundaries at the time of valve installation).

4.1.2 Air/vacuum relief valves. Air/vacuum relief valves (designed to release air from the pipeline and to prevent pipeline collapse due to vacuum pressure when the pipeline is drained) will be installed at high points in the pipeline, and to the extent feasible will be set as close to the edge of the field or fencelines of the McDougall Property as feasible to minimize disruption of agricultural operations. The air/vacuum relief valves will be set below grade, with the above-grade air vent pipe and protective bollards set as close to the edge of the field or fenceline as feasible.

4.1.3 Water meters. To the extent feasible, water meter boxes will be set flush with the surrounding grade, and meter boxes, protective bollards and/or radio antennas will be set as close to the edge of the field or fencelines of the McDougall Property as feasible to minimize disruption of agricultural operations.

4.2 Following installation of the Facilities in the Easement Area, the City shall be responsible for all future restorations of the Easement Area when the City has performed additional maintenance and will remove all debris and leave the ground surface of the Easement Area in a neat and presentable condition. Topsoil and grass shall be restored as near as feasible to as good a condition as the same were prior to any repair or maintenance by the City. The City shall indemnify and hold harmless Grantor, heirs, and assigns from claims of injury to person or property, accidents, thefts or damages, as a result of the negligence by the City, its employees, agents, contractors, consultants and assigns during the installation, repair, inspection or maintenance of the Facilities in the Easement Area.

4.3 The Easement shall include the right of the City, its employees, agents, contractors, consultants and assigns to enter upon the lands owned by the Grantors, within and adjacent to said easement, at all times for the purpose of excavating, constructing, installing, operating, repairing, maintaining, replacing or removing the Facilities. Except in the case of emergency, the City will endeavor to provide the Grantor with notice prior to entering the Easement Area If the City enters the McDougall Property for emergency purposes when prior notice is not feasible, the City will endeavor to notify the Grantor as soon as feasible after the start of such entry.

4.4 The Grantor reserves and retains the right to cultivate the ground and/or plant annual crops within the Easement Area, and to take access along or across said easement, and reserves the right to plant perennial crops in all locations outside of the Easement Area.

4.5 To the extent feasible, the City shall schedule construction, repair or maintenance so as to minimize the potential for damage to crops adjacent to the Easement Area, and to minimize disruption of agricultural operations. The City shall provide fair compensation to the Grantor for any damage done to any crops growing within or adjacent to the Easement Area due to due to City construction, repair or maintenance operations connected with the Facilities. The City agrees to repair and/or replace any fences removed or damaged during installation, repair or maintenance of the Facilities, and install temporary fencing during said installation, repair or maintenance so as to maintain the integrity and security of the fence system existing at the time work is done by the City.

4.6 The Grantor agrees not to build, construct, or create, nor permit others to build or construct buildings or other structures, including parallel fences, within the Easement Area in a manner which may interfere with the use of the Easement for the purposes set forth herein or with the normal operation, inspection, access to or maintenance of the Facilities, including access for excavation, repairs or replacement if necessary. The Grantor further agrees not to install or allow installation of private or franchise utilities in the Easement Area within 8 feet parallel with the Facilities (right angle crossing are allowed).

4.7 The City, its employees, agents, contractors, consultants and assigns, shall have the right to clear

and keep clear all trees, undergrowth, and other obstructions that may interfere with access, normal operation or maintenance of said utilities, within and over the Easement Area .

SECTION 5. Approval of Domestic Water Service Connection.

5.1 Concurrent with the grant of Easement herein (but not as payment or consideration for the Easement), the City authorizes the installation of a single residential water meter connection to serve the McDougall Property (standard 5/8 - 3/4-inch meter), with said water service limited to domestic use for residences on the McDougall Property, as well as for incidental landscaping irrigation immediately around the residences, and with said water service line to be considered an "Outside City Service", subject to all provisions under Chapter 8 of the Dayton Municipal Code and other applicable City standards.

5.2 The Grantor will be responsible for maintenance of the water service line from the City waterline to the residences, which shall also be subject "to such rules and regulations as may be applicable to all users of water outside of the City Limits of Dayton" as specified under the 1949 Agreement.

5.3 Use of water and payment (if any) for said water usage shall be as provided by the 1949 Agreement, which provided for domestic use (without charge or compensation by Grantor) of up to 600 cubic feet per month of water at each of the two dwellings that existed in 1949 (or new dwellings located on the same sites), with payment for use above 600 cubic feet per month to be at the standard City rates for outside City water users, and subject to the limitations that said "right for such free use of water shall exist only so long as such dwellings (or new dwellings located on the same sites) shall stand and be used as dwelling houses", and that said "right for such free use of water shall exist only so longas the City of Dayton obtains water for municipal purposes from the well located on the land hereinbefore particularly described" (ie. well currently known as McDougall Well No. 1).

SECTION 6. Consideration.

6.1 Consideration for this Easement consists wholly of value other than money.

6.2 If the Grantor installs a water service and meter as set forth in Section 5.3 above, , the City agrees to reconnect the Grantor's water service pipe to the new City-installed pipeline, and reset the associated water meter at no cost to the Grantor..

6.2 As partial consideration for the Easement, the City also agrees to waive payment of the water SDC (System Development Charge) typically required of new water service connections, provided the water service for the McDougall Property is connected and activated within 2 years after the recording of this Easement.

SECTION 7. Extinguishment of prescriptive easement rights.

7.1 Following installation and usage of the Facilities City will abandon the existing pipeline in place, and such abandonment of the existing pipeline will terminate all of the City's rights, title and interest in any prescriptive easement rights along the abandoned waterline across the McDougall Property.

SECTION 8. Other Provisions.

8.1 Provision Applicable Law. This Easement shall be governed by, and construed in accordance with the laws of the State of Oregon.

8.2 Waiver. Failure of either party at any time to require performance of any provision of this Easement shall not limit the parties' right to enforce the provision, nor shall any waiver of any breach of any provision of this easement be a waiver of any succeeding breach of the provision or a waiver of the provision itself or any other provision.

8.3 Severability. The determination that one or more provisions of this Easement is invalid, void or illegal or unenforceable shall not effect or invalidate the remainder of this Easement.

8.4 Modification. No amendment or modification of this Easement shall be valid unless in writing and signed by all parties hereto.

The individuals executing this Agreement warrant that they have full authority to execute this Agreement on behalf of the entity for whom they are acting herein.

WITNESS our hands and seals this 5 day of February, 2014.

ARLAND McDOUGALL — arland McDougall

(Printed Name of Grantors) (Signature of Grantors)

STATE OF OREGON )
) ss.
County of Yamhill )

On this 5 day of February, 2014, personally appeared before me, the above named persons, Arland McDougall, _____, known to me to be the person(s) whose signature is above subscribed, and acknowledged to me that this is a free act and deed, for the uses and purposes therein expressed. In witness whereof, I have hereunto set my hand and affixed by official seal on the day and year last above written.

OFFICIAL SEAL
DEBRA RAE LIEN
NOTARY PUBLIC-OREGON
COMMISSION NO. 457368
MY COMMISSION EXPIRES APRIL 03, 2015

Debra Lien
(Notary Signature)
Notary Public for Oregon
My Commission Expires: April 3, 2015

APPROVED:

Dayton City Manager

2-4-14
Date

This instrument was acknowledged before me on the 4 day February 2014, by Patty Ringnalda

Patty Ringnalda
(Notary Signature)
Notary Public for Oregon
My Commission Expires: 4/3/15

City Engineer (Initial) _____ (if modified)

OFFICIAL SEAL
PATTY J NICHOLS-RINGNALDA
NOTARY PUBLIC-OREGON
COMMISSION NO. 457367
MY COMMISSION EXPIRES APRIL 03, 2015

EXHIBIT A

Legal Description for:
Waterline Easement
Located in T.L. 1600, 4 3 09

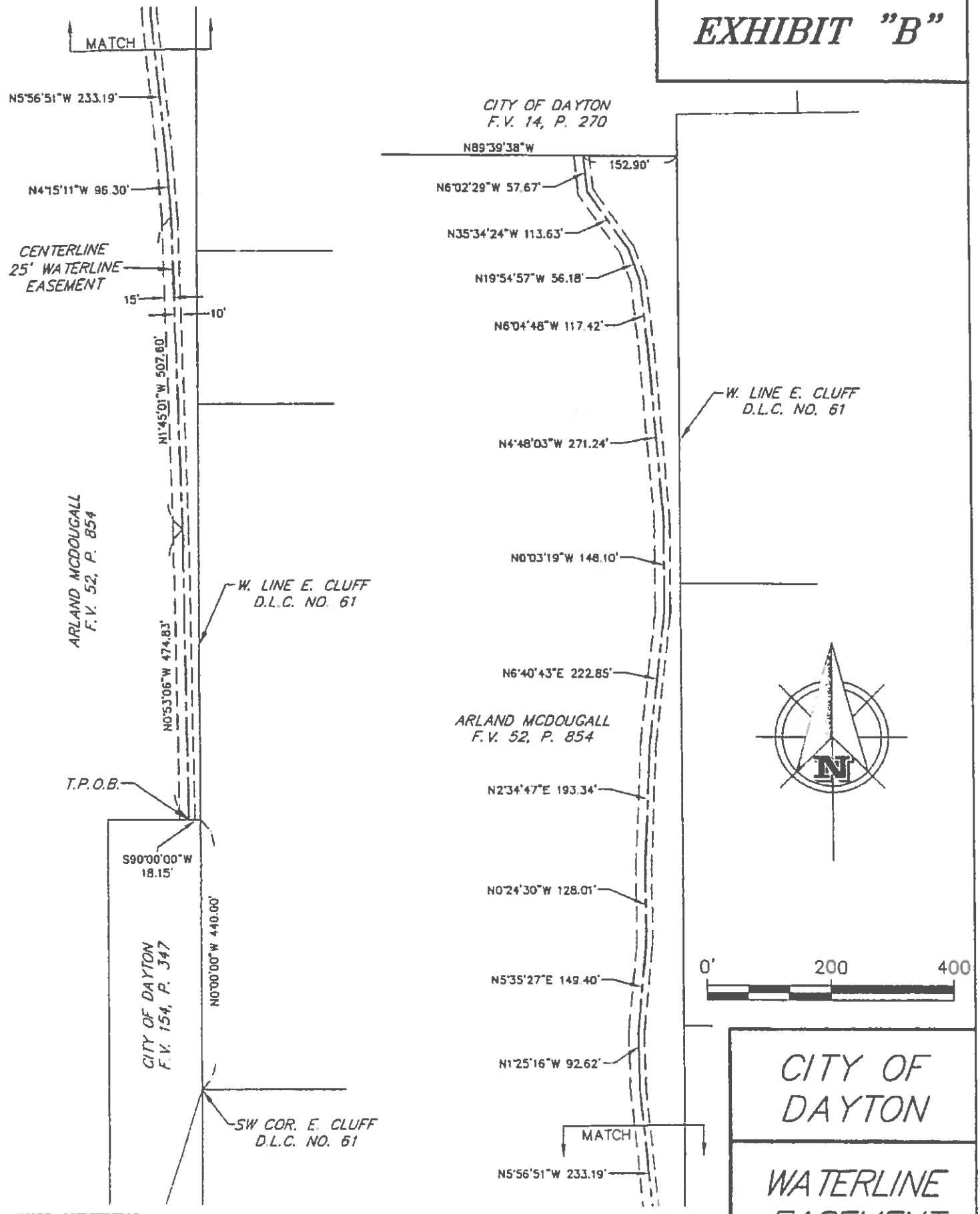
A 25.00-foot wide strip of land situated in the southeast one-quarter of Section 4 and the northeast one-quarter of Section 9, Township 4 South, Range 3 West of the Willamette Meridian, Yamhill County, Oregon, whose sidelines are at a perpendicular distance of 10.00 feet Easterly and 15.00 feet Westerly of the following described centerline:

Beginning at the northeast corner of that tract of land conveyed to the City of Dayton, Oregon, by deed recorded in Film Volume 154, Page 347, Yamhill County Deed Records, said point recorded as being 440 feet North from the southwest corner of the E. Cluff Donation Land Claim No. 61 in said township; thence South 90°00'00" West 18.15 feet along the north line of said City of Dayton tract to the TRUE POINT OF BEGINNING of said centerline; and running thence:

North 0°53'06" West 474.83 feet;
thence North 1°45'01" West 507.60 feet;
thence North 4°15'11" West 96.30 feet;
thence North 5°56'51" West 233.19 feet;
thence North 1°25'16" West 92.62 feet;
thence North 5°35'27" East 149.40 feet;
thence North 0°24'30" West 128.01 feet;
thence North 2°34'47" East 193.34 feet;
thence North 6°40'43" East 222.85 feet;
thence North 0°03'19" West 148.10 feet;
thence North 4°48'03" West 271.24 feet;
thence North 6°04'48" West 117.42 feet;
thence North 19°54'57" West 56.18 feet;
thence North 35°34'24" West 113.63 feet;
thence North 6°02'29" West 57.67 feet to a point on the north line of that tract of land described in Film Volume 52, Page 854, Yamhill County Deed Records at a point North 89°39'38" West 152.90 feet from the northeast corner thereof and the TERMINUS of said centerline.

EXPIRES: 6-30-14

# EXHIBIT "B"





BARKER SURVEYING
3657 KASHMIR WAY SE
SALEM, OREGON 97317
PHONE (503) 588-8800
FAX (503) 363-2469
EMAIL: INFO@BARKERWILSON.COM


TAX LOT 1600
TAX MAP 4 3 09
YAMHILL COUNTY, OREGON

CITY OF DAYTON

WATERLINE EASEMENT

BY: G.L.W. | DATE: 01/29/2014

OFFICIAL YAMHILL COUNTY RECORDS
BRIAN VAN BERGEN, COUNTY CLERK

201408310

$61.00

00440712201400083100050053

07/15/2014 02:52:18 PM

DMR-EDMR Cnt=1 Stn=2 MILLSA
$25.00 $5.00 $11.00 $20.00

**After recording, return to:**
City of Dayton
PO Box 339
Dayton, OR 97114-0339

# WATERLINE EASEMENT & MAINTENANCE ACCESS EASEMENT

WHEREAS, the City of Dayton, Oregon ( "City") owns and operates a municipal water supply pipeline between the City owned watershed area and the City of Dayton, and a portion of said water supply pipeline is situated on a tract of land described in a deed executed 5/17/1966 & recorded in vol 52, page 854, deed reference A/0/5994), Yamhill County Deed Records, Tax Lot 4309-01600 and Tax Lot 4309-00400 (McDougall Property); and

WHEREAS, the City owns a tract of land (commonly known as McDougall Well property), consisting of the tract described in a deed recorded in vol 154, page 347, Yamhill County Deed Records (Tax Lot 4309-00300); and

WHEREAS, the City previously obtained a waterline easement across the northerly portion of the land described in the above deed for the McDougall property, with said easement recorded as instrument 201402055, Yamhill County Deed Records; and

WHEREAS, the City did not realize that the separate tract between the City owned McDougall Well property and McDougall Road (ie. Tax Lot 4309-00400) was also part of the property described by the above referenced deed for the McDougall Property (ie. deed in vol 52, page 854); and

WHEREAS, the waterline easement noted above does not encompass the existing waterline and well access road between the City owned McDougall Well property and McDougall Road; and

WHEREAS, the City and Grantor desire to record an easement to include the pipeline alignment and well access road between the City owned McDougall Well property and McDougall Road (ie. across a portion of Tax Lot 4309-00400); and

WHEREAS, the existing City waterline crosses the field portion of this portion of the McDougall property, but the City desired to install the new waterline under the existing well access road.

NOW, THEREFORE, Owner and the City agree as follows:

SECTION 1. Grant of Easement.

1.1 The Grantor grants to the City a non-exclusive, perpetual easement in gross, on, over, across and along a portion of the McDougall Property (the Easement Area). The Easement Area is more particularly described and depicted on Exhibit A (legal description) and Exhibit B (map) attached and incorporated by reference herein.

1.2 The purposes of this Easement are to provide the City with continued and perpetual use of an existing access road between McDougall road and the City owned McDougall Well property, and to give City the right to enter the Easement Area at any time to establish, install, construct, maintain and repair a water supply pipeline, associated utilities, and all necessary related facilities (the Facilities) along said well access road.

1.3 The parties acknowledge and agree that the grant conferred by this Easement is intended to and

does constitute an encumbrance that runs with the McDougall Property and inures to the benefit of and is binding upon the parties and their respective grantees, heirs, successors, and assigns.

SECTION 2. Termination. .

2.1 If the Dayton City Council, by resolution, shall at any time in the future permanently abandon and discontinue use of the Facilities and the access to the City owned McDougall Well property, this Easement will terminate and will no longer be in force and effect, and all the rights, title and interest of the City, its successors or assigns in and to said Easement shall cease and be of no further force and effect.

2.2 If the City permanently abandons the Easement as set forth in Section 2.1 above, the City will record a quitclaim deed (or other instrument as applicable) in the deed records of Yamhill County, to formalize the termination of all of the City's rights, title and interest to the Easement.

SECTION 3. Ownership of City Waterline and McDougall Well property Access Road.

3.1 The Facilities and the well access road will be City owned, operated and maintained and the Grantor shall have no obligation, express or implied, to maintain or service the Facilities or well access road.

SECTION 4. Installation, Restoration & Maintenance Responsibilities, Permitted Uses by Grantee & Grantor.

4.1 The Facilities shall be installed and maintained in accordance with the provisions of the existing easement document recorded as instrument 201402055, Yamhill County Deed Records (said easement maintenance & restoration provisions being incorporated herein by reference), with the additional requirement that the City will be responsible for maintenance of the access road between McDougall Road and the City owned McDougall Well property.

SECTION 5. Consideration.

5.1 Consideration for this Easement consists wholly of value other than money.

SECTION 6. Extinguishment of prescriptive easement rights.

6.1 Following installation and usage of a new waterline along the existing McDougall Well property access road, City will abandon the existing pipeline in place, and such abandonment of the existing pipeline will terminate all of the City's rights, title and interest in any prescriptive easement rights along the abandoned waterline across the McDougall Property.

SECTION 7. Other Provisions.

7.1 Provision Applicable Law. This Easement shall be governed by, and construed in accordance with the laws of the State of Oregon.

7.2 Waiver. Failure of either party at any time to require performance of any provision of this Easement shall not limit the parties' right to enforce the provision, nor shall any waiver of any breach of any provision of this easement be a waiver of any succeeding breach of the provision or a waiver of the provision itself or any other provision.

7.3 Severability. The determination that one or more provisions of this Easement is invalid, void or illegal or unenforceable shall not effect or invalidate the remainder of this Easement.

7.4 Modification. No amendment or modification of this Easement shall be valid unless in writing and signed by all parties hereto.

The individuals executing this Agreement warrant that they have full authority to execute this Agreement on behalf of the entity for whom they are acting herein.

WITNESS our hands and seals this 2nd day of July, 2014

ARLAND McDOUGALL
(Printed Name of Grantors)

Arland McDougall
(Signature of Grantors)

STATE OF OREGON )
) ss.
County of Yamhill )

On this 2nd day of July, 2014, personally appeared before me, the above named persons, Arland McDougall, _____, known to me to be the person(s) whose signature is above subscribed, and acknowledged to me that this is a free act and deed, for the uses and purposes therein expressed. In witness whereof, I have hereunto set my hand and affixed by official seal on the day and year last above written.

OFFICIAL SEAL
DEBRA RAE LIEN
NOTARY PUBLIC-OREGON
COMMISSION NO. 457368
MY COMMISSION EXPIRES APRIL 03, 2015

Debra Lien
(Notary Signature)
Notary Public for Oregon
My Commission Expires: April 3, 2015

APPROVED:

Dayton City Manager

6-19-14
Date

This instrument was acknowledged before me on the 19th day June, 2014, by

Debra Lien
(Notary Signature)
Notary Public for Oregon
My Commission Expires: 4-3-15

City Engineer (Initial) _____ (if modified)

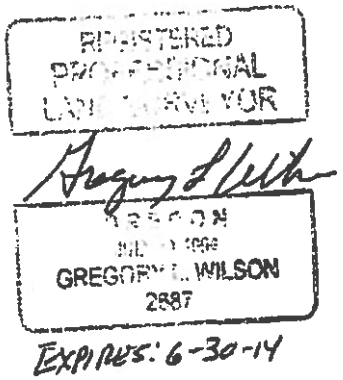
OFFICIAL SEAL
DEBRA RAE LIEN
NOTARY PUBLIC-OREGON
COMMISSION NO. 457368
MY COMMISSION EXPIRES APRIL 03, 2015

EXHIBIT A

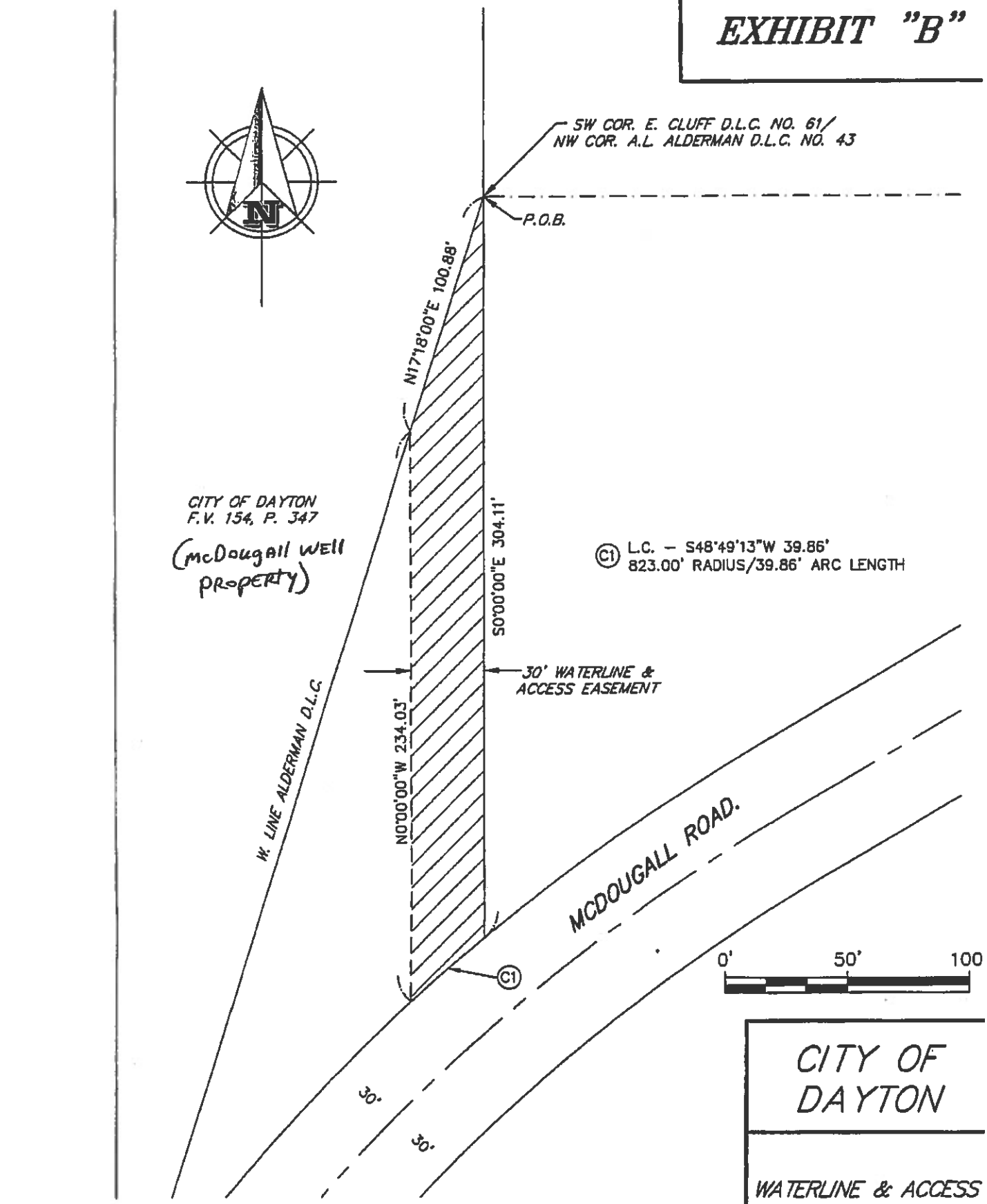
Legal Description for:
Waterline & Access Easement
Located in T.L. 400, 4 3 09

A 30.00-foot wide strip of land situated in the northeast one-quarter of Section 9, Township 4 South, Range 3 West of the Willamette Meridian, Yamhill County, Oregon, more particularly described as follows:

Beginning at the southwest corner of the E. Cluff Donation Land Claim No. 61 in said township, said point also being the northwest corner of the A.L. Alderman Donation Land Claim No. 43; and running thence:
South 0°00'00" East 304.11 feet along the southerly extension of the west line of said Claim No. 61 to a point on the north right of way line of McDougall Road;
thence Southwesterly along the arc of a 823.00-foot radius curve to the left (the chord of which bears South 48°49'13" West 39.86 feet) 39.86 feet along said north right of way line to a point that is 30.00 feet due West from said southerly extension;
thence North 0°00'00" West 234.03 feet to a point on the west line of the aforementioned A. L. Alderman Donation Land Claim No. 43;
thence North 17°18'00" East 100.88 feet along said west line to the Point of Beginning.



# EXHIBIT "B"





BARKER SURVEYING
3657 KASHMIR WAY SE
SALEM, OREGON 97317
PHONE (503) 588-8800
FAX (503) 363-2469
EMAIL: INFO@BARKERWILSON.COM


TAX LOT 400
TAX MAP 4 3 09
YAMHILL COUNTY, OREGON

CITY OF DAYTON

WATERLINE & ACCESS EASEMENT

BY: G.L.W. | DATE: 05/31/2014

Attachment 4 - Fisher Farms Property Reports

# Yamhill County Property Tax Search

Search Again

FISHER FARM PROP #1

| | | | |
|---|---|---|---|
| | | Data Current as of | Oct 26, 2015 |
| **Account Info:** | | Market Land Value | $269,163 |
| Account No | 119972 | Market Structure Value | $24,589 |
| Map/Tax Lot Number | R4319 01501 | Total RMV | $293,752 |
| Property Class | 9413 | Total Assessed Value | $282,020 |
| Tax Code Area | 8.3 | Exemption | $0 |
| Property Status | ACTIVE | Net Taxable | $0 |
| Associated Pin | | 2015-2016 Levied Tax | $0.00 |
| **Owner Info:** | | Account Balance | $0.00 |

⇐ Account has no outstanding balance

| | |
|---|---|
| Property Owner | RESIDENT |
| Situs Address | 13125 SE AMITY-DAYTON HWY |
| Owner Mailing Address | PO BOX 339 DAYTON OR 97114 |

CITY OF DAYTON

**Property Info:**

| Year Built | Acres/ Lot Sq Ft | Square Footage | Number of Bedrooms | Number of Bathrooms | Stories |
|---|---|---|---|---|---|
| 0000 | 49.40 | 0 | 0 | 0.00 | 0 |

**Sales Info:**

| Deed Reference Number | Sale Date | Sale Price |
|---|---|---|
| 2014/06837 | Jun 10, 2014 | 755,000 |

View this tax lot on the Yamhill County GIS Maps

View the plat map for this tax lot

**Tax & Payment History:**

| Stmts | Tax Year | Payments | Interest/ Discount | Fees | Levied Taxes | Last Activity Date |
|---|---|---|---|---|---|---|
| | 2013 | -863.62 | 3.82 | 0.00 | 859.80 | 12/09/2013 |
| | 2012 | -791.14 | -24.46 | 0.00 | 815.60 | 11/01/2012 |
| | 2011 | -791.40 | 3.50 | 0.00 | 787.90 | 12/02/2011 |
| | 2010 | -755.09 | 0.00 | 0.00 | 755.09 | 05/15/2011 |
| | 2009 | -743.71 | 0.00 | 0.00 | 743.71 | 05/15/2010 |
| | 2008 | -603.81 | -18.67 | 0.00 | 622.48 | 11/05/2008 |
| | 2007 | -590.15 | -18.25 | 0.00 | 608.40 | 11/15/2007 |
| | 2006 | -585.96 | -18.12 | 0.00 | 604.08 | 11/15/2006 |
| | 2005 | -600.55 | 0.00 | 0.00 | 600.55 | 05/12/2006 |
| | 2004 | -568.23 | -17.57 | 0.00 | 585.80 | 11/10/2004 |
| | 2003 | -578.37 | 0.00 | 0.00 | 578.37 | 05/15/2004 |
| | 2002 | -562.17 | 4.95 | 0.00 | 557.22 | 12/26/2002 |
| | 2001 | -608.38 | 77.80 | 0.00 | 530.58 | 12/26/2002 |
| | 2000 | -699.42 | 164.14 | 0.00 | 535.28 | 12/26/2002 |
| | 1999 | -762.25 | 242.52 | 0.00 | 519.73 | 12/26/2002 |
| | 1998 | -670.98 | 258.48 | 0.00 | 412.50 | 12/26/2002 |
| | 1997 | -361.04 | 11.02 | 0.00 | 350.02 | 06/08/1998 |
| | 1996 | -483.60 | 35.82 | 0.00 | 447.78 | 07/30/1997 |
| | 1995 | -414.38 | 80.19 | 0.00 | 334.19 | 07/30/1997 |
| | 1994 | -387.30 | 3.41 | 0.00 | 383.89 | 01/03/1995 |

(Summary amounts only. Interest and Fees are calculated at time of payment. There are no fees other than those imposed by the county.)

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# Yamhill County Property Tax Search

Search Again

FISHER FARM PROP #2

| | | | |
|---|---|---|---|
| | | Data Current as of: | Oct 26, 2015 |
| **Account Info:** | | Market Land Value | $111,801 |
| Account No | 119838 | Market Structure Value | $37,186 |
| Map/Tax Lot Number | R4319 01100 | Total RMV | $148,987 |
| Property Class | 9413 | Total Assessed Value | $148,987 |
| Tax Code Area | 8.3 | Exemption | $0 |
| Property Status | ACTIVE | Net Taxable | $0 |
| Associated Pin | M00263155 | 2015-2016 Levied Tax | $0.00 |
| **Owner Info:** | | Account Balance | $0.00 |
| Property Owner | RESIDENT | | |
| Situs Address | 13665 SE AMITY-DAYTON HWY | | |
| Owner Mailing Address | PO BOX 339 DAYTON OR 97114 | | |

⇐ Account has no outstanding balance

CITY OF DAYTON

**Property Info:**

| Year Built | Acres/ Lot Sq Ft | Square Footage | Number of Bedrooms | Number of Bathrooms | Stories |
|---|---|---|---|---|---|
| 0000 | 5.87 | 0 | 0 | 0.00 | 0 |

**Sales Info:**

| Deed Reference Number | Sale Date | Sale Price |
|---|---|---|
| 2014/06837 | Jun 10, 2014 | 755,000 |

View this tax lot on the Yamhill County GIS Maps

View the plat map for this tax lot

**Tax & Payment History:**

| Stmts | Tax Year | Payments | Interest/ Discount | Fees | Levied Taxes | Last Activity Date |
|---|---|---|---|---|---|---|
| | 2013 | -950.03 | 4.20 | 0.00 | 945.83 | 12/09/2013 |
| | 2012 | -899.18 | -27.80 | 0.00 | 926.98 | 11/01/2012 |
| | 2011 | -960.54 | 4.25 | 0.00 | 956.29 | 12/02/2011 |
| | 2010 | -926.62 | 0.00 | 0.00 | 926.62 | 05/15/2011 |
| | 2009 | -944.32 | 0.00 | 0.00 | 944.32 | 05/15/2010 |
| | 2008 | -790.50 | -24.44 | 0.00 | 814.94 | 11/05/2008 |
| | 2007 | -797.19 | -24.65 | 0.00 | 821.84 | 11/15/2007 |
| | 2006 | -725.48 | -22.43 | 0.00 | 747.91 | 11/15/2006 |
| | 2005 | -744.92 | 0.03 | 0.00 | 744.89 | 05/12/2006 |
| | 2004 | -708.16 | -21.90 | 0.00 | 730.06 | 11/10/2004 |
| | 2003 | -722.28 | 0.00 | 0.00 | 722.28 | 03/12/2004 |
| | 2002 | -716.47 | 6.31 | 0.00 | 710.16 | 12/26/2002 |
| | 2001 | -792.81 | 101.40 | 0.00 | 691.41 | 12/26/2002 |
| | 2000 | -943.08 | 221.32 | 0.00 | 721.76 | 12/26/2002 |
| | 1999 | -1034.04 | 329.01 | 0.00 | 705.03 | 12/26/2002 |
| | 1998 | -894.67 | 344.66 | 0.00 | 550.01 | 12/26/2002 |
| | 1997 | -555.53 | 16.96 | 0.00 | 538.57 | 06/08/1998 |
| | 1996 | -562.66 | 41.66 | 0.00 | 521.00 | 07/30/1997 |
| | 1995 | -863.92 | 167.19 | 0.00 | 696.73 | 07/30/1997 |
| | 1994 | -798.77 | 7.03 | 0.00 | 791.74 | 01/03/1995 |

(Summary amounts only. Interest and Fees are calculated at time of payment. There are no fees other than those imposed by the county.)

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# Yamhill County Property Tax Search

Search Again

| | | | |
|---|---|---|---|
| | | Data Current as of: | Oct 26, 2015 |
| **Account Info:** | | Market Land Value | $77,104 |
| Account No | 300659 | Market Structure Value | $0 |
| Map/Tax Lot Number | R4319 01202 | Total RMV | $77,104 |
| Property Class | 9403 | Total Assessed Value | $77,103 |
| Tax Code Area | 8.3 | Exemption | $0 |
| Property Status | ACTIVE | Net Taxable | $0 |
| Associated Pin | | 2015-2016 Levied Tax | $0.00 |
| **Owner Info:** | | Account Balance | $0.00 |
| Property Owner | RESIDENT | | |
| Situs Address | | | |
| Owner Mailing Address | PO BOX 339 DAYTON OR 97114 | | |

FISHER FARM
PROP #3

CITY OF DAYTON

= Account has no outstanding balance

**Property Info:**

| Year Built | Acres/ Lot Sq Ft | Square Footage | Number of Bedrooms | Number of Bathrooms | Stories |
|---|---|---|---|---|---|
| 0000 | 4.49 | 0 | 0 | 0.00 | 0 |

**Sales Info:**

| Deed Reference Number | Sale Date | Sale Price |
|---|---|---|
| 2014/06837 | Jun 10, 2014 | 755,000 |

View this tax lot on the Yamhill County GIS Maps

View the plat map for this tax lot

**Tax & Payment History:**

| Stmts | Tax Year | Payments | Interest/ Discount | Fees | Levied Taxes | Last Activity Date |
|---|---|---|---|---|---|---|
| | 2013 | -54.40 | 0.24 | 0.00 | 54.16 | 12/09/2013 |
| | 2012 | -49.75 | -1.53 | 0.00 | 51.28 | 11/01/2012 |
| | 2011 | -49.68 | 0.21 | 0.00 | 49.47 | 12/02/2011 |
| | 2010 | -47.32 | 0.00 | 0.00 | 47.32 | 05/15/2011 |
| | 2009 | -46.43 | 0.00 | 0.00 | 46.43 | 05/15/2010 |
| | 2008 | -37.68 | -1.16 | 0.00 | 38.84 | 11/05/2008 |
| | 2007 | -36.84 | -1.13 | 0.00 | 37.97 | 11/15/2007 |
| | 2006 | -36.56 | -1.13 | 0.00 | 37.69 | 11/15/2006 |
| | 2005 | -36.86 | -1.13 | 0.00 | 37.99 | 11/15/2005 |
| | 2004 | -35.98 | -1.11 | 0.00 | 37.09 | 11/10/2004 |
| | 2003 | -35.53 | -1.09 | 0.00 | 36.62 | 11/15/2003 |
| | 2002 | -35.59 | 0.31 | 0.00 | 35.28 | 12/26/2002 |
| | 2001 | -38.51 | 4.92 | 0.00 | 33.59 | 12/26/2002 |
| | 2000 | -44.23 | 10.37 | 0.00 | 33.86 | 12/26/2002 |
| | 1999 | -48.27 | 15.35 | 0.00 | 32.92 | 12/26/2002 |
| | 1998 | -27.87 | 1.73 | 0.00 | 26.14 | 06/29/1999 |
| | 1997 | -26.29 | 0.91 | 0.00 | 25.38 | 06/29/1999 |
| | 1996 | -27.94 | 2.06 | 0.00 | 25.88 | 07/30/1997 |
| | 1995 | -30.02 | 5.80 | 0.00 | 24.22 | 07/30/1997 |
| | 1994 | -26.44 | 0.23 | 0.00 | 26.21 | 01/03/1995 |

(Summary amounts only. Interest and Fees are calculated at time of payment. There are no fees other than those imposed by the county.)

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

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Accepted by
City of Dayton 8/27/98
Sue C Hollis, Administrator/
Recorder

AFTER RECORDING, RETURN
AND MAIL TAX STATEMENTS TO:
Sue Hollis, City Administrator
City of Dayton
P.O. Box 338
Dayton, OR 97114

OFFICIAL YAMHILL COUNTY RECORDS
CHARLES STERN, COUNTY CLERK

00133588200300176060040042 $41.00

200317606 3:42:17 PM 7/17/2003

DMR-EDMR Cnt=1 Stn=1 KAREN
$20.00 $10.00 $11.00

# WATER LINE, ACCESS ROAD AND WELL SITE EASEMENT

KNOW ALL MEN BY THESE PRESENTS, THAT **Rodney Warren Brill and Kathleen Ruth Brill** (hereinafter referred to as Grantor) in consideration of the sum of **Eighteen Thousand and No/100 Dollars ($18,000.00)** and other good and valuable consideration, to it in hand paid by The City of Dayton, a Municipal Corporation and Political Subdivision of the State of Oregon, hereinafter referred to as Grantee, does hereby grant, bargain, sell, and convey to the grantee, its successors and assigns a perpetual easement for the purpose of constructing, reconstructing, maintaining, repairing and using the same for a permanent well site, access roadway, underground water line and appurtenant underground utilities, over, across, in and through the real property located in the County of Yamhill and State of Oregon and more particularly described as follows:

**Well Site**

Beginning at the Northwest corner of the Donation Land Claim of W. C. Goodrich and Sarah Goodrich, his wife, Claim No. 91, Notification No. 1218, in Section 36, Township 4 South, Range 4 West of the Willamette Meridian, in Yamhill County, Oregon; thence South along the west line of said D.S.C. 25.30 chains (1,669.80 feet) to the Northwest corner of that parcel of land conveyed to Rodney W. and Kathleen Brill in Vol. 201, Page 627 Yamhill County Records; thence continuing South along said D.L.C. line 247.0 feet; thence East, and parallel with the north line of said Brill property, 2,043.0 feet to the True Point of Beginning; thence South and parallel to the west line of said Brill property, 208.72 feet; thence East, and parallel with the north line of said Brill property, 208.72 feet; thence North, and parallel with the west line of said Brill property, 208.72 feet, thence West, and parallel to the north line of said Brill property, 208.72 feet to the True Point of Beginning; said parcel containing 1.00 acres.

TOGETHER WITH an underground utility easement for a waterline, telephone lines and electrical power lines over, across, in and through the real property described as follows:

**20-foot Underground Utility Easement (telephone, power, water piping)**

Beginning at the Northwest corner of the Donation Land Claim of W.C. Goodrich and Sara Goodrich, his wife, Claim No. 91, Notification No. 1218, in Section 36, Township 4 South,

Exhibit A
EASEMENT / Brill.6 - Page 1/4

Range 4 West of the Willamette Meridian, in Yamhill County, Oregon; thence South along the West line of said D.S.C. 25.30 chains (1,669.80 feet) to the northwest corner of that parcel of land conveyed to Rodney W. and Kathleen Brill in Vol. 201, Page 627 Yamhill County Records; thence continuing south along said D.L.C. line 341 feet to the True Point of Beginning, said point also being on the west line of said Brill property; thence East, and parallel with the north line of said Brill property. 2,043.0 feet to a point on the west line of a one acre parcel of land (Dayton well parcel); thence South along the South line of said one acre parcel, 20 feet; thence West and parallel to the north line of Brill property, 2,043.0 feet; thence North, along the west line of said Brill property, 20.0 feet to the point of beginning; said parcel containing 0.94 acres.

TOGETHER WITH a roadway and underground utility easement for an access road, underground telephone lines and underground electrical power lines over, across, in and through the real property described as follows:

**20-foot Roadway and Underground Utility Easement**

Beginning at the Northwest corner of the Donation Land Claim of W.C. Goodrich and Sarah Goodrich, his wife, Claim No. 91, Notification No.1218, in Section 36, Township 4 South, Range 4 West of the Willamette Meridian, in Yamhill County, Oregon; thence South along the West line of said D.S.C. 25.30 chains (1,669.80 feet) to the Northwest corner of that parcel of land conveyed to Rodney W. and Kathleen Brill in Vol. 201, Page 627 Yamhill County Records; thence East along the North line of said Brill property, 2,456.58 feet to an iron pipe, said pipe being the Northwest corner of the Lundy property recorded in Volume 284, Page 815, on March 30, 1993, Yamhill County Records; thence South along the west line of said Lundy parcel, 5.71 chains (376.86 feet) to the Southwest corner of said Lundy property, said point also being the True Point of Beginning; thence South 84°11' East, 742.7 feet more or less to the West line of a County Road; thence South 20° 30' West along West line of State Highway 233, 20.68 feet; thence North 84° 11' West, 941.3 feet, more or less, to the east line of a one acre parcel (Dayton well parcel); thence North along the east line of said one acre parcel, 20.10 feet; thence South 84° 11' East 205.9 feet, more or less, to the True Point of Beginning; said parcel containing 0.43 acres.

To Have and to Hold the above described and granted premises unto the Grantee, its successors and assigns forever for the uses and purposes above provided.

The Grantee shall have the right at any time hereinafter to enter upon the above described real property for the purpose of constructing, reconstructing, maintaining or repairing well site facilities, underground electrical power lines, telephone lines and any and all water lines, mains, or conduits thereon or therein any connection therewith to remove any trees, shrubs, or brush necessary or convenient to accomplish the same.

The Grantor, its successors or assigns shall not construct or maintain any building or other structures upon or in the above described real property without the written consent of the Grantee, its successors or assigns being first had and obtained.

The Grantee by the acceptance of this conveyance hereby covenants, promises and agrees to replace and restore as nearly as practicable the surface of the soil upon the above described property within the underground utility easement within a reasonable time after the construction, reconstruction, maintenance or repair upon any water line, main or conduit therein or thereon.

Rodney Warren Brill

Kathleen Ruth Brill

STATE OF OREGON )
)
County of Yamhill )

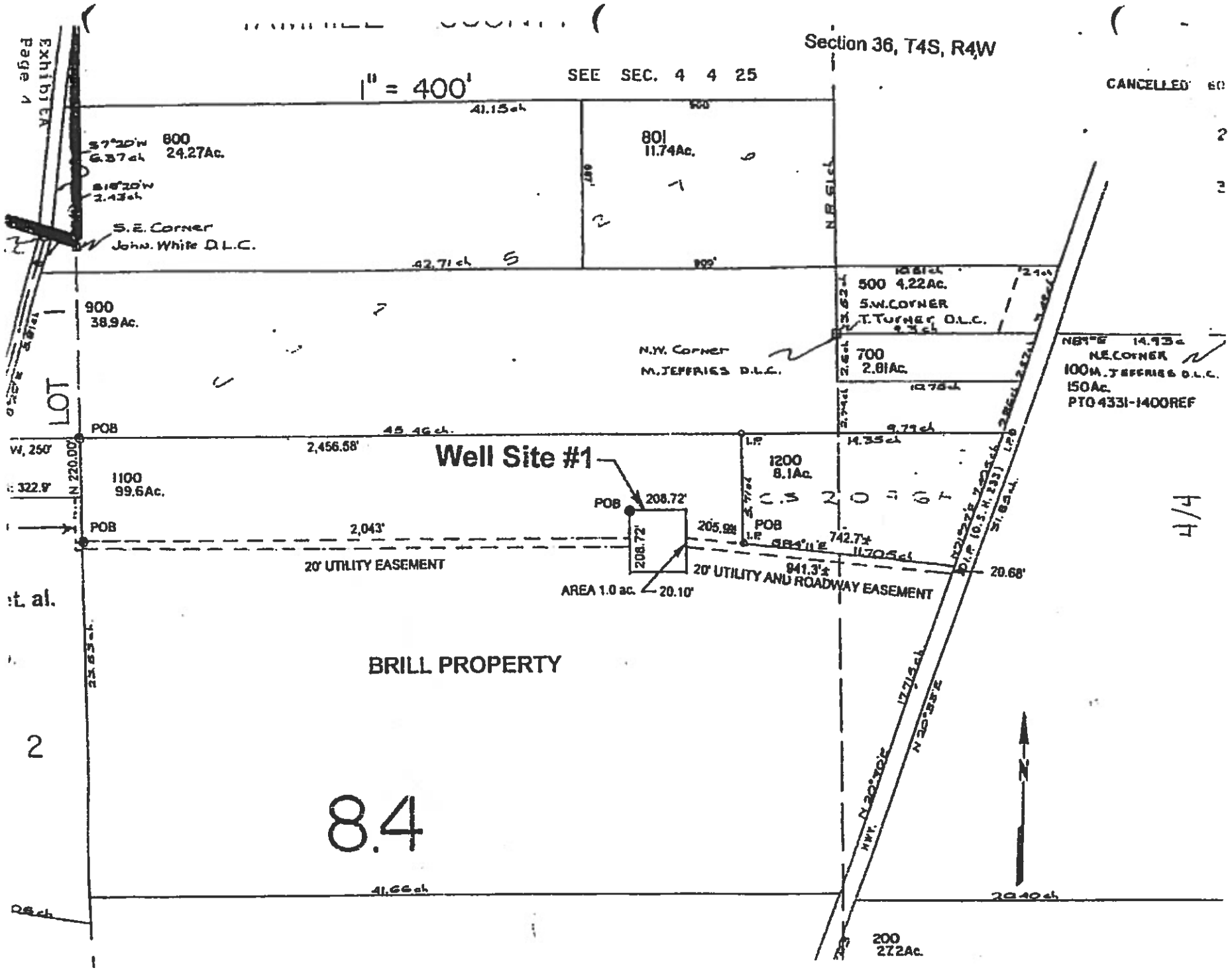
On this 11th day of Aug, 1998 before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Rodney Warren Brill and Kathleen Ruth Brill known to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same freely and voluntarily for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last above written.

OFFICIAL SEAL
DARLA R NORWOOD
NOTARY PUBLIC-OREGON
COMMISSION NO 313158
MY COMMISSION EXPIRES JUN 3, 2002

Darla R Norwood
Notary Public for Oregon
My Commission Expires: June 3, 2002

Exhibit A
EASEMENT / Brill.6 - Page 3 /4


Section 36, T4S, R4W
1" = 400'
SEE SEC. 4 4 25
CANCELLED
800
24.27Ac.
801
11.74Ac.
S.E. Corner
John. White D.L.C.
900
38.9Ac.
500 4.22Ac.
S.W. CORNER
T. Turner D.L.C.
700
2.81Ac.
N.W. Corner
M. JEFFRIES D.L.C.
NE CORNER
100 M. JEFFRIES D.L.C.
150Ac.
PTO 4331-1400REF
LOT
POB
2,456.58'
Well Site #1
1200
8.1Ac.
1100
99.6Ac.
POB
208.72'
POB
2,043'
205.9ft
POB
742.7±
20' UTILITY EASEMENT
20' UTILITY AND ROADWAY EASEMENT
AREA 1.0 ac.
20.10'
941.3'±
20.68'
BRILL PROPERTY
8.4
200
27.2Ac.
4/4
2

After recording, return to:
Rece Bly
Miller, Nash, Wiener, Hager & Carlsen LLP
111 S.W. Fifth Avenue, Suite 3500
Portland, Oregon 97204

OFFICIAL YAMHILL COUNTY RECORDS
CHARLES STERN, COUNTY CLERK
00058355200100084670120125
$81.00
200108467 4:31:22 PM 5/30/2001
DMR-EDMR Cnt=1 Stn=2 ANITA
$60.00 $10.00 $11.00

# EXHIBIT 1

## EASEMENT AGREEMENT

**DATE:** Effective as of April 2, 2001

**PARTIES:**

| | |
|---|---|
| The City of Dayton | "Dayton" |
| The City of Lafayette | "Lafayette" |
| Evergreen Agriculture Enterprises, Inc. | "EAE" |
| and | |
| Evergreen International Aviation, Inc. | "EIA" |

## RECITALS:

A. On or about October 15, 1998, Dayton and Lafayette filed a condemnation action against EAE and EIA in Yamhill County Circuit Court bearing Case No. CV98328 ("the Action"). Thereafter, the four parties agreed to settle the Action on terms that (a) required Dayton and Lafayette to pay EAE and EIA a total of $30,000 cash as compensation for the taking, and (b) required the parties to prepare, execute, and record this easement agreement.

B. The parties to this agreement intend to create two permanent easements in gross. One easement is for the development and operation of as many as three (3) municipal water wells. The other easement is for a subsurface freshwater pipeline and other utilities related to the operation of the wells and/or pipeline.

## AGREEMENT:

The parties agree as follows:

1. Grants of easements. EAE and EIA hereby grant and convey to Dayton and Lafayette, and each of them, a permanent exclusive easement in gross on, over, across, and

along the real property described in Exhibit 1 attached hereto ("Property 1") for the development, construction, repair, operation and replacement of as many as three (3) municipal water wells.

EAE and EIA hereby grant and convey to Dayton and Lafayette a permanent non-exclusive easement in gross on, over, across, and along the real property described in Exhibit 2 attached hereto ("Property 2") for the development, construction, operation, repair and replacement of a subsurface fresh water pipeline and other utilities related to the operation of the water wells. At all times, Dayton and Lafayette shall ensure that the pipeline and the other utilities are kept far enough below the surface of the ground that they will not be struck or impacted by sub-soilers, disks, spring tooth harrows, or any other similar farm implements.

By means of this easement agreement, EAE and EIA have not and do not convey to Dayton and Lafayette any water rights of any nature whatsoever.

2. Cost of construction and operation; standard of maintenance and operation; construction liens. EAE and EIA resisted the Action and would not have granted the easements described herein but for the prosecution of the Action by Dayton and Lafayette.

Dayton and Lafayette shall bear all costs and expenses associated with constructing, developing, maintaining, operating repairing and replacing the municipal water wells and fresh water pipeline and related utilities. All such equipment and components of the water system shall be maintained, repaired, replaced and operated by Dayton and Lafayette in a manner consistent with generally accepted practices of municipalities in the Pacific Northwest.

Dayton and Lafayette shall to the extent permitted by law, indemnify, defend, and hold EAE and EIA harmless from all construction liens imposed on, or attempted to be imposed, Property 1 and/or Property 2 or on any real property contiguous to Property 1 or Property 2 that

is owned by EAE and/or EIA which liens or attempted liens arise out of, or are related to, the municipal water wells and/or fresh water pipeline.

3. Associated real property taxes. Dayton and Lafayette shall bear all real property taxes, if any, associated with the municipal water wells and the fresh water pipeline or with any other improvement within the scope of this agreement that Dayton or Lafayette cause to be constructed on Property 1 and/or Property 2. If a separate tax lot is not created by Yamhill County or any other taxing authority for Property 1 or Property 2, but the County or other taxing authority nonetheless imposes real property taxes based on the improvements that Dayton and/or Lafayette place on Property 1 and/or Property 2, Dayton and Lafayette shall promptly reimburse EAE and EIA for all real property taxes attributable to any improvements made by Dayton and/or Lafayette.

4. Chlorination; hazardous substances. Dayton and Lafayette shall not place any chlorination equipment or chlorine on Property 1 and/or Property 2. Also, Dayton and Lafayette shall not bring onto Property 1 and/or Property 2, or allow anyone else to bring onto Property 1 and/or Property 2, any hazardous, toxic, noxious, or offensive materials, chemicals, or substances.

5. Insurance. At all times throughout the term of this agreement, in conjunction with their activities on Property 1 and Property 2, Dayton and Lafayette shall maintain in place policies of general liability and casualty insurance, each of which must have a policy limit of no less than $2 million.

6. General indemnity. To the extent permissible under Oregon law, Dayton and Lafayette, and each of them, shall indemnify, defend, and hold harmless EAE and EIA from all claims, demands, damages, liabilities and causes of suit or action related in any way to the

development, maintenance, or operation of the municipal water wells, the fresh water pipeline, or any other components of a municipal water system on Property 1 and/or Property 2.

7. Remedies. In the event that the any of EAE, EIA, Lafayette and/or Dayton, breach this agreement, the party(ies) against which the breach occurred shall be entitled to all remedies available at law or in equity.

8. Attorney fees. If an action is instituted to declare, interpret, or enforce any of the terms or provisions of this agreement, the prevailing party shall recover from the losing party its costs and attorney fees, both at trial and on appeal.

9. Binding effect. This easement agreement is binding upon the parties and their successors and assigns.

10. Approval of governmental unit. By signing below, the cities of Lafayette and Dayton indicate their approval of the conveyance of the easements to them as required by the terms of ORS 93.808.

**CITY OF DAYTON**

By: Georgia M. Wunderlich

Date: 5/19/01

**CITY OF LAFAYETTE**

By:

Date: 5/21/01

**EVERGREEN AGRICULTURE ENTERPRISES, INC.**

By:

Date: 5/7/01

**EVERGREEN INTERNATIONAL AVIATION, INC.**

By:

Date: 5/7/01

STATE OF OREGON )
) SS
COUNTY OF Yamhill )

On this 7th day of ~~April~~ May, 2001, the foregoing easement agreement was acknowledged before me by Michael Spencer who did say that he or she is a officer for Evergreen Agric. and that he or she executed the easement agreement on behalf of that corporation and with the authorization of its board of directors or city council.

OFFICIAL SEAL
CAROLYN F SMITHRUD
NOTARY PUBLIC - OREGON
COMMISSION NO. 328966
MY COMMISSION EXPIRES NOV. 9, 2003

Carolyn F. Smithrud
Notary Public for Oregon
My commission expires: 11-9-03

STATE OF OREGON )
) SS
COUNTY OF Yamhill )

On this 7th day of ~~April~~ May, 2001, the foregoing easement agreement was acknowledged before me by John Irwin who did say that he or she is a officer for Evergreen Aviation and that he or she executed the easement agreement on behalf of that corporation and with the authorization of its board of directors or city council.

OFFICIAL SEAL
CAROLYN F SMITHRUD
NOTARY PUBLIC - OREGON
COMMISSION NO. 328966
MY COMMISSION EXPIRES NOV. 9, 2003

Carolyn F. Smithrud
Notary Public for Oregon
My commission expires: 11-9-03

STATE OF OREGON )
) SS
COUNTY OF Yamhill )

On this 19th day of ~~April~~ May, 2001, the foregoing easement agreement was acknowledged before me by GEORGIA M WINDISH who did say that he or she is a MAYOR for City of Dayton and that he or she executed the easement agreement on behalf of that corporation and with the authorization of its board of directors or city council.

OFFICIAL SEAL
SUE C HOLLIS
NOTARY PUBLIC-OREGON
COMMISSION NO.304086
MY COMMISSION EXPIRES SEP 01, 2001

Sue C Hollis
Notary Public for Oregon
My commission expires: 09-01-01

STATE OF OREGON )
) SS
COUNTY OF YAMHILL )

On this 21st day of ~~April~~ MAY, 2001, the foregoing easement agreement was acknowledged before me by JACQUELYN CARPENTER who did say that he or she is a ACTING MAYOR for CITY OF LAFAYETTE and that he or she executed the easement agreement on behalf of that corporation and with the authorization of its board of directors or city council.

OFFICIAL SEAL
JACQUELINE MOTSINGER
NOTARY PUBLIC - OREGON
COMMISSION NO. 320027
MY COMMISSION EXPIRES JANUARY 24, 2003

Jacqueline Motsinger
Notary Public for Oregon
My commission expires: 1/24/03

EXHIBIT 1
Property 1

## Evergreen Parcel (Parcel F)

**Well No. 3 Parcel Purchase**
Commencing at the northwest corner of the A. Meredith Donation Land Claim Number 84; thence along the centerline of Airport Road (464) South 6° 35' West, 3990.08 feet to the southwest corner of that tract of land described by deed to Evergreen International Aviation, Inc. recorded in Document Number 199705699 Deed Records of Yamhill County, Oregon and the Point of Beginning; thence along the south line of said tract North 88° 59' East, 246.04 feet; thence North 208.00 feet; thence West 221.49 feet to the west line of said tract; thence along said line South 6° 35' West, 209.38 feet to the Point of Beginning.

SAVING AND EXCEPTING THEREFROM the rights of the public in and to that portion of the above property lying within the limits of roads, streets, and highways.

The area of land to which this description applies contains 1.01 acres, more or less.

**Well No. 4 Parcel Purchase**
Commencing at the northwest corner of the A. Meredith Donation Land Claim Number 84; thence along the centerline of Airport Road (464) South 6° 35' West, 1990.00 feet to a point on the west line of that tract of land described by deed to Evergreen International Aviation, Inc. recorded in Document Number 199705699 Deed Records of Yamhill County, Oregon and the Point of Beginning; thence South 83° 25' East, 233.72 feet; thence North 06° 35' East, 208.72 feet; thence North 83° 25' West, 233.72 feet to the west line of said tract; thence along said west line South 06° 35' West, 208.72 feet to the Point of Beginning.

SAVING AND EXCEPTING THEREFROM the rights of the public in and to that portion of the above property lying within the limits of roads, streets, and highways.

The area of land to which this description applies contains 1.01 acres, more or less.

**Well No. 5 Parcel Purchase**
Commencing at the northeast corner of the A. Meredith Donation Land Claim Number 84; thence along the north line of said claim North 89° 45' West, 1402.07 feet; thence South 00° 15' West a distance of 30.00 feet to the south line of Cruickshank Road (32) and the Point of Beginning; thence continuing South 00° 15' West, 217.00 feet; thence parallel with the north line of said claim North 89° 45' West, 151.50 feet; thence North 34° 59' 16" West, 168.7 feet more or less to the Southeast line of Airport Road (464); thence along said line North 57° 37' 51" East, 147.00 feet to the intersection of Airport Road (464) and Cruickshank Road (32); thence along the south line of Cruickshank Road (32) South 89° 45' East, 125.00 feet to the Point of Beginning.

The area of land to which this description applies contains 1.45 acres, more or less.

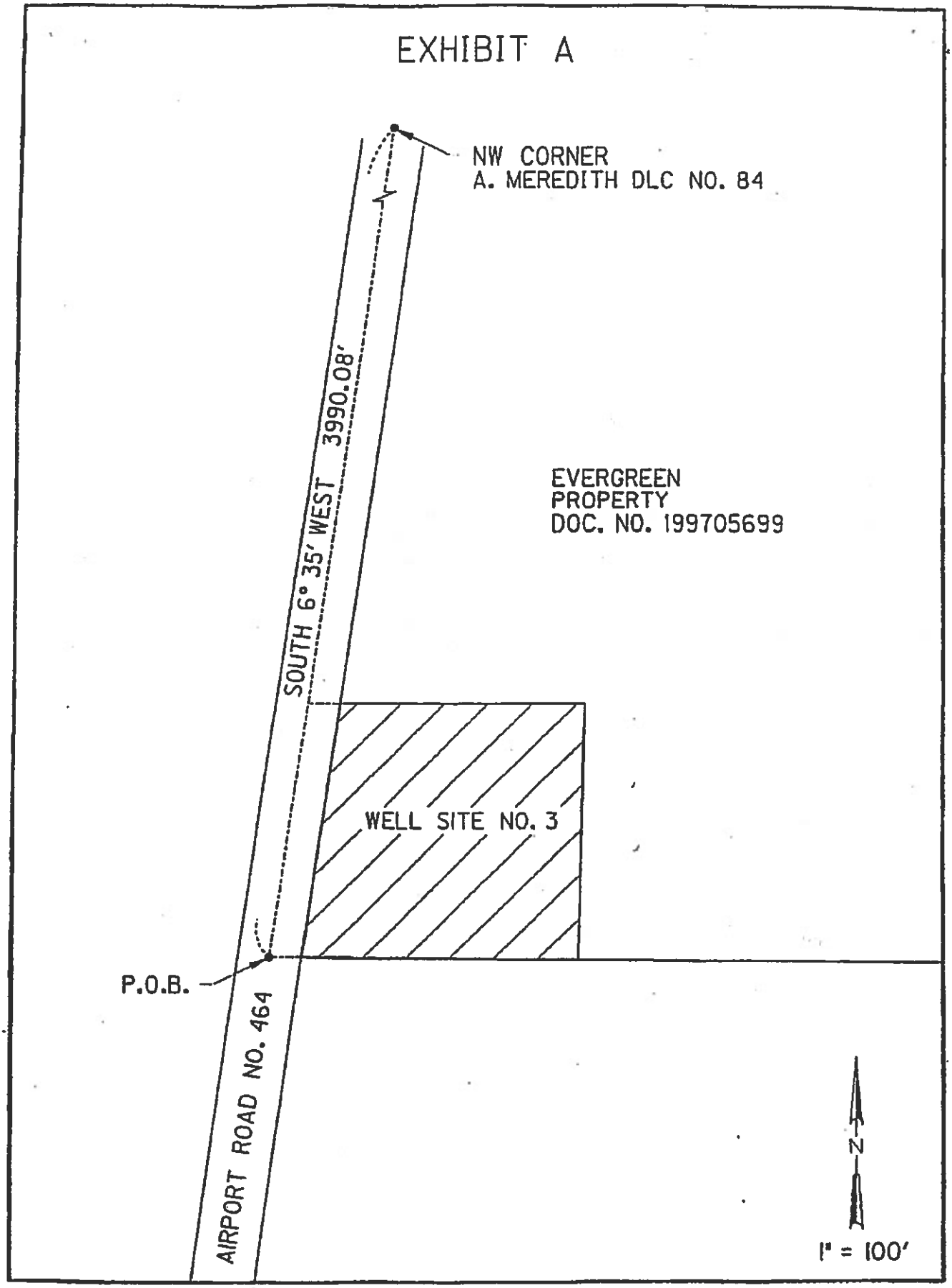
REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JAN. 27, 1995
JOSEPH A. FEYDER
2692

EXPIRES: 12/31/01

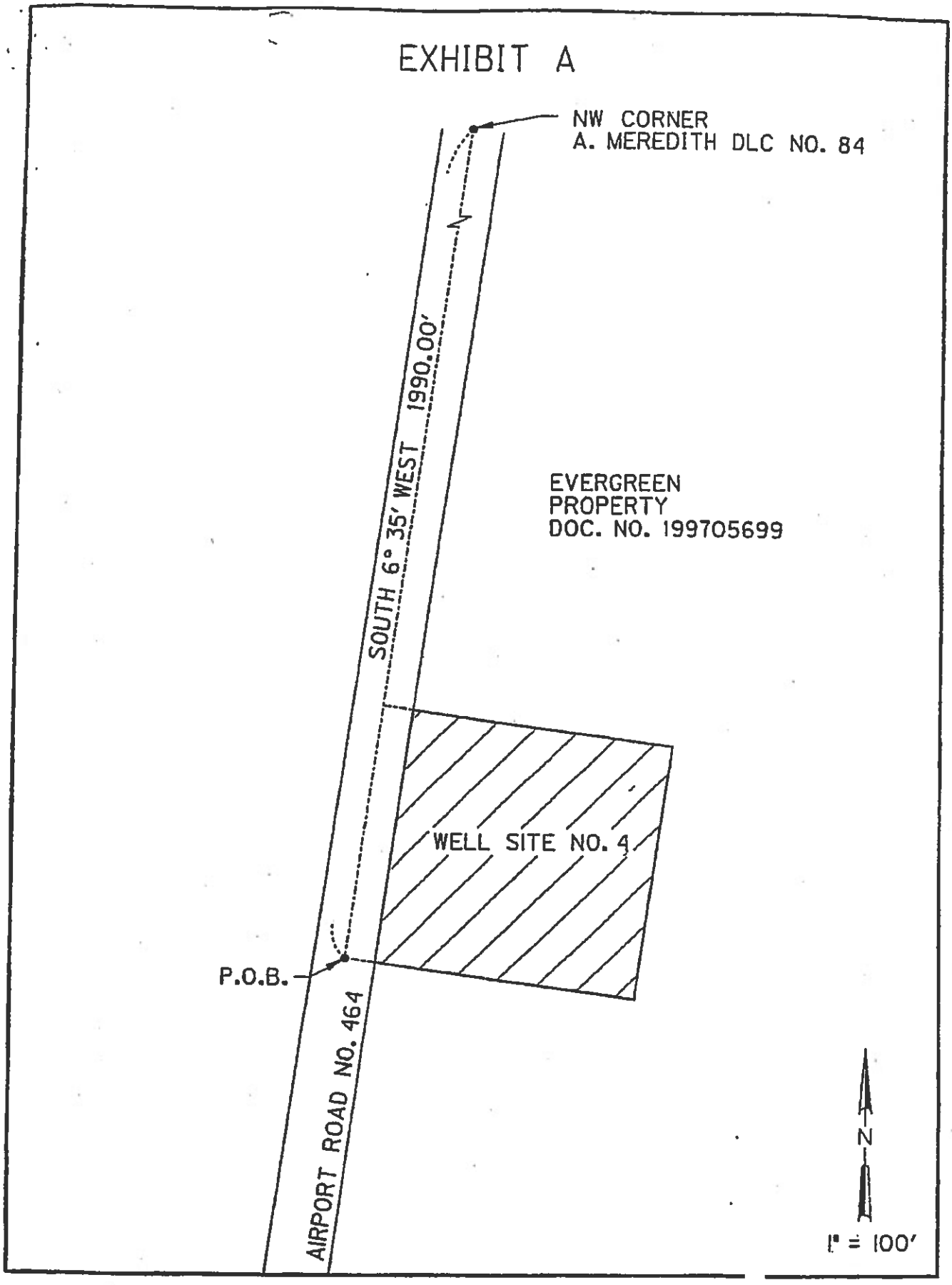
7/17

# EXHIBIT A



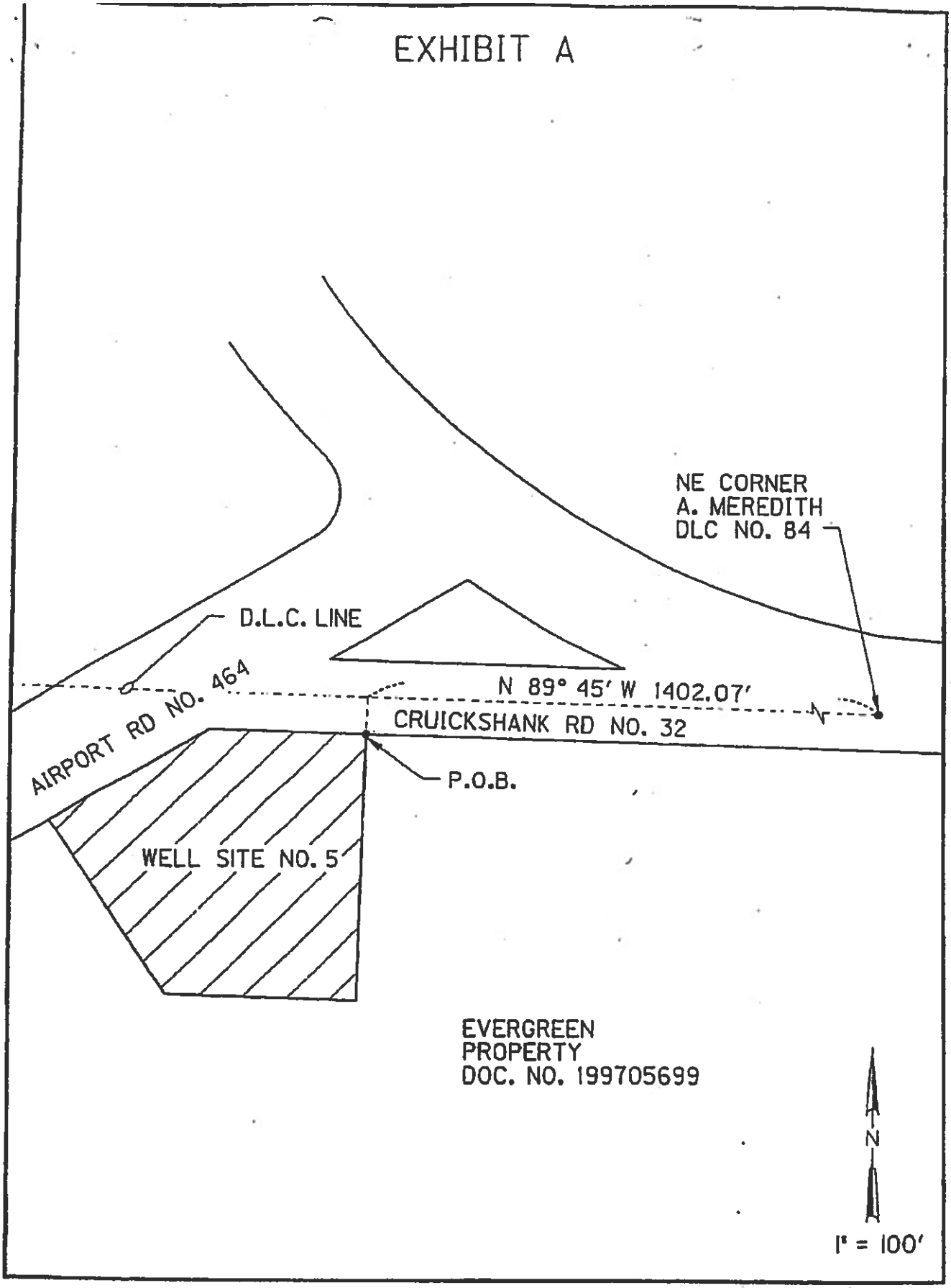

8/12

# EXHIBIT A




9/12

# EXHIBIT A




10/12

EXHIBIT 2
Property 2

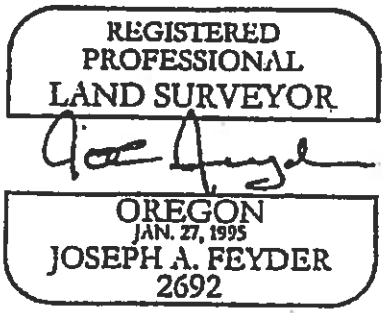
## Evergreen, et al Parcel (Parcel B)

**Well No. 2 Parcel Purchase**
The northerly 220.00 feet of Parcel 2 of that tract of land conveyed to Evergreen Agricultural Enterprises, Inc. by deed recorded in Document Number 199615882 Deed Records of Yamhill County, Oregon.

The area of land to which this description applies contains 1.45 acres, more or less.

**Utility Easement (telephone, power, water piping)**
The easterly 20.00 feet of the southerly 162.2 feet of the northerly 382.2 feet of Parcel 2 of that tract of land conveyed to Evergreen Agricultural Enterprises, Inc. by deed recorded in Document Number 199615882 Deed Records of Yamhill County, Oregon.

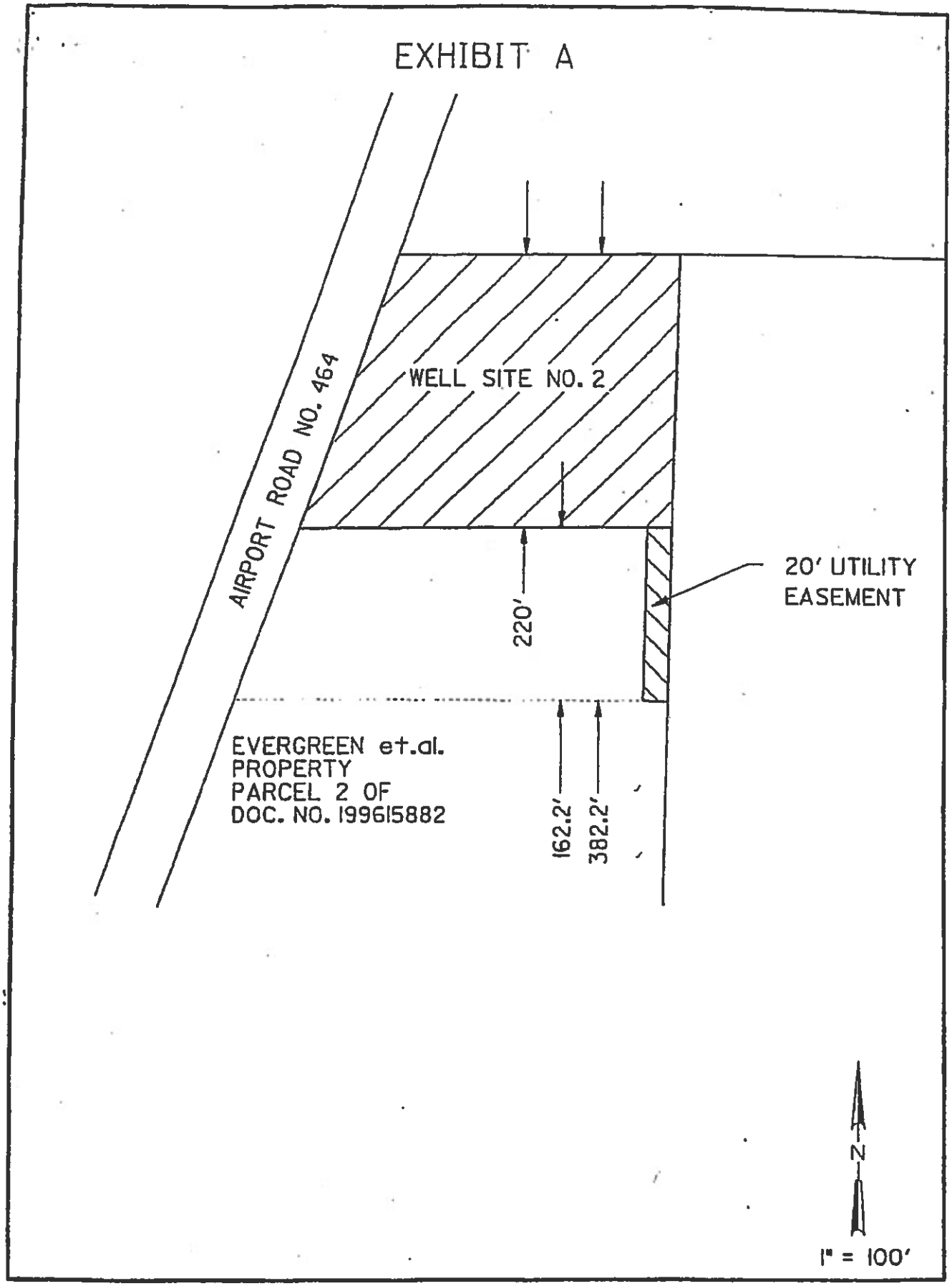
The area of land to which this description applies contains 0.07 acres, more or less.




EXPIRES: 12/31/01

11/12

# EXHIBIT A




12/12.

RECEIVED
2006
LAFAYETTE CITY HALL

AFTER RECORDING RETURN TO:
Jordan Schrader PC
PO Box 230669
Portland OR 97281
(47514-33742 – JDG)

11/9/06 Rcm
FOR YOUR INFORMATION
JORDAN SCHRADER

OFFICIAL YAMHILL COUNTY RECORDS
JAN COLEMAN, COUNTY CLERK
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OFFICIAL YAMHILL COUNTY RECORDS
JAN COLEMAN, COUNTY CLERK
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$35.00 $10.00 $11.00

This document is being re-recorded to correct reference number previously recorded instrument number 200625056.

*This space provided for recorder's use.*

# AMENDMENT OF EASEMENT AGREEMENT

DATE: Effective April 2, 2001

PARTIES: The City of Dayton ("Dayton")
The City of Lafayette ("Lafayette")
Evergreen Agriculture Enterprises, Inc. ("EAE")
AND
Evergreen International Aviation, Inc. ("EIA")

The parties agree as follows:

1. Paragraph 1 of that certain Easement Agreement (the "Agreement") between the parties dated April 2, 2001, and recorded May 30, 2001, in Yamhill County as Deed Record ~~200108467~~ 200108467, is amended to read as follows:

> "1. Grants of easements. EAE and EIA hereby grant and convey to Dayton and Lafayette, and each of them, a permanent exclusive easement on, over, across, and along the real property described in Exhibit 1 attached hereto and incorporated herein by reference ("Property 1") for the development, construction, repair, operation, and replacement of as many as four (4) municipal water wells.
>
> EAE and EIA hereby grant and convey to Dayton and Lafayette a permanent non-exclusive easement on, over, across, and along the real

property described in Exhibit 2 attached hereto and incorporated herein by reference ("Property 2") for the development, construction, operation, repair, and replacement of a subsurface fresh water pipeline and other utilities related to the operation of the water wells. At all times, Dayton and Lafayette shall ensure that the pipeline and the other utilities are kept far enough below the surface of the ground that they will not be struck or impacted by sub-soilers, disks, spring tooth harrows, or any other similar farm implements.

By means of this easement agreement, EAE and EIA have not and do not convey to Dayton and Lafayette any water rights of any nature whatsoever."

2. Exhibit 1 of the Agreement is amended to read as attached hereto as Attachment A.

3. Exhibit 2 of the Agreement is amended to read as attached hereto as Attachment B.

**CITY OF DAYTON**

By: _____

Date: 10/6/06

**CITY OF LAFAYETTE**

By: Don Leard

Date: 10-19-2006

**EVERGREEN AGRICULTURE ENTERPRISES, INC.**

By: Gwenna R. Wortress
Gwenna R. Wortress
Secretary

Date: 9/1/06

**EVERGREEN INTERNATIONAL AVIATION, INC.**

By: Gwenna R. Wortress
Gwenna R. Wortress
Secretary

Date: 9/1/06

STATE OF OREGON )
) ss.
County of Yamhill )

On this 6th day of ~~May~~ October, 2006, the foregoing easement agreement was acknowledged before me by Jackie Brons who did say that he or she is an Mayor for City of Dayton and that he or she executed the easement agreement on behalf of that ~~corporation~~ and with the ~~authorization of its board of directors~~ or city council. City

OFFICIAL SEAL
SUE C HOLLIS
NOTARY PUBLIC - OREGON
COMMISSION NO. 396558
MY COMMISSION EXPIRES AUGUST 28, 2009

Sue C Hollis
NOTARY PUBLIC FOR OREGON
My Commission Expires: 8/28/09

STATE OF OREGON )
) ss.
County of Yamhill )

On this 19 day of ~~May~~ OCTOBER, 2006, the foregoing easement agreement was acknowledged before me by DON LEARO who did say that he ~~or she~~ is an MAYOR for CITY OF LAFAYETTE and that he ~~or she~~ executed the easement agreement on behalf of that corporation and with the authorization of its board of directors or city council.

OFFICIAL SEAL
JAMIE D RHODES
NOTARY PUBLIC - OREGON
COMMISSION NO. 367139
MY COMMISSION EXPIRES MARCH 31, 2007

Jamie D Rhodes
NOTARY PUBLIC FOR OREGON
My Commission Expires: 3/31/2007

STATE OF OREGON )
) ss.
County of Yamhill )

On this 5 day of ~~May~~ September, 2006, the foregoing easement agreement was acknowledged before me by Gwenna R. Woodcock who did say that he or she is an Secretary for Evergreen Agricultural Enterprises and that he or she executed the easement agreement on behalf of that corporation and with the authorization of its board of directors or city council.

OFFICIAL SEAL
KENDAL CARTER
NOTARY PUBLIC - OREGON
COMMISSION NO. 380519

Kendal Carter
NOTARY PUBLIC FOR OREGON
My Commission Expires: May 3, 2008

STATE OF OREGON )
) ss.
County of Yamhill )

On this 5 day of Sept May, 2006, the foregoing easement agreement was acknowledged before me by Gayenna R. Worthess who did say that he or she is an Secretary for Evergreen International Aviation and that he or she executed the easement agreement on behalf of that corporation and with the authorization of its board of directors or city council.

OFFICIAL SEAL
KENDAL CARTER
NOTARY PUBLIC – OREGON
COMMISSION NO. 380319
MY COMMISSION EXPIRES MAY 3, 2008

Kendal Carter
NOTARY PUBLIC FOR OREGON
My Commission Expires: May 3, 2008

EXHIBIT )
Property )

## Evergreen, et al Parcel (Parcel B)

**Well No. 2 Parcel Purchase**
The northerly 220.00 feet of Parcel 2 of that tract of land conveyed to Evergreen Agricultural Enterprises, Inc. by deed recorded in Document Number 199615882 Deed Records of Yamhill County, Oregon.

The area of land to which this description applies contains 1.45 acres, more or less.

## Evergreen Parcel (Parcel F)

**Well No. 3 Parcel Purchase**
Commencing at the northwest corner of the A. Meredith Donation Land Claim Number 84; thence along the centerline of Airport Road (464) South 6° 35' West, 3990.08 feet to the southwest corner of that tract of land described by deed to Evergreen International Aviation, Inc. recorded in Document Number 199705699 Deed Records of Yamhill County, Oregon and the Point of Beginning; thence along the south line of said tract North 88° 59' East, 246.04 feet; thence North 208.00 feet; thence West 221.49 feet to the west line of said tract; thence along said line South 6° 35' West, 209.38 feet to the Point of Beginning.

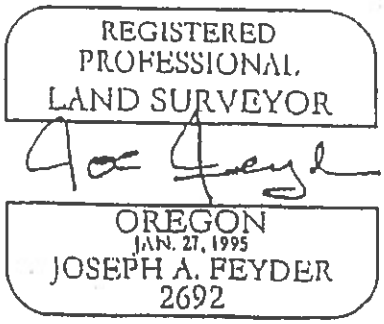
SAVING AND EXCEPTING THEREFROM the rights of the public in and to that portion of the above property lying within the limits of roads, streets, and highways.

The area of land to which this description applies contains 1.01 acres, more or less.

**Well No. 4 Parcel Purchase**
Commencing at the northwest corner of the A. Meredith Donation Land Claim Number 84; thence along the centerline of Airport Road (464) South 6° 35' West, 1990.00 feet to a point on the west line of that tract of land described by deed to Evergreen International Aviation, Inc. recorded in Document Number 199705699 Deed Records of Yamhill County, Oregon and the Point of Beginning; thence South 83° 25' East, 233.72 feet; thence North 06° 35' East, 208.72 feet; thence North 83° 25' West, 233.72 feet to the west line of said tract; thence along said west line South 06° 35' West, 208.72 feet to the Point of Beginning.

SAVING AND EXCEPTING THEREFROM the rights of the public in and to that portion of the above property lying within the limits of roads, streets, and highways.

The area of land to which this description applies contains 1.01 acres, more or less.




EXPIRES: 12/31/01

ATTACHMENT A

Well No. 5 Parcel Purchase

Commencing at the northeast corner of the A. Meredith Donation Land Claim Number 84; thence along the north line of said claim North 89° 45' West, 1402.07 feet; thence South 00° 15' West a distance of 30.00 feet to the south line of Cruickshank Road (32) and the Point of Beginning; thence continuing South 00° 15' West, 217.00 feet; thence parallel with the north line of said claim North 89° 45' West, 151.50 feet; thence North 34° 59' 16" West, 168.7 feet more or less to the Southeast line of Airport Road (464); thence along said line North 57° 37' 51" East, 147.00 feet to the intersection of Airport Road (464) and Cruickshank Road (32); thence along the south line of Cruickshank Road (32) South 89° 45' East, 125.00 feet to the Point of Beginning.

The area of land to which this description applies contains 1.45 acres, more or less.

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JAN. 27, 1995
JOSEPH A. FEYDER
2692

EXPIRES: 12/31/01

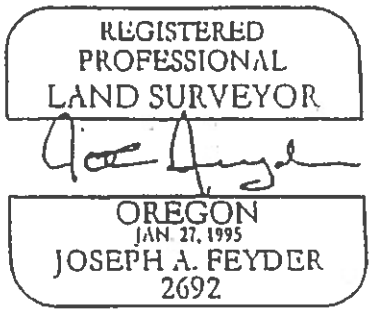
ATTACHMENT A
Page 2 of 2

EXHIBIT 2
Property 7

## Evergreen, et al Parcel (Parcel B)

Utility Easement (telephone, power, water piping)
The easterly 20.00 feet of the southerly 162.2 feet of the northerly 382.2 feet of Parcel 2 of that tract of land conveyed to Evergreen Agricultural Enterprises, Inc. by deed recorded in Document Number 199615882 Deed Records of Yamhill County, Oregon

The area of land to which this description applies contains 0.07 acres, more or less.




EXPIRES: 12/31/01

WATER/POWER FROM well 2 to well 1

ATTACHMENT B
Page 1 of 1

#### 6.4.2.3 Additional Water Rights (Purchase & Transfer)

As previously discussed, new groundwater rights are generally no longer available in Western Oregon. However, existing water-rights can be purchased (with or without purchasing the land to which the water-right is attached), and an application submitted to the WRD to modify the type of use allowed (ie. from agricultural to municipal), and to modify the approved point of use to match the City's current water use area.

Currently, agricultural users consume the majority of the nearby groundwater capacity. In an effort to ensure that reliable water supplies are available in the future, the City should consider the purchase of early water rights from nearby agricultural users, as these water rights or land become available. This will shift a portion of the finite groundwater capacity from agricultural usage to municipal usage. As noted above, the City would have to file a water rights transfer to change the use from agricultural to municipal, and to change place of use.

Transferable water rights with early priority dates that produce significant amounts of water in the surrounding area are not normally available except when purchased as part of the purchase of an existing farm. Although the City should purchase these water rights if and when they become available, there is no guarantee that the option will arise to purchase existing water rights with early priority dates, and therefore may not be a feasible long term solution for water supply

As touched on briefly in Section 4.2.2, many of the existing early priority date water rights draw water from relatively shallow, higher producing aquifers. While the shallower nature of the agricultural aquifers results in higher producing wells, it also raises the risk of GWUDI issues when these wells are used as a municipal water source. As part of the evaluation and investigation prior to purchase of an agricultural groundwater right, the City should also get a determination from the ODWP as to the susceptibility of the well from a GWUDI perspective. A high producing, early priority date groundwater well with GWUDI issues may still be worth purchasing, but it would require a surface water treatment facility (which should be considered in conjunction with the purchase price of the water-right.

Although we are not counting on the purchase of new water rights for planning purposes, we recommend that the City investigate the purchase of existing groundwater rights that may be associated with agricultural land surrounding Dayton, as discussed in the recommendations section of this chapter. This recommendation is based on the water right owner's willingness to sell, and thus may or may not provide additional water supply within the planning period.

### 6.4.3 Regional Water Supply System Options

As previously noted, in 2008 Yamhill County completed the "Yamhill County Water Supply Analysis", which examined both the status of existing municipal water supply sources within Yamhill County, as well as options for increasing supply sources. As was noted in that report, the options available for individual small municipalities for increasing their water supply sources (or obtaining new sources) are limited at best. A number of options considered in the 2008 County Water Supply Analysis dealt with the development of a regional water system, whereby the various cities would construct interties to share existing sources and/or develop new sources that could be used as a regional water supply. As noted above, one of the stipulations of the May 2000 Settlement Agreement was that both Dayton and Lafayette committed to "*integrate into the Cities' ongoing water master planning. . . a preference for regional water supply development to meet future needs*" (agreement 2b).

Regional water supply options presented in Section 5 of the 2008 Yamhill County Water Supply Analysis that most apply to Dayton include utilizing the McGuire Reservoir (either alone or in conjunction with Walker Reservoir), or constructing a surface water treatment plant on the Willamette River.

One of the options presented in the 2008 Yamhill County Water Supply Analysis was to have the City of Dayton cooperate with other Yamhill County cities (including the City of McMinnville) to develop a regional water treatment plant that draws water from the Willamette River. Subject to acquisition of water rights, such a treatment plant could either utilize either natural river flows, or utilize water drawn from federal storage in COE impoundments located in the Willamette basin. As noted in the study, public perception of the Willamette River as a supply source is generally negative, although recent developments such as the Wilsonville Water Treatment Plant and the City of Dundee's interest in a Willamette River Plant has improved that perception. If Willamette River surface water rights can be secured, the water will have to pass through an extensive treatment process, which will affect the overall cost of this option. The 2008 study (section 5.4.1) discussed several locations for siting a Willamette River intake and water treatment plant for a regional water system. Sites reviewed included locations near Dayton, Dundee or Newberg.

Historically, local concern with Willamette River water quality centers around the "Newberg Pool", the portion of Willamette River that stretches from the mouth of the Yamhill River to Willamette Falls. There are two areas of primary concern, namely water quality and fish deformities. The first is based on pollution in river sediments from existing and historical industrial discharges from facilities located within and downstream of Newberg. However, these industrial discharge concerns do not affect the water quality upstream of Newberg (ie. at Dayton or at Dundee).

Another historical public concern about the Newberg Pool relates to the high incidence of skeletal and spinal deformities in certain species of resident (ie. non-migratory) fish in this section of the Willamette (being roughly twice the rate observed in portions of the river further upstream). A multi-year study completed in 2004 by a multi-disciplinary team of OSU scientists definitively demonstrated that the deformities were caused by two types of fish parasites which burrow into the bone of young fish and disrupts normal bone development (study presented at the Wilsonville Water Quality Forum 6/30/04). Unlike chemical pollutants, the fish parasites represent little or no risk to human health, as cooking or freezing will kill the parasites in infected fish.

As discussed in more detail in Chapter 7, one potential location for a Willamette River intake structure and pump station was identified on the outskirts of Dayton (ie. southwest of Neck Road), located immediately adjacent to the Dayton UGB. The east bank of the Willamette River banks in this area is more stable than the portions of the river between Dayton and Newberg. This location is also upstream of the "Newberg Pool", which will help alleviate negative public perception related to treating Willamette River water for municipal use.

### 6.4.4 Existing Sources, Water Production Reliability

Discussions with the City's hydrogeologist reveals that groundwater levels in the City wells is declining over time. Static water levels are recorded periodically in each of the operating wells, and the City should continue to monitor water levels and adjust well pumping rates to minimize further declines in static water levels. We strongly recommend that the City operate the wells for long-term sustainability (even if it means restricting production), rather than operating the system to meet short term demands.

Below is a synopsis of the water *production* reliability evaluation of the City's existing water supply sources.

### Watershed Springs, Production Reliability

As noted in Chapter 4.3.2, the watershed springs require significant work to bring them into conformance with ODWP requirements for spring sources, and to comply with requirements of the Groundwater Rule. Failure to comply with these requirements will likely result in the springs being determined to be groundwater under the direct influence (GWUDI) of surface water, which will result in these sources being unavailable to the City without treatment meeting surface water treatment standards.

Therefore, until the springs are upgraded and it is demonstrated that they can remain as groundwater sources, they cannot be considered to be reliable sources. If the springs can be upgraded to avoid the surface water influence issues, they are anticipated to remain as reliable sources for the City, as the water quality is otherwise very good. Alternatively, if the springs cannot be upgraded, construction of a treatment plant to treat the spring water to surface water standards would also allow the springs to remain as reliable water sources.

An evaluation of the improvement and potential treatment requirements for the watershed springs is discussed further in Chapter 7.

### McDougal Wells, Production Reliability

Although the ODWP expressed concern about whether the McDougal Wells were subject to surface water influence, testing performed by the City in 2007 and 2008 (see Chapter 4.3.3.2.1) demonstrated that these wells were not surface water influenced, and they should be considered as reliable production sources for the study period, albeit at discharge rates significantly less than allowed under the water rights certificate for McDougal Well 1.

### Flower Lane Well & 11th Street Well, Production Reliability

Although these wells are high in iron and manganese, the currently discharge to the WTP, with the treated water being mixed with the treated wellfield water and sent to the distribution system. We are not aware of any production issues with these wells, and they should be considered as reliable production sources for the study period.

### Post Office Well, Production Reliability

As noted in Chapter 4.3.3, this well is not currently in use as a production well for domestic water, but is currently used only for irrigation water for the Courthouse Square park. Additionally, the 2004 ODWP Source Water Assessment deemed the construction of this well as inadequate due to the lack of any information on a well seal on the original well log. Also, this well has high levels of iron and manganese (as well as reported problems with hydrogen sulfide), but a raw water line to the City's WTP was not constructed as part of the 2004 water project. If the City does decide to utilize this well as primary production source for domestic water, testing similar to that performed on the McDougal Wells will likely be required, as well as construction of a raw water pipeline to the WTP. Based on this, the Post Office well cannot be considered to be a reliably available source for domestic water during the study period.

Wellfield Wells 1-5, Production Reliability

The wellfield wells produce water that, after treatment at the WTP, is consistently of good quality. Once Well 1 and Well 3 are upgraded with a VFD and flowmeter to allow discharge control based on flow rate, all of the wellfield wells will be capable of producing at a defined water discharge rate while controlling drawdown to levels that remain above the screens.

Although the production rates of the wellfield wells are significantly less than was originally anticipated (and less than the water rights permit rates), they appear to be capable of consistently producing water during the planning period. The greatest risk associated with the reliability of these wells (besides the fact that they can only be used as a secondary source) is that the water rights conditions and the settlement agreement dictate that if the water level declines more than certain trigger levels, that the City must curtail production from these wells. However, implementation of the automatic discharge control strategy noted above also allows the City to control well pumping rates to better control long term water level declines.

Another issue with the wellfield wells in the issue with iron bacteria bio-fouling of the well screens. The City has already had to rehab several of the wellfield wells due to this issue (most recently Well 4 in 2009). Discussions with the City's hydrogeologist (GSI Water Solutions) indicate that apparently some of the area farmers also struggle with this issue of bio-fouling of well screens. It does not appear to be unique to the City wells, but is believed to be due to the particular water chemistry in this aquifer. Based on experience to date, the City will need to budget to rehab the wellfield wells on a regular, rotating basis. The initial recommended rehabilitation frequency is every five years for each well.

## 6.4.5 Existing Sources, Pumping or Conveyance Reliability

The City relies heavily on the hydraulic capacity and mechanical reliability of the well pumps to deliver water to the distribution grid for consumption (either directly as with the McDougal wells, or indirectly through the WTP as with the in-town and wellfield wells). Unlike some municipalities that utilize topographic relief and gravity-fed water sources, all of the water in Dayton (other than the watershed springs) must be pumped from the source. The failure of a well pump whether stemming from mechanical or electrical causes, diminishes the availability of water for municipal needs.

Below is a synopsis of the *pumping or conveyance* reliability evaluation of the City's existing water supply sources. Discussions related to reliability of the distribution system pumps (at the WTP) are discussed in Chapter 7.

Watershed Springs, Conveyance Reliability

As noted in Chapter 4.6, the existing waterline which conveys the spring water to the watershed storage reservoirs, and from thence to town, is 1930s vintage steel waterline that is well past the end of its service life. The City has repaired the portion of the transmission main between the springs and the reservoirs a number of times over the past several years, and the line exhibited significant corrosion. Since this is the lowest pressure segment of this line, it must be assumed that the higher pressure portions of this line are also in poor condition. A significant portion of the waterline alignment between the reservoirs and McDougal Road runs through the woods along an unknown alignment, which means that the City is not able to regularly patrol the waterline alignment and check for leaks. The replacement of the old steel waterlines from the watershed to town should be considered as a critical priority. Since the springs flow to town by gravity, auxiliary power is not required.

McDougal Wells, Flower Lane Well & 11th Street Well, Pumping and Conveyance Reliability

The McDougal, Flower Lane and 11th Street Well pumps are relatively small submersible pumps of a size that is readily available from local suppliers, and which can be easily services or replaced by local well contractors. The discharge lines from the McDougal Wells are relatively short, are readily accessible to City forces, and are located on property owned by the City. The discharge lines from the Flower Lane and 11th Street wells run along public rights-of-way to the WTP, and are readily accessible to City forces. The City has equipment to repair any leaks that may develop in the conveyance lines from these wells.

None of these wells have provisions for auxiliary power. Since the City relies on these wells to feed the WTP, improvements to provide for auxiliary power are recommended early in the planning period.

Post Office Well, Pumping and Conveyance Reliability

The pump for the Post Office Well is also of a size and type that is readily available from local suppliers, and which can be easily services or replaced by local well contractors. As noted in Chapter 4.3.3.2, the location and alignment of the discharge line from this well to the Courthouse Square Park irrigation system is unknown, although it is believed to be a 1930s vintage steel line. Since utilizing this well for irrigation of the park results in significant savings of water as opposed to using treated water from the distribution system, the replacement of the irrigation line should be addressed by the City early in the planning period.

This well does not have provisions for auxiliary power. Since it is used solely as an irrigation well, auxiliary power is not considered to be necessary for this installation, as power outages during the irrigation season are typically short, and loss of irrigation water for even a few days is not critical.

Wellfield Wells 1-5, Pumping and Conveyance Reliability

The pumps for the Wellfield wells and methane strippers are also of a size and type that is readily available from local suppliers, and which can be easily services or replaced by local contractors, as are the VFDs that control the well pumps and the methane stripper booster pumps.

Each of these wells is provided with a generator receptacle and a manual transfer switch, although the City would have to rent multiple generators in order to run these wells at the same time. Since the proper operation of the WTP filters (especially the backwashing cycle) requires operation of multiple pumps to provide adequate flows, improvements to provide for on-site auxiliary power at each site is recommended early in the planning period.

### 6.4.6 System-Wide Water Source Reliability

Three criteria for evaluating source reliability were introduced in Section 6.2.2.1, and each are addressed in turn.

Clearly the goal of these design criteria is to ensure the uninterrupted supply of drinking water during periods of maximum use; however, there are other standards and operating modes that can be applied to achieve the same outcome. As future sources or storage reservoirs come on-line, the ability to buffer or ride-out short period MDD demands is improved. Water conservation is another approach that can be used to reduce the demands placed on a utility during periods of maximum use.

- *Two or more sources of water supply should be developed with a total capacity to replenish depleted fire suppression storage within a 72-hour period while concurrently supplying MDD.*

Under the existing system, fire flows of 4,000 gpm for a 4-hour duration (960,000 gallons) can be satisfied by a combination of the existing 1.5 MG ground storage reservoir at the WTP and the reservoirs in the watershed once the recommended improvements are made.

Below we analyze the ability to refill the reservoir under two scenarios. The first scenario involves the water system operating under existing conditions (ie. prior to replacement of the remaining steel waterlines) under both present day MDD and future MDD. The second scenario assumes that the City replaces the old steel waterlines and reduces the system losses to 15%.

*Scenario # 1 (no system loss reduction).* Assuming the system is operating at present day (2010) MDD levels, the complete recharge of the fire suppression storage volume is not possible, because the present day MDD is 0.744 MGD and the estimated long-term production rate of the City's sources is only 0.504 MGD (about two thirds the present day MDD). Therefore, the City cannot even meet the current MDD without over-pumping their existing wells.

To replenish the fire suppression storage in 72 hours meet this criteria in 2010, the City would need a current water production rate of approximately 0.941 MGD (653 gpm). To meet the criteria in 2030, the City will need a production rate of approximately 1.410 MGD (979 gpm).

*Scenario # 2 (system loss reduced to 15%).* Assuming that the present day (2010) demand is reduced through water conservation and system leakage repair (for a system-wide leakage rate of 15%), the 2010 MDD would be approximately 0.413 MGD. The reduced MDD of 0.413 MGD (286 gpm) is less than the current long-term production rate of 0.504 MGD (350 gpm). Under these conditions (reduced MDD & all sources in operation), the City could refill the reservoirs in approximately 4.4 days (longer than the 72 hour requirement). Even with the reduced system loss, the City would need a long term supply of 0.733 MGD (509 gpm) in order to replenish the reservoir in 72 hours (approximately 159 gpm more than the current long-term production rate). Therefore the City still wouldn't be able to meet this criteria.

In 2030 (end of the planning period), the City's reduced MDD (15% leakage) would be approximately 0.739 MGD (513 gpm). The source production rate in 2030 required to meet MDD and replenish the fire suppression storage in 72 hours would be approximately 1.059 MGD (735 gpm), which is just over double the 2010 estimated long-term production rate of the City's sources.

Since the City cannot replenish the fire suppression storage under either of these scenarios, it is evident that the City needs additional water sources to meet this water supply criteria. As the City continues to grow, the need for additional sources will become even more critical.

- *When the largest single source is out of service, the remaining sources should be able to satisfy MDD (capacity with the largest single source out of service is referred to as firm capacity).*

As noted in **Table 6-1**, the City's current water sources have an estimated long-term production capacity of 350 gpm (without counting water from the Lafayette wellfield wells). The largest single source is Wellfield Well 3, with an estimated long-term production rate of 90 gpm. Without Well 3, the firm capacity is approximately 0.374 MGD (260 gpm). The 2010 MMD is 0.744 MGD, almost two times the firm capacity of the existing sources. If the system leakage was reduced 15%, the 2010 MDD would be

approximately 0.413 MGD (287 gpm), still about 27 gpm more than the available firm capacity of 260 gpm.

The City cannot meet this criteria based on the 2010 MDD, let alone the future 2030 MDD. Therefore, the City needs to secure additional long-term sources in order to meet this criteria. Although it does not solve the problem, the City should work to reduce the overall system leakage, as it makes the scope of the problem significantly less severe, and the amount of new source water required in the future can be reduced.

- *Pumps at well sites should include provisions for auxiliary power.*

An important measure of reliability is the provision of an emergency power source for each well site. Since the infrastructure for two separate and independent primary power feeds to each well site does not exist, this requires the reliance on on-site power generation.

Although the wellfield wells are currently provided with manual transfer switches and are able to connection to trailer mounted generators, the City does not have generators capable of powering these wells. The main portable generator at the WTP is required to keep the treatment system and the distribution system pumps in operation, and is thus should not be considered as available for use at the well sites. The City would have to rent generators for each of the well sites, which may not be feasible during a major power outage. Additional of on-site generators and automatic transfer switches should be installed at each of the well facilities.

## 6.5 GROUNDWATER PROTECTION

The federal Safe Drinking Water Act of 1986 requires that every state have a drinking water protection program in place to guard against contamination of groundwater. The City may wish to voluntarily develop a Drinking Water Protection Plan to meet the DEQ and Oregon Health Department administrative rules. The plan is a valuable source of information as it relates to the management of municipal or county lands overlaying the groundwater aquifers in general, and to the identification of potential sources of contamination and municipal emergency responses in particular. Development of such a groundwater protection plan is beyond the scope of this Water Master Plan.

## 6.6 AQUIFER STORAGE & RECOVERY (ASR) EVALUATION

As discussed in Section 3.10, Aquifer Storage and Recover (ASR) is an option that should be considered by municipalities which have adequate water rights, but with water sources that are not adequate to meet peak demands during the summer months. For an ASR program to be feasible, a city must have a reliable water source available (water rights, etc.) that either meets primary drinking water standards or can be treated to these standards prior to injection into the aquifer, and which is located to allow the water to be economically obtained, treated and conveyed to the injection site. The following is a preliminary evaluation of ASR potential for the City's various water sources (excluding the spring sources). In the future, if any of the assumptions listed are determined to be invalid, the City may wish to pursue these ASR evaluations further.

# 7.6 Recommended Approaches & Improvements

Based on the above discussions, it is clear that the City must proceed with various improvements to the water treatment system in order to provide for long term growth.

Since the various improvements address issues related to different sources, the City may need to proceed with more than one project concurrently. The City should begin implementing these recommendations in the very near future, since the current available firm water supply is very close to the present MDD.

The recommended improvements and studies are summarized in **Table 7-3** (at the end of this chapter).

## 7.6.1 Water Loss Reduction (Transmission & Distribution Improvements)

As discussed in Section 5.4.7 and Section 6.7.1, the water loss experienced by the Dayton distribution system and the watershed transmission system is higher than desired.

When prioritizing water system improvements, the City should bear in mind that reduction in distribution system leakage also reduces the City's water treatment requirements. Further reduction in water losses from the in-town distribution system and replacement of the watershed transmission main will have the same effect as increasing the source production and treatment capacity available for use by consumers.

Recommendations for distribution system improvements that will reduce water loss (and increase the effective volume available from the City's existing sources) are included in Chapter 8.

## 7.6.2 WTP Pressure Filter Backwash Improvements

As discussed under Section 7.3.1, the existing WTP needs to be upgraded to ensure that adequate water is available for backwashing the pressure filters (350 gpm minimum). The recommended improvements involve the construction of a 21,000 gallon above grade clearwell structure on the west side of the existing WTP building.

Recommended budget numbers to cover the capital costs for these recommended improvements appear in Chapter 12.

## 7.6.3 WTP Finish Water Pump Improvements

As discussed under Section 7.3.2, the City will need to add the third distribution pump at the WTP within the planning period. The timing for when the third pump will need to be added is dependent on the extent of the water loss reduction that the City is able to achieve. The City should continue to monitor the peak demands, and schedule the installation of the third pump by no later than 2020.

Recommended budget numbers to cover the capital costs for these recommended improvements appear in Chapter 12.

## 7.6.4 WTP Fire Pump Improvements

As discussed under Section 4.4.4.3, the fire flows measured in the distribution system are less than would be expected based on the rated flow-head curve of the fire pump provided. While the addition of the secondary transmission main from the WTP (see Chapter 7) is anticipated to help this situation, the City should troubleshoot the cause of this discrepancy what can be done to resolve it in the interim. Since the

**Figure 8-1** shows one conceptual alignment for the new transmission main, which could be routed to the northeast corner of the WTP/reservoir property, and then through an easement to and along the west side of Flower Lane to Ash Street. Construction in an easement along Ash Street will avoid conflicts with the several existing pipelines already located in Flower Lane (14" Lafayette transmission line, 8-inch Dayton waterline, the 2 & 3-inch raw water lines from Flower Lane & 11th Street wells, the gravity sewer line and existing storm drain lines). Although this will require easements across private property, the first property to be crossed is currently undeveloped, and the second property is the First Baptist Church (where there appears to be adequate space to route the waterline along the Flower Lane frontage between the building and the street).

#### 8.4.1.1.2 Watershed Transmission Line

As previously noted, the transmission main from the watershed is well beyond the end of its useful life (ie. 1930s vintage steel line), as well as being significantly undersized, and should be replaced with a new 12-inch minimum size waterline as soon in the planning period as feasible. The new PRV station constructed in 2009 was constructed and valved to allow for connection of this future 12-inch transmission main. There are several segments of this transmission main, summarized as follows. This entire waterline (with the exception of a segment near McDougal Corner) is a 1930s vintage steel line that is well beyond its design life, and has experienced multiple leaks and repairs in recent years.

##### Watershed Springs to Watershed Reservoirs (within City watershed)

A new 8-inch PVC waterline from the springs to the reservoirs is anticipated. An easement (or long-term lease) for the portion within the lease lands (encompassing the spring and filter area) will be required prior to construction of this waterline, unless the City purchases or otherwise acquires this property.

##### Watershed Reservoirs to McDougal Wells

Although a short segment of this transmission line below the reservoir is located on City property, the majority of this steel waterline is located on private property, over which the City has not been able to locate a recorded easement. The alignment of this waterline between the City watershed and the McDougal Well sites is not entirely certain (although it appears to be along the westerly boundary of Tax Lot 4309-1600, 17185 NE McDougal Rd). The City needs to verify the existing waterline alignment, clear brush & trees along its length to allow for inspection and maintenance, and obtain easements to allow for installation of a replacement waterline. As noted above, this segment and all of the following segments (to 1st & Ferry) are to be replaced with a new 12-inch waterline.

##### McDougal Wells to Hwy 99W

This portion of the waterline appears to be located within the McDougal Road right-of-way (county road), although the exact alignment is unknown. It is anticipated that the new waterline will be installed within the County right-of-way.

##### Hwy 99W Crossing & McDougal Corner

The portion of the waterline crossing Hwy 99W is apparently a 1930's vintage steel line, while the portion from the south side of the highway to the south side of the railroad tracks (to Kreder Road) is 8-inch ductile iron installed in 1992. If the new waterline is installed prior to construction of the Newberg-Dundee Bypass, it is recommended that it be installed in an easement outside of the ODOT

right-of-way, even if the City has to pay for such an easement. This will minimize the risk of the City being required to pay to relocate the waterline when the bypass is constructed (as would happen if it is installed within the ODOT right-of-way).

Kreder Road to PRV Station

This portion of the waterline is located within the Kreder Road right-of-way (county road). It is anticipated that the new waterline will be installed within the County right-of-way.

PRV Station to 1st & Ferry (Yamhill River Crossing)

The existing waterline across the Yamhill River is suspended on the existing wooden pedestrian bridge. As noted in Section 4.6.4.1, the existing Yamhill River pedestrian bridge (at the easterly end of Ferry Street) is near or at the end of its design life, and will require increasingly expensive repairs in the coming years. This bridge is not expected to last through the planning period of this water study.

ODOT's Tier 2 Draft Environmental Impact Statement for the Newberg-Dundee Bypass (released in June 2010) includes a plan to replace the existing pedestrian bridge with a new vehicular bridge at the same location (ie. to connect Kreder Road and Ferry Street across the Yamhill River). However, the timeframe for this new bridge is highly uncertain, as it is dependent on federal funding. Since the City expects to have to replace the existing waterline early in the planning period, it does not appear feasible to wait until the new ODOT Ferry Street bridge is complete in order to replace the river crossing.

As discussed in Section 4.4.1.1, OBEC Consulting Engineers estimated the ongoing maintenance and upgrade costs to potentially exceed $700,000 from approximately 2011 to 2030. OBEC also recommended that the City place a high priority on maintenance or replacement of the bridge due to the critical function it serves the City (this recommendation predates ODOT's selection of the option for a new Ferry Street bridge). OBEC's bridge replacement cost estimates range from $3.8 million to $6.9 million depending on the bridge type (this assumes a replacement pedestrian bridge).

Given the cost associated with ongoing bridge maintenance and/or replacement of the pedestrian bridge, and the anticipated timeframe for the new ODOT bridge, the following alternatives were developed.

(1) One long-term option would be to eliminate reliance on a pedestrian bridge entirely, and install a new water transmission line under the Yamhill River using directional drilling. Preliminary estimates for directionally drilling under the Yamhill River (for both the water and sanitary sewer) are approximately $1,107,000. Assuming that the pedestrian bridge would be removed during the 20 year planning period, this option would require both waterline and the sanitary sewer force main to be bored under the river. This option would eliminate the ongoing maintenance associated with exposed pipelines suspended from bridges, and is substantially less expensive than a new pedestrian bridge.

(2) Another option evaluated was to route the water line to the Hwy 18 bridge north of town and hang the transmission main from this bridge. In discussions with ODOT about this option, ODOT indicated that this existing bridge was not designed to accommodate additional pipelines of this type, and that this option may require upgrades to the existing bridge to ensure that its

### 4.3.3 Water Supply, Wells

The City currently utilizes 10 municipal wells (McDougal Wells 1 & 2, Flower Lane Well, 11th Street Well, Post Office Well, and Dayton-Lafayette wellfield Wells 1-5). Although all five wellfield wells discharge to the City WTP, Dayton actually only owns the improvements at 2½ of these wells (Well 1, 2 & half of 5), although both Dayton and Lafayette have full water-rights from each well in the wellfield.

As previously noted, under the terms of the City's water rights, the watershed wells and the in-town wells are the City's primary production wells, while the wellfield wells are the secondary source wells.

**Table 4-4** lists the estimated long term production flowrates for the active wells as estimated based on currently available information (not based on actual production testing). It should be noted that the estimated production rates listed are approximate, and are based on anticipated summer flows moving into the future. As noted in Section 6.7.2, it is recommended that the City retain GSI Water Solutions (or other hydrogeologist) to assist the City in performing detailed production and efficiency testing on all of the City's wells, to verify the condition of the wells and to verify assumptions behind these anticipated long term pumping rates (and correct these estimates if necessary).

**Table 4-4** Wells, Estimated Long Term Production Capacity

| Well Name | Estimated Long Term Production Rate[1] (gpm) |
|---|---|
| McDougal Well #1 | 30 [5] |
| McDougal Well #2 | 65 [5] |
| Flower Lane Well | 25 [6] |
| 11th Street Well | 25 [5] |
| Wellfield Well # 1 | 40 [7] |
| Wellfield Well # 2[2] | 40 [8] (Lafayette) |
| Wellfield Well # 3 | 90 [9] |
| Wellfield Well # 4[2] | 70 (Lafayette) |
| Wellfield Well # 5[3] | 60 (50% Lafayette) |
| TOTAL | 445 (305 w/out Lafayette owned wells) |
| *Post Office Well*[4] | - |

(1) Based on consultations from GSI Water Solutions and recent City production records.
(2) Although Lafayette owns Wells 2 & 4, both Dayton and Lafayette have full water-rights from each well.
(3) Although Dayton & Lafayette equally share ownership of Well # 5, both Dayton and Lafayette have full water-rights from each well.
(4) Post Office Well is currently utilized only for irrigation of park land within the City.
(5) Assumes both McDougal wells pumping, post rehab of these wells.
(6) Based on combined flows of 50 gpm from Flower Lane & 11th Street wells
(7) Well 1 production is currently 0 gpm due to biofouling & inadequate pump control systems. The value listed assumed well rehab is successfully completed, and that the pump control systems are upgraded.
(8) Well 2 production is currently 20 gpm due to production problems (assumed to be biofouling). The value listed assumes well rehab is successfully completed.
(9) Well 3 pump control systems are inadequate to prevent drawdown into screens. The value listed assumes pump control systems are upgraded.

integrity is not compromised. A detailed structural evaluation of the existing bridge to determine the feasibility of installing the waterline on the bridge is beyond the scope of this water study.

The use of the Hwy 18 bridge crossing alternative will require the installation of approximately 3,400 feet of additional 12-inch transmission main (ie. from Kreder Road to Hwy 18, along Hwy 18 to Dayton interchange, and then south along 3rd Street to Oak Street). Based on estimated pipeline costs from Chapter 12, this additional transmission main would be about $500,000, plus the cost of the bridge crossing work itself. Given that this approach would require that the existing sewer force main (which also hangs on the pedestrian bridge) also be relocated to the Hwy 18 bridge, and the fact that the additional sewer force main length would be even greater than the water main (±4800 feet), this option appears to be significantly more expensive than the directional drill alternative.

If the existing Hwy 18 bridge is replaced as part of the ODOT work on the Newberg-Dundee Bypass, the new bridge could conceivably be designed to accommodate the water & sewer pipelines. However, since the timeframe for the transmission main replacement is expected to precede the ODOT bypass work, and given the cost for the additional pipelines, installation on the new bridge is not considered to be a viable option, and is not considered further.

It is not considered feasible to install the new larger diameter watershed transmission main on the existing pedestrian bridge, and the new transmission line replacement will most likely precede the construction of the new ODOT Ferry Street bridge. Therefore, we recommend that the City plan for installing the transmission main under the river via directional drilling.

#### 8.4.1.1.3 Palmer Creek Bridge Crossing (Hwy 221 Bridge)

The existing waterline is inadequately size to convey required fire flows to the south portion of Dayton. As discussed below, the waterline crossing the highway bridge will be fed by two waterlines connecting to the Ferry Street transmission main (existing 8" & new 10" mains). A 12-inch transmission main is recommended for the Palmer Creek bridge crossing (from Mill Street to Neck Road). In order to minimize the work within the ODOT right-of-way, it is recommended that the new transmission main be routed along the old 3rd Street right-of-way to the north edge of the cemetery, and then west to the ODOT right-of-way, then north across the bridge and along the west side of Hwy 221 to Neck Road.

As with the Hwy 18 bridge alternative, a preliminary structural evaluation of the existing Hwy 221 Palmer Creek bridge should be performed to verify that the new transmission main can be suspended from the existing bridge without major (ie. expensive) structural bridge upgrades. Such a structural evaluation is beyond the scope of this water study, but merits further consideration by the City. We recommend that the City retain an engineering firm specializing in bridge construction and modification to conduct this preliminary structural evaluation (similar to the firm that did the pedestrian bridge structural evaluation & design work). If the preliminary structural evaluation indicates problems with utilizing the existing bridge, the only other feasible alternatives would be to either install the pipeline down the ravine and bore a casing under the creek, or install the pipeline via directional drilling (ie. likely drill beginning near Neck Road and exiting near Mill Street).

For purposes of this master plan, it is assumed that the new pipeline can be suspended under the existing bridge.

The Post Office Well is currently used only for irrigation of the City park property (since a raw water pipeline from the well to the WTP does not exist), and is not included for finished water purposes.

#### 4.3.3.1 Well Discharge Rate Control Strategy

The City uses two different control strategies on their various wells to control the rate at which water is discharged from the wells. Control of the discharge rate is important in order to avoid excessive drawdown of the water level. The well drawdown needs to be controlled to ensure that the water level never drops below the top of the well screen or the perforated portion of the casing. If the water level is allowed to drop below the top of the screen or perforated casing, the groundwater begins to cascade into the well bore, resulting in the aeration of the groundwater, which in turn promotes bacterial growth that tends to foul and blind off the well screen and aquifer (thereby reducing the capacity of the well by reducing the amount of water that can flow to the pump). It also leads to excessive flowrates through the aquifer, which can result in damage to the aquifer structure itself (for alluvial aquifers), such as transport of fines to the area outside the screen or into the well bore.

##### 4.3.3.1.1 Manual Throttling Control Strategy

The discharge rate for the City's primary production wells (McDougal wells & in-town wells) is controlled by manually setting a throttling valve on the wellhead discharge piping, based on the flowrate as measured by a mechanical flow meter mounted in the wellhead piping. This requires that the City regularly monitor the water level and manually adjust the throttling valve and discharge rate to keep the water level above the top of the screen or perforated casing. Since the discharge rate of the pump is dependent on the level of the water in the well, this results in a variable flowrate (ie. as the water level drops, the well pump discharge rate decreases since it has to expend more energy to lift the water higher out of the well).

A similar configuration is currently used for Wellfield Well 1 and Well 3, even though these wells (in addition to the throttling gate valve) are also equipped with an automatic blowoff valve (ie. discharges water to the adjacent field when the well first starts up), and a backpressure valve (ClaVal style). Once again, this results in a flowrate that can vary significantly as the water level in the well drops during pumping. Since the methane strippers require a relatively constant flowrate to avoid overfilling, this configuration has not worked well since the system went on-line in 2004. Lafayette recently converted Well 4 over to the automated control strategy summarized below. Dayton plans to convert Wells 1 & 3 in the near future.

##### 4.3.3.1.2 Automated Discharge Control Strategy

Due to lack of discharge control (ie. with the manual control strategy) at the City's original Wellfield wells, a different approach was taken when Well 2 & Well 5 were constructed in 2009. A magnetic flow meter was installed on the well discharge line, with the flow meter sending a 4-20 mA signal (proportionate to flowrate) to the control panel. The flowrate signal was connected to a Variable Frequency Drive (VFD) capable of automatically controlling the speed of the well pump motor, which in turn controls the rate of discharge from the well. The operators enter the discharge flowrate desired into the control system, and the VFD controls the well pump speed to maintain that discharge rate (ie. as the water level drops in the well, the VFD speeds up the well pump to compensate). The water level in the well is constantly monitored by a down-hole level transducer, and if the water level gets too low (ie. too

close to the well screen), the control system slows the well pump down to keep the water level from dropping below the top of the screen. Pumping the well at a constant flowrate and preventing the water level from dropping too low maximizes the efficiency of the well, and maximizes its service life between upgrades or rehabilitation.

#### 4.3.3.2 Primary Production Wells (McDougal 1& 2, Flower Lane, 11th Street and Post Office)

As noted above, under the terms of the City's water rights, the Dayton-Lafayette wellfield wells are designated as secondary production sources, after full utilization of the City's other wells and springs. **Table 4-5** contains a summary of some of characteristics of the City's primary production wells.

**Table 4-5** Well Summary, Primary Production Wells

| Well → / Well Information | McDougal Well 1 | McDougal Well 2 | Flower Lane | 11th Street | Post Office |
|---|---|---|---|---|---|
| Date Drilled | 1949 | 1970 | 1990 | 1977 | 1953 |
| Yamhill County Well Log # | 5280 | 465 | 125<br>1860/1861 | 5324 | 5338 |
| Approximate Ground Elev | ±184' | ±186' | ±163' | ±167' | ±157' |
| Well Depth | 208' | 219' | 164' | 135' | 155' |
| Casing | 10" to 120' | • 8" to 75'<br>• 6" to 219 | 8" to 105' | 8" to 107' | 10" to 155' |
| (S) Screen Interval or (P) Perforated Casing Interval | (P) 10"<br>92' to 209' | (P) 6"<br>140' to 150'<br>189' to 219' | (S) 7"<br>108' to 128'<br>150' to 155'<br>155' to 160' | (S) 8"<br>112' to 123'<br>123' to 128' | (P) 10"<br>73' to101'<br>117' to 131'<br>135' to 155' |
| Well Pump | | | | | |
| • Type | •Submersible | •Submersible | •Submersible | •Submersible | •Submersible |
| • Diameter | •__" | •__" | •__" | •__" | •__" |
| • Motor size | •15 hp | •10 hp | •15 hp | •7.5 hp | •10 hp |
| • Motor speed | •__ rpm | •__ rpm | •__ rpm | •__ rpm | •__ rpm |
| • Power | •__V, 3φ | •__V, 3φ | •__V, 3φ | •__V, 3φ | •__V, 3φ |
| • Intake Depth (BGS) | •__' | •__' | •154' | •131' | •__' |
| • Motor Control | •FVNR | •FVNR | •FVNR | •FVNR | •FVNR |
| Transducer depth (BGS) | __' | __' | __' | __' | __' |
| Onsite Treatment | None | None | None | None | None |
| Flow Meter | Yes (no telem) | Yes (no telem) | Yes (no telem) | Yes (no telem) | Yes (no telem) |
| Discharge Rate Control Technique | Manual Throttling Valve | Manual Throttling Valve | Manual Throttling Valve | Manual Throttling Valve | Manual Throttling Valve |
| Auxiliary Power | None | None | None | None | None |
| Discharge location | Watershed Waterline (flow to town & reservoir) | Watershed Waterline (flow to town & reservoir) | Raw water line to WTP | Raw water line to WTP | Courthouse Square Park irrigation |
| Telemetry to WTP? | No | No | Radio | No | No |

Well pump information listed is based on City records, and was not field verified. Blanks in table represent unknown information that should be verified by the City. BGS = Below Ground Surface

A short history & overview of each of the primary production wells is presented below.

#### 4.3.3.2.1 McDougal Well 1 & Well 2

McDougal Wells 1 and 2 were installed in 1949 and 1970, respectively, and are located northeast of Dayton (north of Hwy 99W) near where Miller Creek crosses McDougal Road. McDougal Well 1 is located approximately 330 feet north of McDougal Road, with McDougal Well 2 being about 140 feet further north. Both wells are located on property owned by the City of Dayton (Tax Lot 4309-300, property acquired in 1949). McDougal Well 1 was originally provided with a 30 hp lineshaft turbine pump, but this was subsequently replaced by a 15 hp submersible turbine well pump.

Based on the 2004 Source Water Assessment Report prepared by ODWP, McDougal Well 1 & 2 were determined to be potentially susceptible to surface water contamination due to concerns with whether the well casings are adequately sealed down to an impermeable confining layer. The well log for the 1949 McDougal Well 1 has no information on the installation of a well seal (although it appears that the original well log was not filed as required, and a late registration was submitted about 5 years after the well was drilled, and may not be complete). The well log for the 1970 McDougal Well 2 lists insufficient cement to fill the annular space, and the casing is not extended far enough to avoid co-mingling water from two separate aquifers.

In 2006, the ODWP required the City to perform Microscopic Particulate (MPA) testing on the McDougal wells to confirm whether or not they were surface water influenced (GWUDI) sources. This testing was performed in 2007 and 2008 by GSI Water Solutions and City staff, and it was determined that the wells were not under the direct influence of surface water (see 7/7/08 GSI memo in **Appendix J**).

The watershed chlorination building is located just south of the McDougal Well 1, as discussed in a section below.

#### 4.3.3.2.2 Flower Lane Well

The Flower Lane Well was installed 1990, and is located on the southwest side of the intersection of Flower Lane and Ash Road. The well is located on property owned by the First Baptist Church of Dayton (Tax Lot 432BB-1400 & 1500). This well discharges to a raw water pipeline that runs south along Flower to the WTP (where it is treated with the wellfield water due to high concentrations of iron and manganese). The Flower Lane well was constructed to supplement the Post Office well water right. In April 2010, the WRD approved a water rights transfer application which transferred a portion of the Post Office well water right to Flower Lane as an additional point of appropriation.

#### 4.3.3.2.3 11th Street Well

The 11th Street Well (also referenced as Palmer well) was installed in 1977, and is located on the south side of Church Street east of 11th Street. This well is located on property owned by the City of Dayton (Tax Lot 4317CC-1025, property acquired in 1976). This well discharges to a raw water pipeline that runs west along Park Place and south along Flower to the WTP (where it is treated with the wellfield water due to high concentrations of iron and manganese).

#### 4.3.3.2.4 Post Office Well

The Post Office Well (also referenced as Ferry Street well) was constructed in 1953, and is located on the north side of Ferry Street across from the Post Office. This well is located on property owned by the City

**From:** Scott Pingel
**To:** "karen.m.quigley@state.or.us"
**Subject:** Water Supply Development Application and affected Tribes
**Date:** Wednesday, December 16, 2015 1:09:00 PM

Ms. Quigley,

The City of Dayton is pursuing funds through the Water Supply Development Account to replace a little over a mile water transmission line, redevelop wells in order to comply with Oregon drinking water standards and to add efficiency measures to wells. Would I be able to get a list of any tribes this project may affect?

Thanks,

Scott Pingel, City Manager
City of Dayton

**From:** Quigley Karen M
**To:** Scott Pingel
**Subject:** Re: Water Supply Development Application and affected Tribes
**Date:** Thursday, December 17, 2015 3:36:03 PM

Hello Scott,
Please touch base with Robert Kentta at Siletz. rkentta@ctdi.nsn.us
David Harrelson at Grand Ronde. David.Harrelson @grandronde.org
and Kathleen Sloan at Warm Springs Kathleen.sloan@ctwsbnr.org
Thanks,
Karen

*Sent from my Verizon Wireless 4G LTE DROID*

Scott Pingel <spingel@ci.dayton.or.us> wrote:

Ms. Quigley,

The City of Dayton is pursuing funds through the Water Supply Development Account to replace a little over a mile water transmission line, redevelop wells in order to comply with Oregon drinking water standards and to add efficiency measures to wells. Would I be able to get a list of any tribes this project may affect?

Thanks,

Scott Pingel, City Manager
City of Dayton

# Attachment 13 - Potentially Affected Tribes

**From:** Scott Pingel
**To:** "misty.thorsgard@grandronde.org"; "Kathleen.sloan@ctwsbnr.org"
**Cc:** "Denny Muchmore"
**Subject:** FW: WSD Application and potentially affected tribes (map exhibits) (1of 2)
**Date:** Tuesday, January 12, 2016 8:21:00 AM
**Attachments:** OR_Dayton_20140725_TM_geo (markup-Dayton 2016 Water project).pdf
OR_Dundee_20140725_TM_geo (markup-Dayton 2016 Water project).pdf
OR_McMinnville_20140725_TM_geo (markup-Dayton 2016 Water project).pdf

---

Ms. Thorsgard and Ms. Sloan,

Attached are maps that show the location and description of the City's proposed water system improvements that we are applying for grant funds for through the Water Supply Development Account. Due to the size of the map files, I will send them in this and one more email.

Thanks,

Scott Pingel, City Manager
City of Dayton

**From:** Denny Muchmore [mailto:dmuchmore@westech-eng.com]
**Sent:** Monday, January 11, 2016 5:19 PM
**To:** Scott Pingel <spingel@ci.dayton.or.us>
**Subject:** FW: WSD Application and potentially affected tribes (map exhibits) (1of 2)

Resending in two parts (previous email was apparently too large).

*Denny Muchmore, PE*
*Westech Engineering, Inc.*
*3841 Fairview Industrial Drive SE, Suite 100, Salem, OR 97302*
*503-585-2474 ph 503-585-3986 fax 503-931-8708 cell*
*dmuchmore@westech-eng.com*

---

**From:** Denny Muchmore
**Sent:** Monday, January 11, 2016 4:57 PM
**To:** 'Scott Pingel' <spingel@ci.dayton.or.us>
**Subject:** WSD Application and potentially affected tribes (map exhibits)

Scott,
Attached are reference maps showing where the various project components are located, as follows.

- Dayton 7.5' USGS topo map (current 2014 version), marked up to show transmission main alignment & limits. Also shows well locations.
  - *This map includes most of the transmission line, up to a point just south of the City watershed reservoir.*
  - *This map includes the Fisher Farm Wells.*
  - *This map also includes the Dayton Wellfield Well #1.*

- Dundee 7.5' USGS topo map (current 2014 version), marked up to show the transmission main alignment & limits.
  - *This map includes the portion of the transmission line just south of the City watershed*

*reservoir.*

- McMinnville 7.5' USGS topo map (current 2014 version), marked up to show well location.
  - *This map includes the Dayton Wellfield Well #3.*

- Markup of the Watershed City Utility map, highlighted to show the future transmission main alignment & limits in relation to roads & property lines.
- Markup of the Wellfield City Utility map, highlighted to show the location of the various well improvements which are part of this project.

Please let us know if you get any additional map or information requests related to the review by the tribes.

*Denny Muchmore, PE*
*Westech Engineering, Inc.*
*3841 Fairview Industrial Drive SE, Suite 100, Salem, OR 97302*
*503-585-2474 ph 503-585-3986 fax 503-931-8708 cell*
*dmuchmore@westech-eng.com*

---

**From:** Scott Pingel [mailto:spingel@ci.dayton.or.us]
**Sent:** Monday, January 11, 2016 1:37 PM
**To:** Denny Muchmore <dmuchmore@westech-eng.com>
**Subject:** RE: WSD Application and potentially affected tribes (map request)

Thanks.

Scott Pingel, City Manager
City of Dayton

---

**From:** Denny Muchmore [mailto:dmuchmore@westech-eng.com]
**Sent:** Monday, January 11, 2016 1:36 PM
**To:** Scott Pingel <spingel@ci.dayton.or.us>
**Subject:** WSD Application and potentially affected tribes (map request)

Scott,

I will put something together for you this afternoon.

*Denny Muchmore, PE*
*Westech Engineering, Inc.*

---

**From:** Scott Pingel [mailto:spingel@ci.dayton.or.us]
**Sent:** Monday, January 11, 2016 12:58 PM
**To:** Denny Muchmore <dmuchmore@westech-eng.com>
**Subject:** FW: Water Supply Development Application and potentially affected tribes

Denny,

FYI below. When I contacted the state about potential tribes that would be affected, I was directed to 3 tribes. 2 have asked the question below. Is there a map we can use to highlight the location of the transmission line, the Fisher Farms wells, and the joint wells to provide this information to the tribes?

Thanks,

Scott Pingel, City Manager
City of Dayton

**From:** Kathleen Sloan [mailto:kathleen.sloan@ctwsbnr.org]
**Sent:** Monday, January 11, 2016 12:43 PM
**To:** Scott Pingel <spingel@ci.dayton.or.us>
**Cc:** rkentta@ctdi.nsn.us; David.Harrelson@grandronde.org
**Subject:** Re: Water Supply Development Application and potentially affected tribes

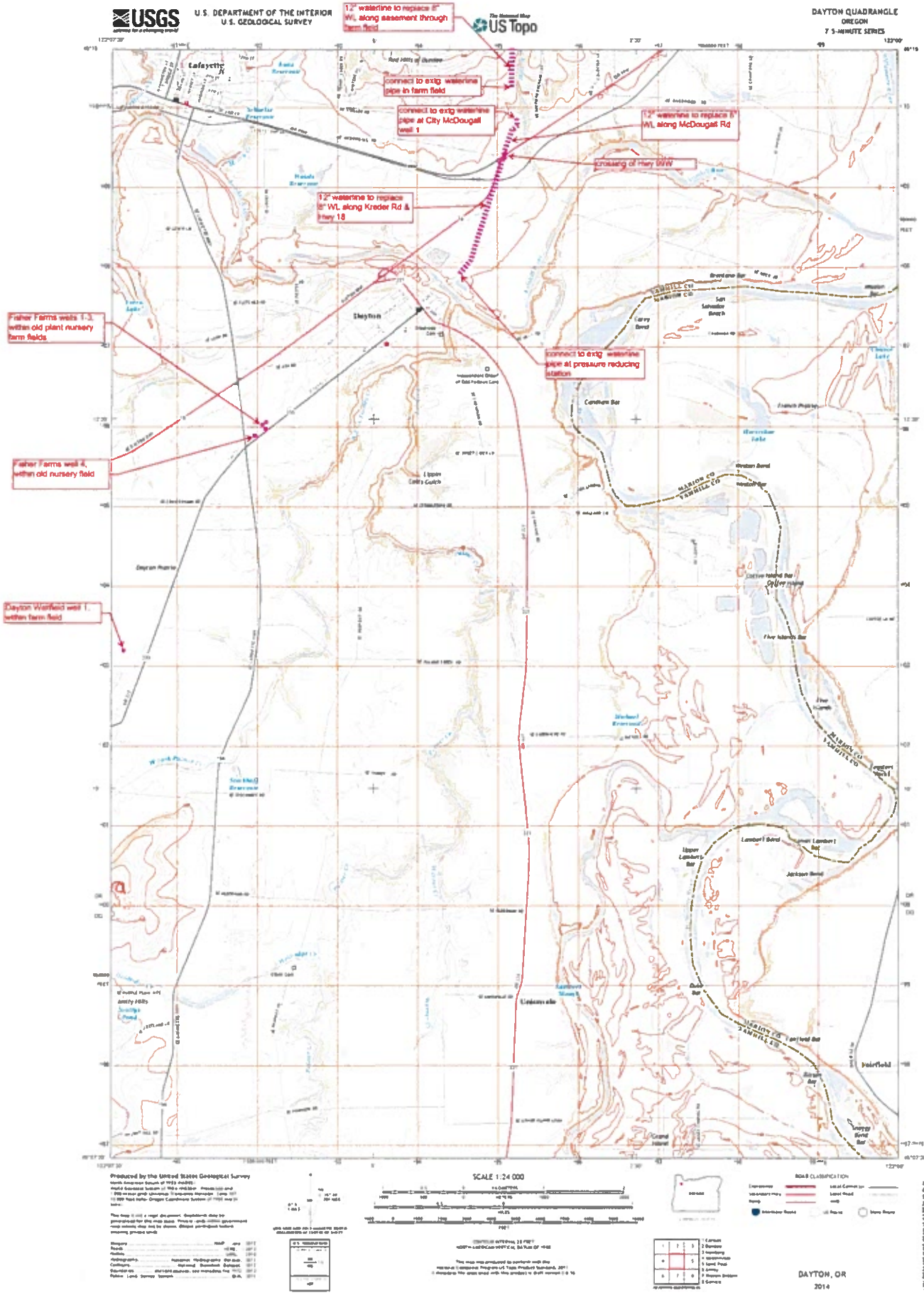
Hi Scott,

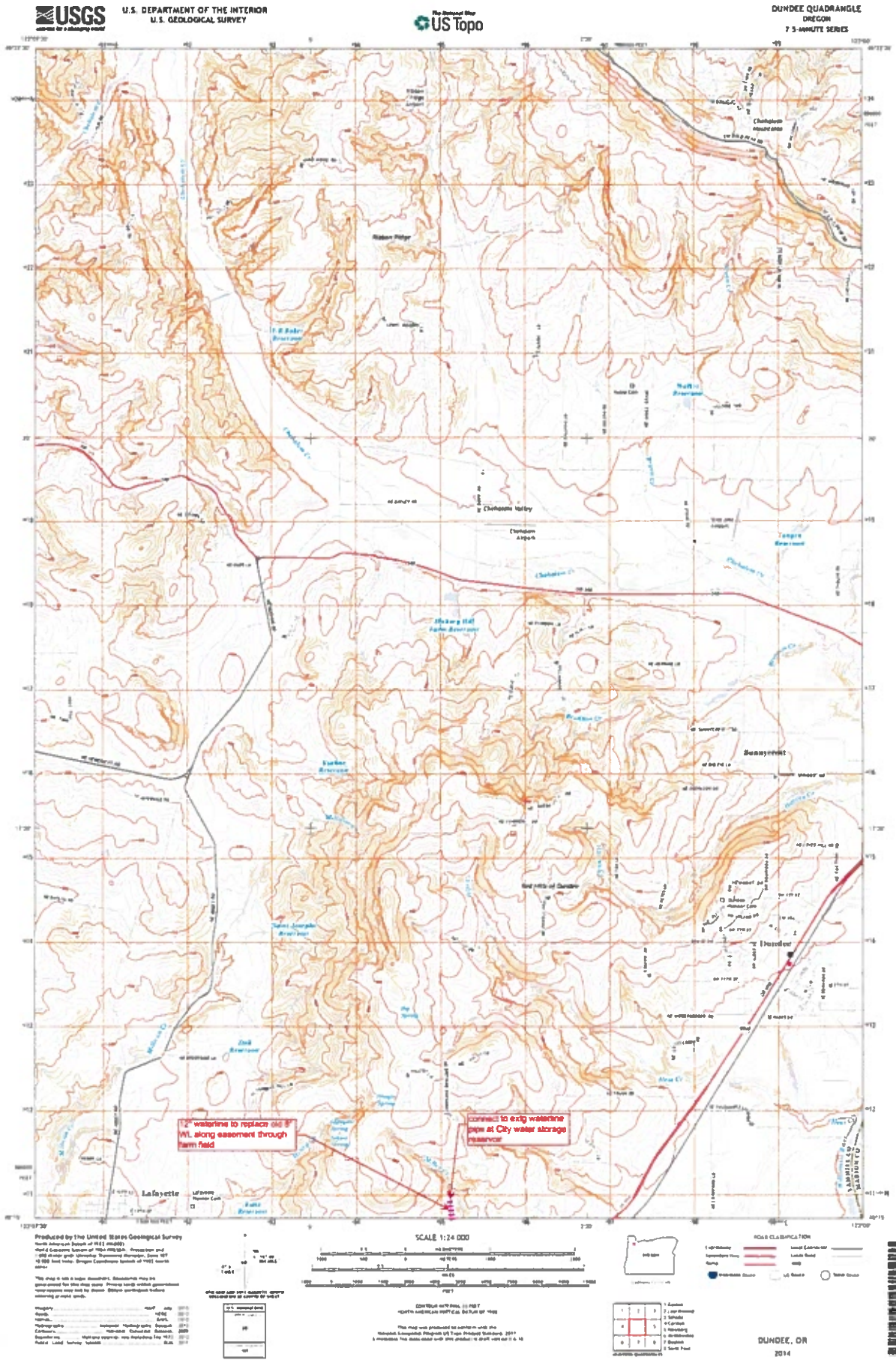
Thank you for your email. Can you please provide a map (7.5' USGS topo is preferred) of your proposed project activities?

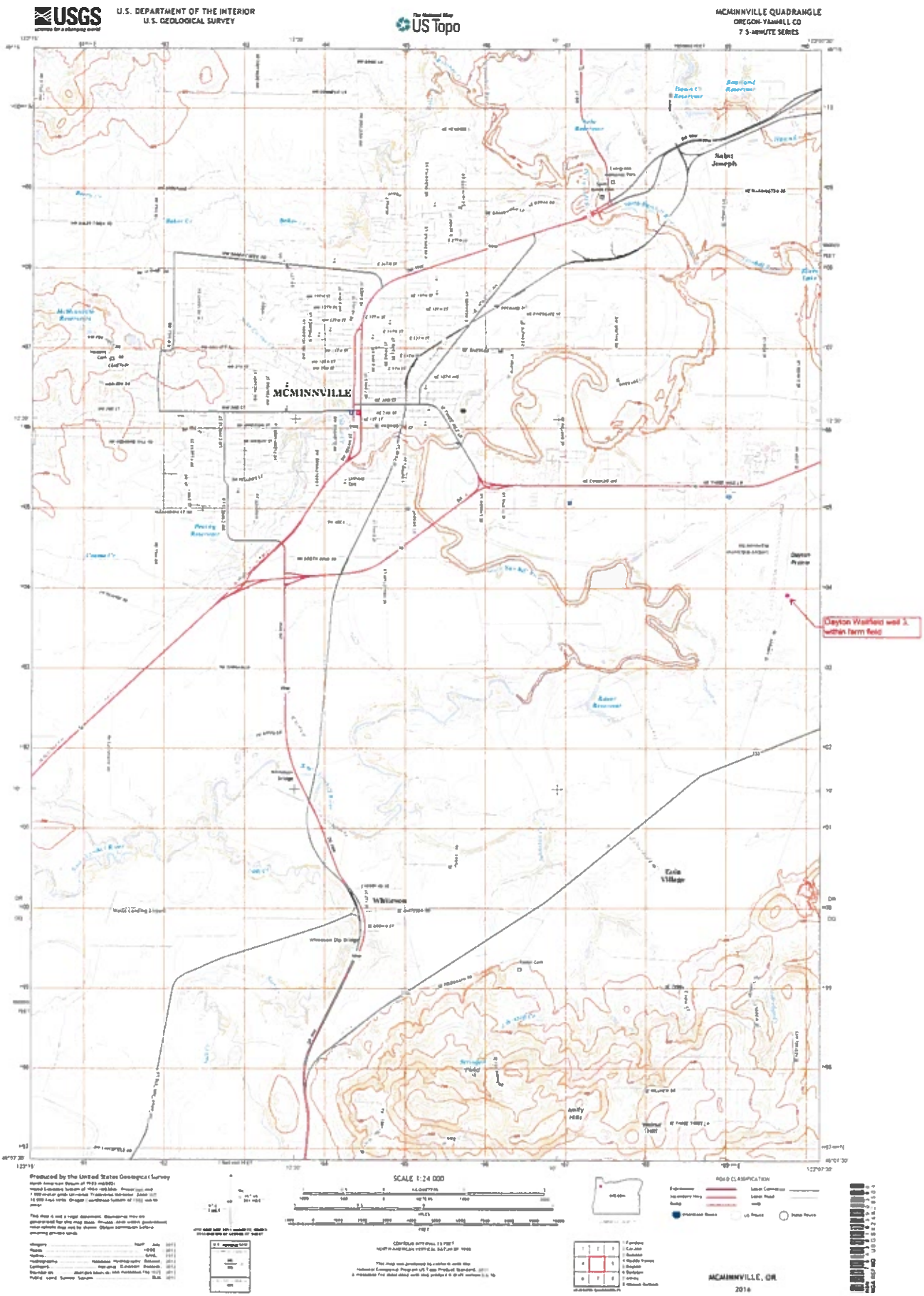
Kathleen Sloan, PhD
Manager
Warm Springs Geo Visions
Cultural Resource Department
Confederated Tribes of the Warm Springs Reservation of Oregon
PO Box 460
Warm Springs, Oregon 97761
ph: 541.553.3464
fax: 541-553-3584
kathleen.sloan@ctwsbnr.org

On Jan 11, 2016, at 9:27 AM, Scott Pingel <spingel@ci.dayton.or.us> wrote:

> Mr. Kentta, Mr. Harrelson, and Ms. Sloan,
>
> The City of Dayton is pursuing funds through the Water Supply Development Account to replace a little over a mile water transmission line, redevelop wells in order to comply with Oregon drinking water standards and to add efficiency measures to wells. In contacting the State as to any tribes that may be affected by this project, I was given the contact information for each of you. I am reaching out to let you know of our potential project. If you have any concerns or want more details of this potential project, please let me know. The City of Dayton will not be disturbing any soils that have not been previously disturbed.
>
> Thanks,
>
> **Scott Pingel, City Manager**
>
> City of Dayton


U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
USGS
US Topo
DAYTON QUADRANGLE
OREGON
7.5-MINUTE SERIES
12" waterline to replace 8" WL along easement through farm field
connect to extg waterline pipe in farm field
connect to extg waterline pipe at City McDougall well 1
12" waterline to replace 8" WL along McDougall Rd
Crossing of Hwy 99W
12" waterline to replace 8" WL along Kreder Rd & Hwy 18
Fisher Farms wells 1-3, within old plant nursery farm fields
Fisher Farms well 4, within old nursery field
Dayton Warfield well 1, within farm field
connect to extg waterline pipe at pressure reducing station
Dayton
Lafayette
Yamhill
Lambert Bend
Jackson Bend
Fairfield
SCALE 1:24 000
DAYTON, OR
2014


U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
USGS
science for a changing world
The National Map
US Topo
DUNDEE QUADRANGLE
OREGON
7.5-MINUTE SERIES
12" waterline to replace old 8" WL along easement through farm field
connect to exig waterline pipe at City water storage reservoir
Lafayette
Dundee
Bessymer
Chehalem Valley
Airport
Ridge
Hills of Dundee
Produced by the United States Geological Survey
SCALE 1:24 000
ROAD CLASSIFICATION
DUNDEE, OR
2014


USGS
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
US Topo
McMINNVILLE QUADRANGLE
OREGON-YAMHILL CO
7.5-MINUTE SERIES
McMINNVILLE
Dayton Warfield well 3, within farm field
Saint Joseph
Dayton Prairie
Eola Village
Whiteson
Amity Hills
Produced by the United States Geological Survey
SCALE 1:24 000
ROAD CLASSIFICATION
McMINNVILLE, OR
2016

# Attachment 14 - Potentially Affected Tribes

**From:** Scott Pingel
**To:** "misty.thorsgard@grandronde.org"; "Kathleen.sloan@ctwsbnr.org"
**Cc:** "Denny Muchmore"
**Subject:** FW: WSD Application and potentially affected tribes (map exhibits) (2 of 2)
**Date:** Tuesday, January 12, 2016 8:22:00 AM
**Attachments:** Watershed Water Map Markup - Dayton 2016 Water project.pdf
Wellfield Water Map Markup - Dayton 2016 Water project.pdf

---

Here is the second email and maps.

Scott Pingel, City Manager
City of Dayton

---

**From:** Denny Muchmore [mailto:dmuchmore@westech-eng.com]
**Sent:** Monday, January 11, 2016 5:20 PM
**To:** Scott Pingel <spingel@ci.dayton.or.us>
**Subject:** FW: WSD Application and potentially affected tribes (map exhibits) (2 of 2)

Second of two parts resent (previous email was apparently too large).

*Denny Muchmore, PE*
*Westech Engineering, Inc.*
*3841 Fairview Industrial Drive SE, Suite 100, Salem, OR 97302*
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City of Dayton

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*Westech Engineering, Inc.*

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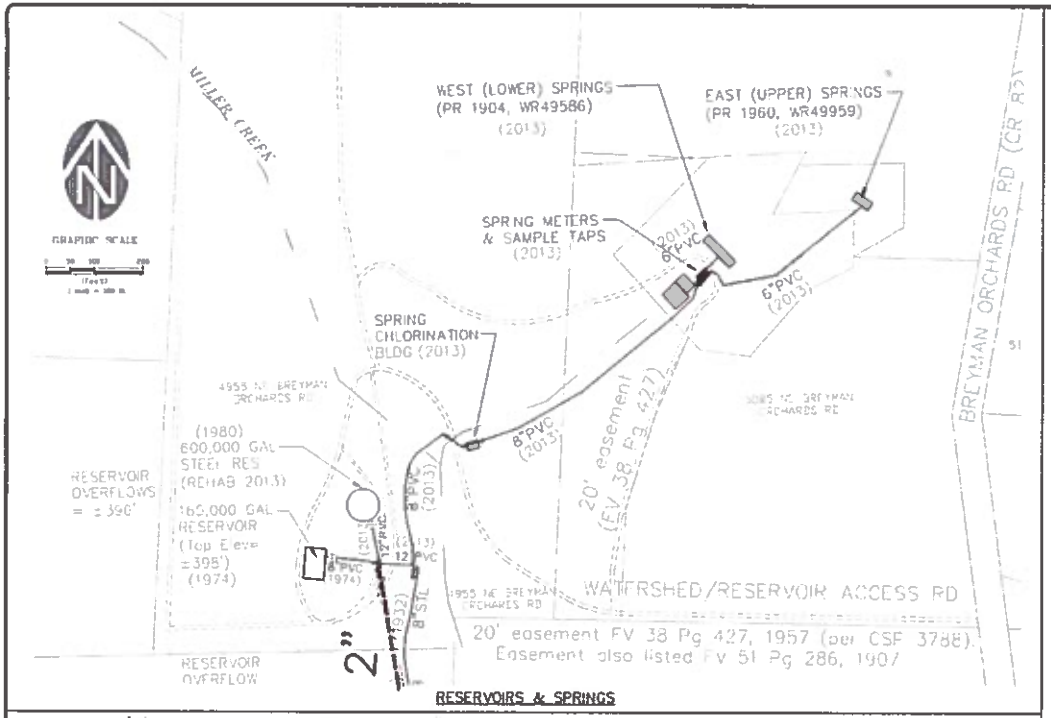
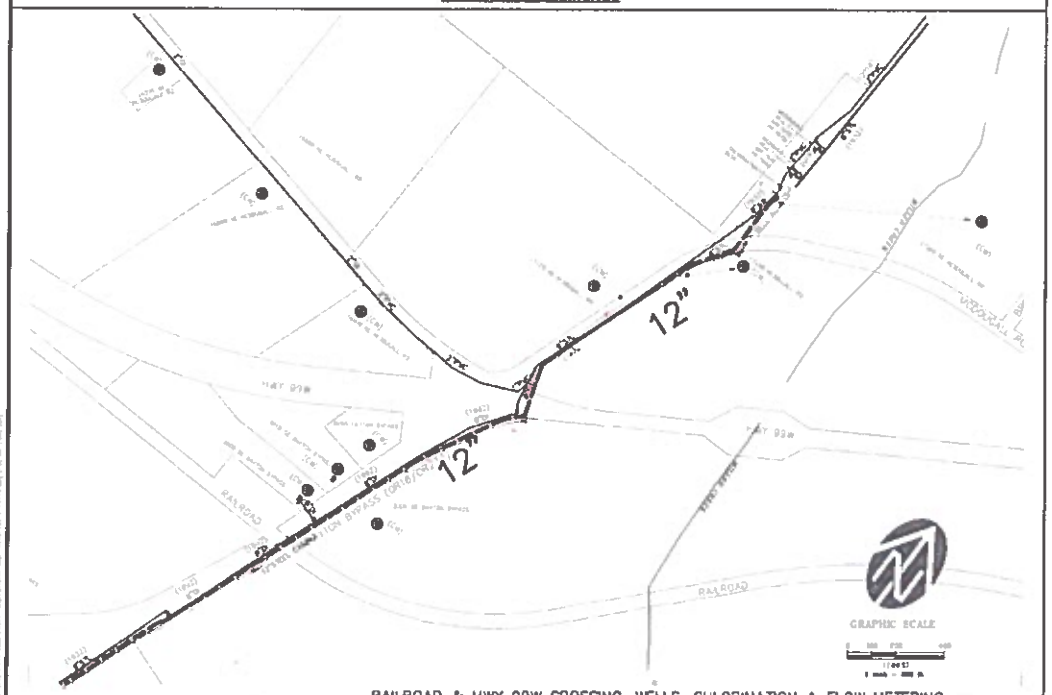
Kathleen Sloan, PhD
Manager
Warm Springs Geo Visions
Cultural Resource Department
Confederated Tribes of the Warm Springs Reservation of Oregon
PO Box 460
Warm Springs, Oregon 97761
ph: 541.553.3464
fax: 541-553-3584
kathleen.sloan@ctwsbnr.org

On Jan 11, 2016, at 9:27 AM, Scott Pingel <spingel@ci.dayton.or.us> wrote:

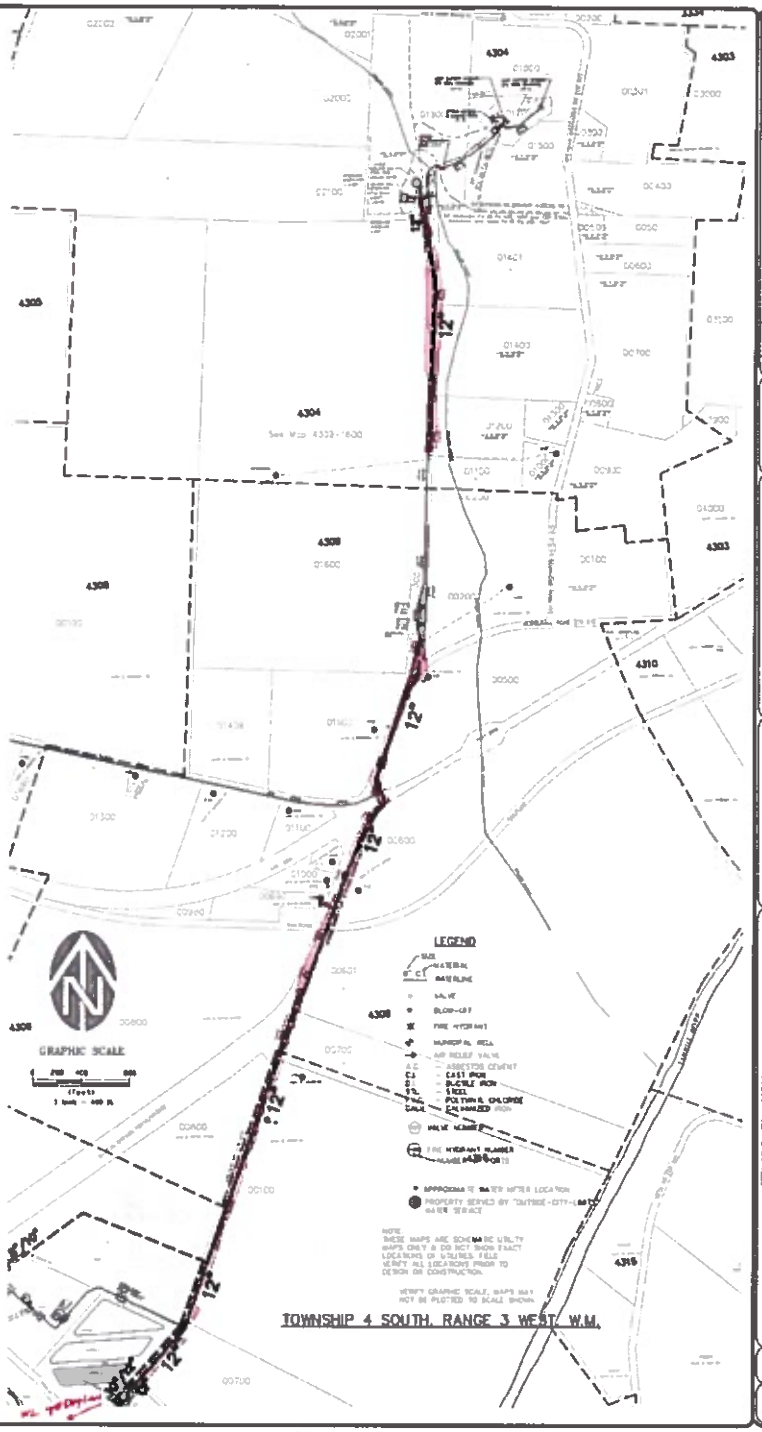
> Mr. Kentta, Mr. Harrelson, and Ms. Sloan,
> The City of Dayton is pursuing funds through the Water Supply Development Account to replace a little over a mile water transmission line, redevelop wells in order to comply with Oregon drinking water standards and to add efficiency measures to wells. In contacting the State as to any tribes that may be affected by this project, I was given the contact information for each of you. I am reaching out to let you know of our potential project. If you have any concerns or want more details of this potential project, please let me know. The City of Dayton will not be disturbing any soils that have not been previously disturbed.
> Thanks,
> Scott Pingel, City Manager
> City of Dayton




RESERVOIRS & SPRINGS




RAILROAD & HWY 99W CROSSING, WELLS, CHLORINATION & FLOW METERING




TOWNSHIP 4 SOUTH, RANGE 3 WEST, W.M.

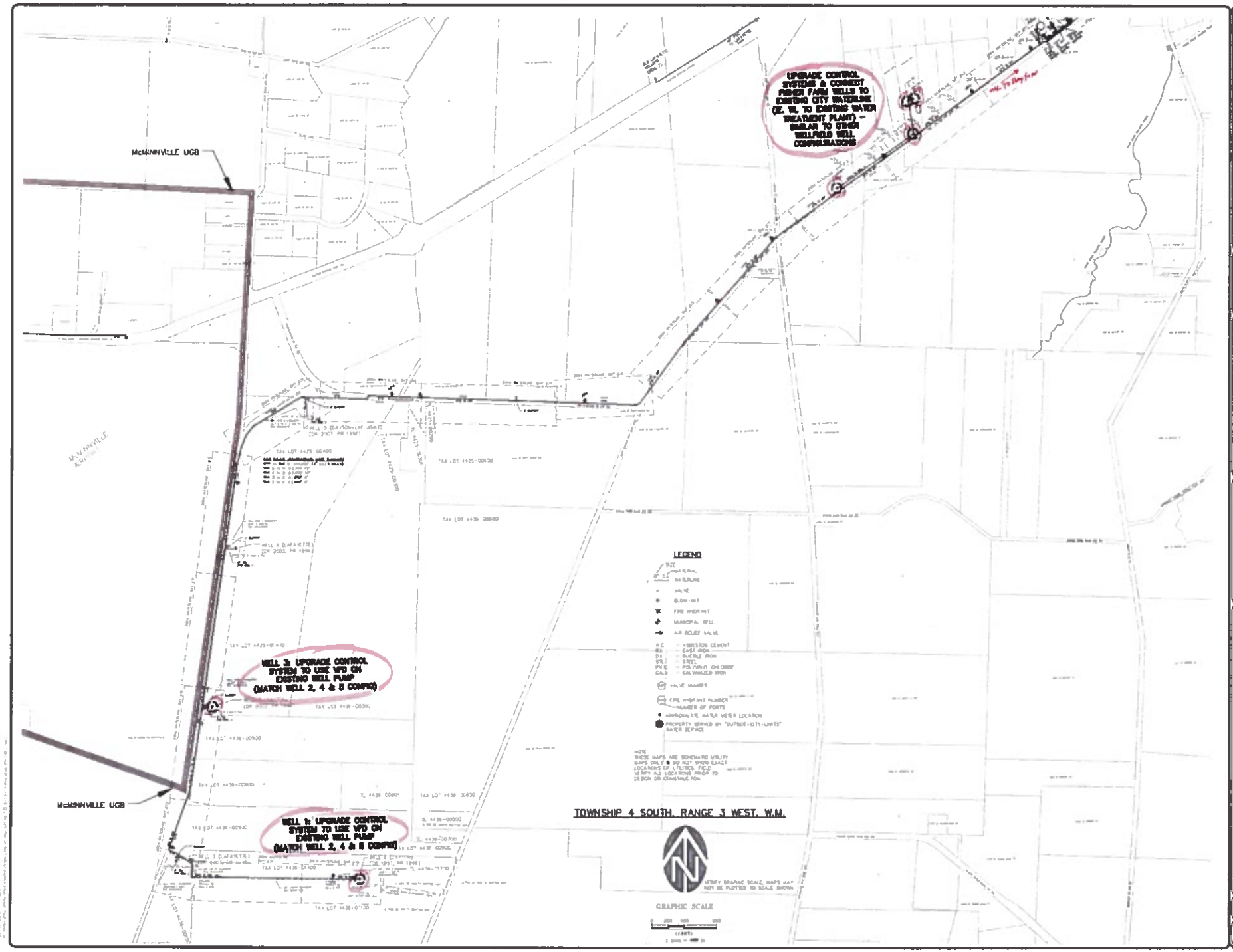
CITY OF DAYTON, OREGON

(2010 WMP) WATERSHED AREA
FUTURE WATERLINE MAP
(NOT ALL LINES SHOWN)

MAP UPDATED 1-31-2014

SHEET
1 OF 1

JOB NUMBER
2609.1013.0


McMINNVILLE UGB
UPGRADE CONTROL SYSTEMS & CONNECT FISHER FARM WELLS TO EXISTING CITY WATERLINE (EX. 16" TO EXISTING WATER TREATMENT PLANT) -- SIMILAR TO OTHER WELLFIELD WELL CONFIGURATIONS
WELL 3: UPGRADE CONTROL SYSTEM TO USE VFD ON EXISTING WELL PUMP (MATCH WELL 2, 4 & 5 CONFIG)
WELL 1: UPGRADE CONTROL SYSTEM TO USE VFD ON EXISTING WELL PUMP (MATCH WELL 2, 4 & 5 CONFIG)
McMINNVILLE UGB
LEGEND
TOWNSHIP 4 SOUTH, RANGE 3 WEST, W.M.
GRAPHIC SCALE
MAP UPDATED: 1-11-2010
CITY OF McMINNVILLE, OREGON
(2010 WMP) WELLFIELD AREA
FUTURE WATER SYSTEM IMPROVEMENT MAP
(NOT ALL IMPROVEMENT DETAILS SHOWN)
SHEET
1 OF 1
JOB NUMBER
2609.1006.0

# STATE OF OREGON
# DEPARTMENT OF HUMAN SERVICES
# DRINKING WATER PROGRAM
# LAND USE COMPATIBILITY STATEMENT

Certain plan review approvals for drinking water projects have been identified by the Department of Land Conservation and Development as Class B permits affecting land use. The Department of Human Services is therefore required by ORS 197-180, OAR 660-30-065 to - 070, OAR 660-31-010-040, the Department of Human Service=s state agency coordination program and OAR 333-61-062 to ensure that projects defined in OAR 333-61-062(1) are compatible with city and county comprehensive plans and land use regulations. This form or other acceptable documentation and necessary attachments must accompany each set of project plans to ensure that compatibility.

1. GENERAL INFORMATION

a. Project Title WATERSHED SPRINGS & WATERLINE IMPROVEMENTS

b. Applicant CITY OF DAYTON
Name of Water System

c. Type of project* MUNICIPAL SOURCE WATER COLLECTION SYSTEM
Treatment, Transmission, Storage, Distribution, Etc.

d. Project contact person DENNY MUCHMORE, PE (WESTECH ENGINEERING)
Engineer, owners, etc., including title
3841 FAIRVIEW INDUSTRIAL DRIVE SE
Street Address
SALEM, OR 97302 503-585-2474
City, State, Zip Code Phone

e. The local government entity* having comprehensive planning authority over the site of the proposed project is:

Agency Name YAMHILL COUNTY Phone 503-434-7516

Address 525 NE 4TH STR, MCMINNVILLE, OR Zip 97128
(*If the proposed project is located within the jurisdiction of more than one planning authority, all entities must certify compatibility.)

f. If a statement of compatibility previously has been submitted to the Department to cover a master water system plan, of which this project is a segment, no further information is required. If such a statement has been filed, the date of the submittal was _____.

(Continued on the back)

* UPGRADES TO BRING WATERSHED SOURCES AND ASSOCIATED PIPING INTO CONFORMANCE WITH CURRENT STATE RULES FOR MUNICIPAL WATER SYSTEMS. RECONSTRUCTION OF EXISTING MUNICIPAL WATER SOURCE, WHICH IS CLASSIFIED BY WATER RESOURCE DEPT (WRD) AS PART OF CITY'S "PRIMARY" WATER SOURCE SYSTEM.

C:\DOCUMENTS AND SETTINGS\PCYMBALA\LOCAL SETTINGS\TEMP\MXLIBDIR\LUCS.DOC

**LAND USE COMPATIBILITY DETERMINATION (Complete either 2 or 3)**

2. PLANNING AUTHORITY STATEMENT: (To be completed by local planning authority)

a. I certify that this project has been reviewed for compatibility with:

1. ~ The acknowledged comprehensive plan and land use regulations.

2. ~ Statewide planning goals. The goals apply because:

~ There is no acknowledged plan, or
~ Conditions described in OAR 660-31-025(3) apply.

b. I find that this project **(circle one)** IS or IS NOT, compatible.
Attach appropriate land use decision(s) written findings as required in ORS 215.416 (8) or (9) or 227.173 (1) OR (2), or OAR 660-31-025 (2) or (3).

Signed _____ Title P. D. M.
Date 9/8/2011
Allowed for the replacement of the existing waterline

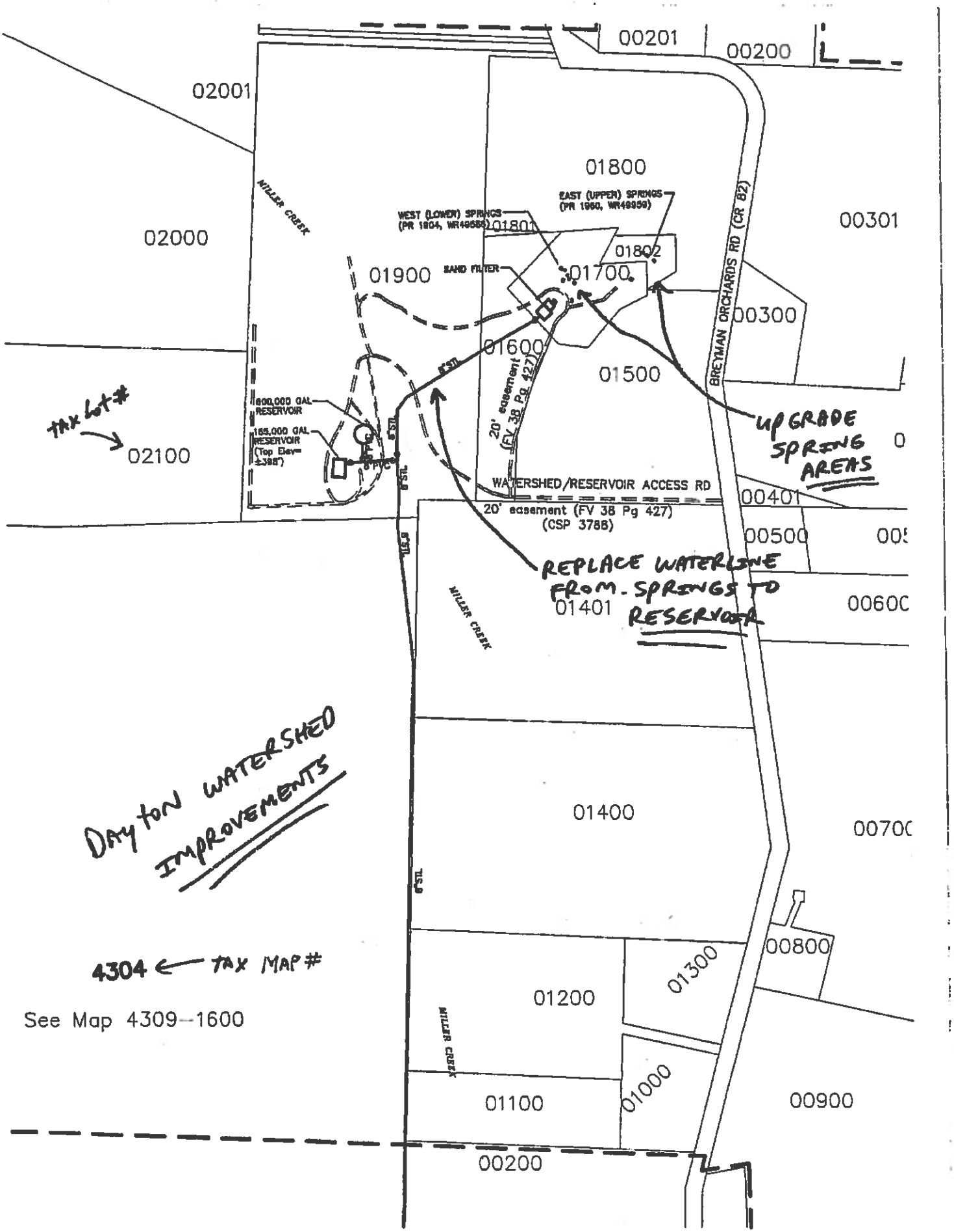
3. APPLICANT REQUEST FOR PLAN REVIEW APPROVAL

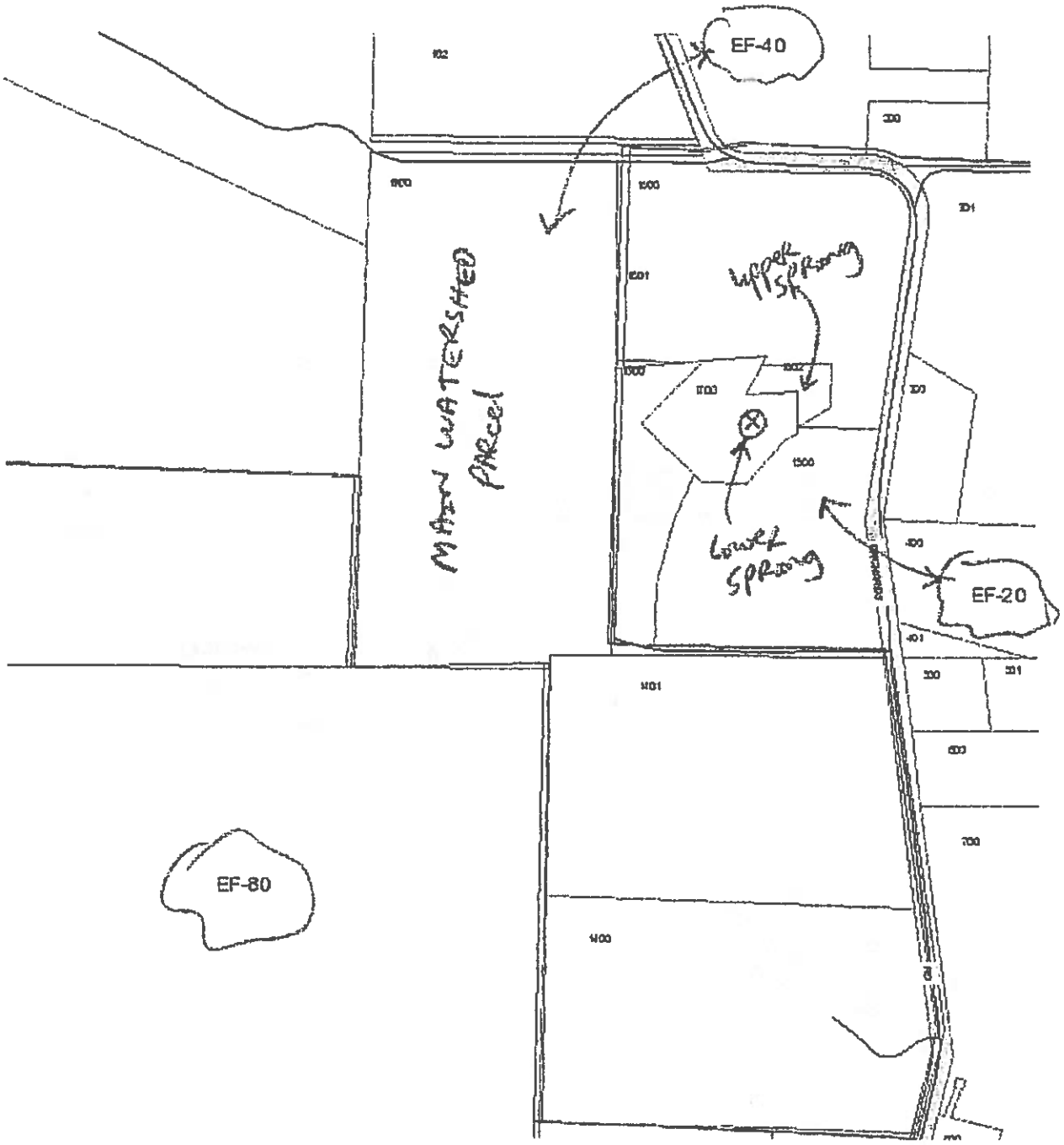
I hereby certify that I have applied to the local governments cited in 1.e above for a determination of compatibility with the local acknowledged plan or the statewide planning goals as applicable. I hereby request that the Department issue the plan review approval with the understanding that issuance of said approval is not a finding of compliance with the statewide planning goals or compatibility with the applicable, acknowledged comprehensive plan and land use regulations, but will be conditional, pending the applicant receiving a land use approval from each unit of local government. When signed, such approval shall be forwarded to the Department. I understand that plan review approval for this project will not be effective until and unless the Department of Human Services has received a copy of the land use approval and determined it to be complete and adequate.

Signed _____ Title City Manager Date 9/8/11

- MAPS SHOWING LOCATION OF WATERSHED SPRINGS & ASSOCIATED WATERLINE IS ATTACHED FOR REFERENCE.
- MAP SHOWING COUNTY ZONING IS ATTACHED:
  + SPRINGS ARE ON EF-20 LAND
  + WATERLINE IS ON EF-20 & EF-40 LAND
- SYSTEM IS AN EXISTING "UTILITY FACILITY NECESSARY FOR PUBLIC SERVICE" AS ALLOWED UNDER SECTION 402.2 (F) OF YAMHILL COUNTY ZONING ORDINANCE.

C:\DOCUMENTS AND SETTINGS\PCYMBALA\LOCAL SETTINGS\TEMP\MXLIBDIR\LUCS.DOC


00201
00200
02001
01800
EAST (UPPER) SPRINGS
(PR 1990, WR49939)
WEST (LOWER) SPRINGS
(PR 1904, WR49585)
01801
01802
00301
02000
MILLER CREEK
01900
SAND FILTER
01700
00300
01600
01500
BREYMAN ORCHARDS RD (CR 82)
20' easement
(FV 38 Pg 427)
TAX Lot#
02100
600,000 GAL
RESERVOIR
165,000 GAL
RESERVOIR
(Top Elev=
±388')
8"STL
8"PVC
UPGRADE
SPRING
AREAS
0
WATERSHED/RESERVOIR ACCESS RD
20' easement (FV 38 Pg 427)
(CSP 3788)
00401
00500
00
REPLACE WATERLINE
FROM SPRINGS TO
RESERVOIR
01401
MILLER CREEK
00600
DAYTON WATERSHED
IMPROVEMENTS
01400
00700
00800
4304 ← TAX MAP #
See Map 4309—1600
01200
01300
MILLER CREEK
01100
01000
00900
00200




Easting: 7540950 ft Northing: 587632 ft Lon: 123° 04' 05" W Lat: 45° 14' 49" N

PUBLIC HEALTH DIVISION
Drinking Water Services

John A. Kitzhaber, M.D., Governor

Health

800 NE Oregon Street #640
Portland, OR 97232-2162
Voice 971-673-0405
FAX 971-673-0694
www.healthoregon.org/dwp

WESTECH
FEB - 6 2015
RECEIVED

2/4/2015

Westech Engineering Inc
Denny Muchmore, PE
3841 Fairview Industrial Dr SE #100
Salem, OR 97301

Re: PWS 4100252 Dayton, City of
Waterline Exemption

Dear Denny Muchmore, PE:

Thank you for submitting the necessary information required under OAR 333-061-0060(4) for the plan review exemption for water main extension projects for the above water system. At this time, the exemption status is renewed for 2015. Sometime in January 2016, please forward a summary of the 2015 water line projects for the 2016 exemption.

Again, thank you very much. If you have any questions or concerns, please contact me at 971-673-0191 or via e-mail at carrie.l.gentry@state.or.us.

Sincerely,

Carrie Gentry, P.E.
Plan Review Coordinator
Drinking Water Services

Yamhill County HD
Fred Kalish, Oregon Health Authority

STATE OF OREGON

COUNTY OF YAMHILL

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CITY OF DAYTON
PO BOX 339
DAYTON OR 97114-0339

confirms the right to use the waters of TWO WELLS in the PALMER CREEK BASIN for NURSERY USE on 5.87 ACRES.

This right was perfected under Permit G-15906. The date of priority is AUGUST 22, 2001. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 0.56 CUBIC FOOT PER SECOND measured at the wells.

The period of use is year round.

The wells are located as follows:

| Twp | Rng | Mer | Sec | Q-Q | DLC | Measured Distances |
|---|---|---|---|---|---|---|
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 1 (YAMH 5370) - 830 FEET NORTH AND 1100 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 3 (YAMH 52469) - 220 FEET NORTH AND 880 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |

The amount of water used for nursery use is limited to a maximum of 5.0 acre feet per acre and a diversion of 0.15 cubic foot per second per acre. For irrigation of containerized nursery plants, the amount of water diverted is limited to one fortieth of one cubic foot per second and 5.0 acre feet per acre per year. For irrigation of in-ground nursery plants the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre per year. The use of water for nursery use may be made any time, during the period of allowed use specified above, that the use is beneficial. For irrigation of any other crop, the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre during the irrigation season of each year.

The place of use is located as follows:

| NURSERY USE | | | | | | |
|---|---|---|---|---|---|---|
| Twp | Rng | Mer | Sec | Q-Q | DLC | Acres |
| 4 S | 3 W | WM | 19 | SW NE | 48 | 0.07 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | 5.80 |

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

Measurement, recording and reporting conditions:

A. The water user shall maintain the meter or other suitable measuring device in good working order, shall keep a complete record of the amount of water used each month, and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the water user to report general water-use information, including the place and nature of use of water under the right.

B. The water user shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

To monitor the effect of water use from the wells authorized under this right, the Department requires the water user to make and report annual static water level measurements. The static water level shall be measured in the month of March. Reports shall be submitted to the Department within 30 days of measurement.

Measurements must be made according to the following schedule:

Following the first year of water use, the user shall submit seven consecutive annual reports of static water level measurements. Based on an analysis of the data collected, the Director may require that the user obtain and report additional annual static water level measurements beyond the seven year minimum reporting period. The additional measurements may be required in a different month. If the measurement requirement is stopped, the Director may restart it at any time.

All measurements shall be made by a certified water rights examiner, registered professional geologist, registered professional engineer, licensed well constructor or pump installer licensed by the Construction Contractors Board and be submitted to the Department on forms provided by the Department. The Department requires the individual performing the measurement to:

(A) Identify each well with its associated measurement; and
(B) Measure and report water levels to the nearest tenth of a foot as depth-to-water below ground surface; and
(C) Specify the method used to obtain each well measurement; and
(D) Certify the accuracy of all measurements and calculations submitted to the Department.

The water user shall discontinue use of, or reduce the rate or volume of withdrawal from, the wells if annual water level measurements reveal any of the following events:

(A) An average water level decline of three or more feet per year for five consecutive years; or
(B) A water level decline of 15 or more feet in fewer than five consecutive years; or
(C) A water level decline of 25 or more feet; or
(D) Hydraulic interference leading to a decline of 25 or more feet in any neighboring well with senior priority.

The levels from which the cited declines in (A), (B) and (C) above will be referenced are as follows: The reference level for Well 1 (YAMH 5370) is 30.00 below ground surface. The reference level for Well 3 (YAMH 52469) is 25.50 below ground surface.

The period of non or restricted use shall continue until the annual water level rises above the decline level which triggered the action or until the Department determines, based on the water user's and/or the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or senior water rights. The water user shall in no instance allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this right. If more than one well is involved, the water user may submit an alternative measurement and reporting plan for review and approval by the Department.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this right, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interference.

The wells shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge to determine the water level elevation in the well at all times.

Where two or more water users agree among themselves as to the manner of rotation in the use of water and such agreement is placed in writing and filed by such water users with the watermaster, and such rotation system does not infringe upon such prior rights of any water user not a party to such rotation plan, the watermaster shall distribute the water according to the agreement.

The Director may require water level or pump test results every ten years.

Failure to comply with any of the provisions of this right may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the right.

This right is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

This certificate is issued to supersede certificate 89862, as it contains a scrivener's error.

Issued FEB 13 2015

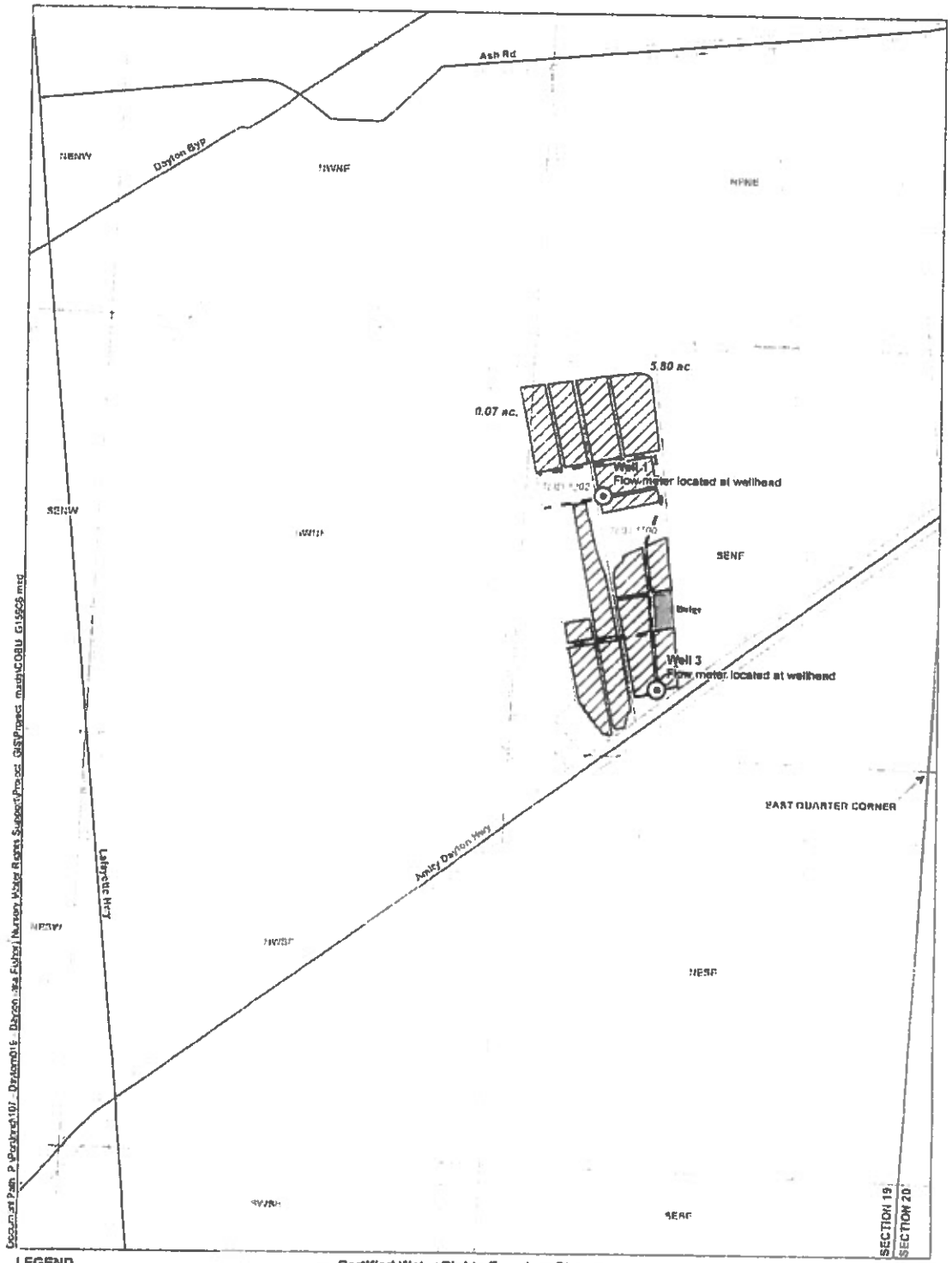
Dwight W. Fr[illegible]
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

850

# Claim of Beneficial Use Map

**Permit G-15906, Application G-15445**
**Water Right in the Name of City of Dayton**

**Township 4 South, Range 3 West, Section 19, as projected within DLC 48 (W.M.)**




COBU MAP #850

**LEGEND**

- Point of Appropriation (POA)
- Place of Use (POU)
- Markers
- Street
- Tax Lot
- Waterbody

**POA Location Description**

**Well 1 (YAMH 6378)**
Located 830 feet North and 1,100 feet West from the East quarter corner of Section 19, Township 4 South, Range 3 West (W.M.)

**Well 3 (YAMH 52668)**
Located 220 feet North and 660 feet West from the East quarter corner of Section 19, Township 4 South, Range 3 West (W.M.)

**Certified Water Rights Examiner Stamp**

Certified Water Rights Examiner
#78185WRE
Theodore R. Ressler
June 29, 2007
STATE OF OREGON
EXPIRES: 12-31-2014

**Disclaimer**

This map was prepared for the purpose of identifying the location of a water right only and it is not intended to provide legal dimensions or location of property ownership lines.

**Map Notes**

Date: September 22, 2014
Sources: BLM, USGS, ESRI
Prepared By: GSI Water Solutions, Inc.

N
0 200 400
Feet

GSI Water Solutions, Inc.

STATE OF OREGON

COUNTY OF YAMHILL

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CITY OF DAYTON
PO BOX 339
DAYTON OR 97114-0339

confirms the right to use the waters of TWO WELLS in the WEST FORK PALMER CREEK BASIN for NURSERY USE on 39.74 ACRES.

This right was perfected under Permit G-17039. The date of priority is APRIL 18, 2000. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 0.90 CUBIC FEET PER SECOND measured at the wells.

The period of use is year round.

The wells are located as follows:

| Twp | Rng | Mer | Sec | Q-Q | DLC | Measured Distances |
|---|---|---|---|---|---|---|
| 4 S | 3 W | WM | 19 | NW SE | 48 | WELL 4 (YAMH 5447) - 545 FEET SOUTH AND 1840 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 3 – (YAMH 52469) - 220 FEET NORTH AND 880 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |

The amount of water used for NURSERY OPERATIONS is limited to a diversion of 0.15 cubic foot per second per acre. For irrigation of **containerized nursery plants**, the amount of water diverted is limited to ONE-FORTIETH of one cubic foot per second (or its equivalent) and 5.0 acre feet per acre per year. For irrigation of **in ground nursery plants** the amount of water diverted is limited to ONE-EIGHTIETH of one cubic foot per second (or its equivalent) and 2.5 acre feet per acre per year. The use of water for NURSERY OPERATIONS may be made any time, during the period of allowed use specified above, that the use is beneficial. For irrigation of **any other crop**, the amount of water diverted is limited to ONE-EIGHTIETH of one cubic foot per second (or its equivalent) and 2.5 acre feet per acre during the irrigation season of each year.

The place of use is located as follows:

| NURSERY USE | | | | | | |
|---|---|---|---|---|---|---|
| Twp | Rng | Mer | Sec | Q-Q | DLC | Acres |
| 4 S | 3 W | WM | 19 | NW NE | 48 | 3.76 |
| 4 S | 3 W | WM | 19 | SW NE | 48 | 25.91 |
| 4 S | 3 W | WM | 19 | SE NW | 48 | 0.31 |
| 4 S | 3 W | WM | 19 | NW SE | 48 | 9.76 |

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

The combined quantity of water diverted at Wells 3 and 4 shall not exceed the quantity of water available from the original point of appropriation, Well 5.

| Twp | Rng | Mer | Sec | Q-Q | DLC | Measured Distances |
|---|---|---|---|---|---|---|
| 4 S | 3 W | WM | 19 | SW NE | 48 | 1760 FEET SOUTH AND 90 FEET EAST FROM THE N 1/4 CORNER, SECTION 19 |

Measurement, recording and reporting conditions:

A. The water user shall maintain the meters or measuring devices in good working order. The water user shall keep a complete record of the amount of water used each month, and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the water user to report general water-use information, including the place and nature of use of water under the right.

B. The water user shall allow the watermaster access to the meters or measuring devices; provided however, where the meters or measuring devices are located within a private structure, the watermaster shall request access upon reasonable notice.

Water shall be acquired from the same aquifer as the original point of appropriation, Well 5.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this right, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interference.

The wells shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge to determine the water level elevation in the well at all times.

The Director may require water level or pump test results every ten years.

Failure to comply with any of the provisions of this right may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the right.

This right is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

This certificate is issued to supersede certificate 89861, as it contains a scrivener's error.

Issued FEB 13 2015

Dwight W. French
Water Right Services Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

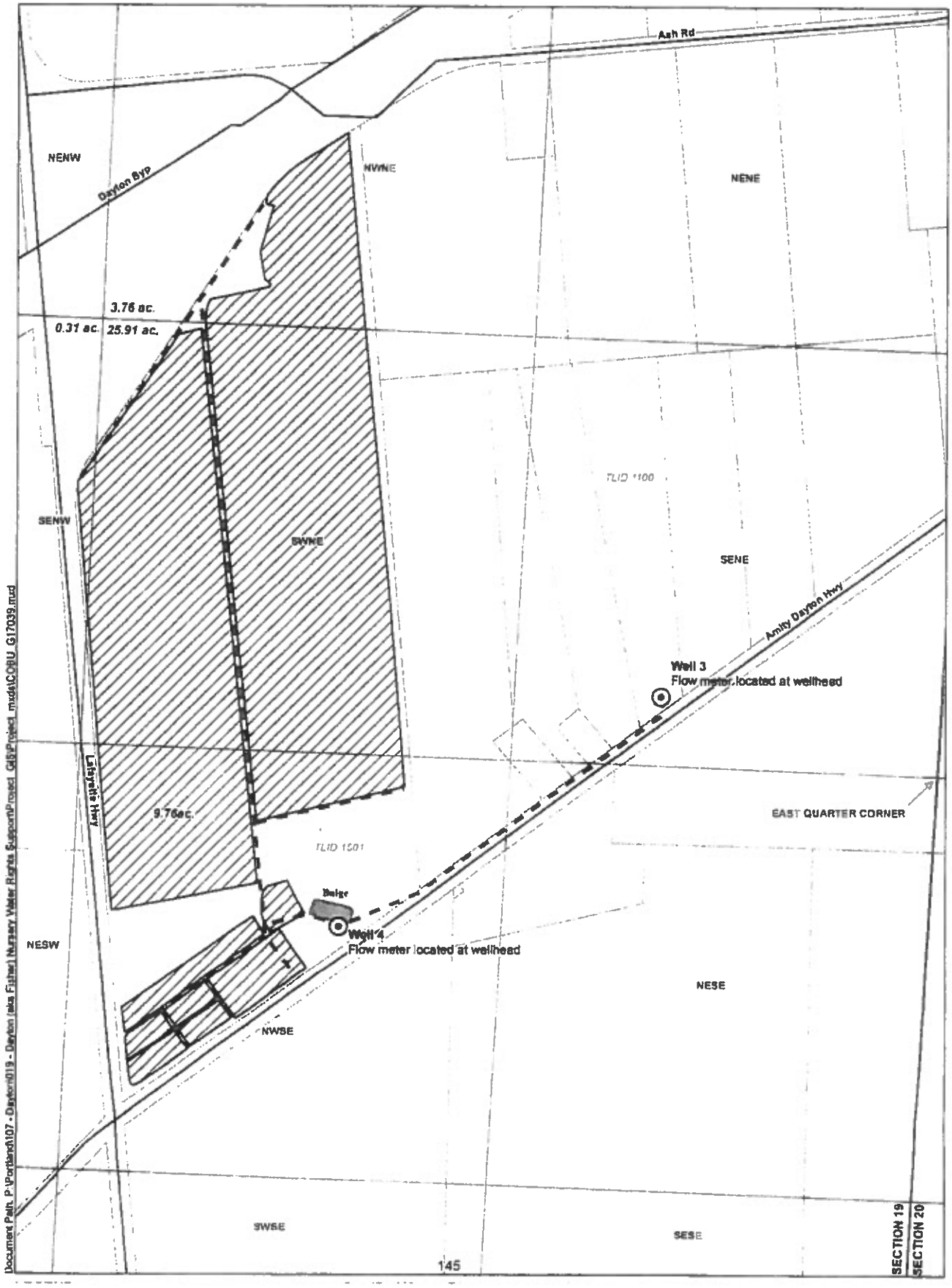
857

WRD

# Claim of Beneficial Use Map

**Permit G-17039, Application G-15130**
**Water Right in the Name of City of Dayton**

SALEM **Township 4 South, Range 3 West, Section 19, as projected within DLC 48 (W.M.)**




COBU MAP #857

Document Path: P:\Portland\107 - Dayton\019 - Dayton (aka Fisher) Nursery Water Rights Support\Project GIS\Project_mxd\COBU_G17039.mxd

STATE OF OREGON

COUNTY OF YAMHILL

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CITY OF DAYTON
PO BOX 339
DAYTON OR 97114-0339

confirms the right to use the waters of TWO WELLS in the PALMER CREEK BASIN for NURSERY USE on 5.0 ACRES.

This right was perfected under Permit G-15821. The date of priority is NOVEMBER 5, 2003. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 0.125 CUBIC FOOT PER SECOND measured at the wells.

The period of use is year round.

The wells are located as follows:

| Twp | Rng | Mer | Sec | Q-Q | DLC | Measured Distances |
|---|---|---|---|---|---|---|
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 3 (YAMH 52469) - 220 FEET NORTH AND 880 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |
| 4 S | 3 W | WM | 19 | NW SE | 48 | WELL 4 (YAMH 5447) - 545 FEET SOUTH AND 1840 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |

The amount of water used for nursery use is limited to a maximum of 5.0 acre feet per acre and a diversion of 0.15 cubic foot per second per acre. For irrigation of containerized nursery plants, the amount of water diverted is limited to one fortieth of one cubic foot per second and 5.0 acre feet per acre per year. For irrigation of in-ground nursery plants the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre per year. The use of water for nursery use may be made any time, during the period of allowed use specified above, that the use is beneficial. For irrigation of any other crop, the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre during the irrigation season of each year.

The place of use is located as follows:

| NURSERY USE | | | | | | |
|---|---|---|---|---|---|---|
| Twp | Rng | Mer | Sec | Q-Q | DLC | Acres |
| 4 S | 3 W | WM | 19 | NW NE | 48 | 2.25 |
| 4 S | 3 W | WM | 19 | SW NE | 48 | 1.13 |
| 4 S | 3 W | WM | 19 | NE NW | 48 | 0.63 |
| 4 S | 3 W | WM | 19 | SE NW | 48 | 0.99 |

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

Measurement, recording and reporting conditions:

A. The water user shall maintain the meter or other suitable measuring device in good working order.

B. The water user shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

C. The Director may require the water user to keep and maintain a record of the amount (volume) of water used and may require the water user to report water use on a periodic schedule as established by the Director. In addition, the Director may require the water user to report general water use information, the periods of water use and the place and nature of use of water under the right. The Director may provide an opportunity for the water user to submit alternative reporting procedures for review and approval.

To monitor the effect of water use from the wells authorized under this right, the Department requires the water user to make and report annual static water level measurements. The static water level shall be measured in the month of March. Reports shall be submitted to the Department within 30 days of measurement.

Measurements must be made according to the following schedule:

Following the first year of water use, the user shall submit seven consecutive annual reports of static water level measurements. Based on an analysis of the data collected, the Director may require that the user obtain and report additional annual static water level measurements beyond the seven year minimum reporting period. The additional measurements may be required in a different month. If the measurement requirement is stopped, the Director may restart it at any time.

All measurements shall be made by a certified water rights examiner, registered professional geologist, registered professional engineer, licensed well constructor or pump installer licensed by the Construction Contractors Board and be submitted to the Department on forms provided by the Department. The Department requires the individual performing the measurement to:

(A) Identify each well with its associated measurement; and
(B) Measure and report water levels to the nearest tenth of a foot as depth-to-water below ground surface; and
(C) Specify the method used to obtain each well measurement; and
(D) Certify the accuracy of all measurements and calculations submitted to the Department.

The water user shall discontinue use of, or reduce the rate or volume of withdrawal from, the wells if annual water level measurements reveal any of the following events:

(A) An average water level decline of three or more feet per year for five consecutive years; or
(B) A water level decline of 15 or more feet in fewer than five consecutive years; or
(C) A water level decline of 25 or more feet; or
(D) Hydraulic interference leading to a decline of 25 or more feet in any neighboring well with senior priority.

The levels from which the cited declines in (A), (B) and (C) above will be referenced are as follows: The reference level for Well 3 (YAMH 52469) is 25.50 below ground surface. The reference level for Well 4 (YAMH 5447) is 39.00 below ground surface.

The period of non or restricted use shall continue until the annual water level rises above the decline level which triggered the action or until the Department determines, based on the water user's and/or the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or senior water rights.

The water user shall in no instance allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this right. If more than one well is involved, the water user may submit an alternative measurement and reporting plan for review and approval by the Department.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this right, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interference.

The wells shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge to determine the water level elevation in the well at all times.

Where two or more water users agree among themselves as to the manner of rotation in the use of water and such agreement is placed in writing and filed by such water users with the watermaster, and such rotation system does not infringe upon such prior rights of any water user not a party to such rotation plan, the watermaster shall distribute the water according to the agreement.

The Director may require water level or pump test results every ten years.

Failure to comply with any of the provisions of this right may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the right.

This right is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

This certificate is issued to supersede certificate 89863, as it contains a scrivener's error.

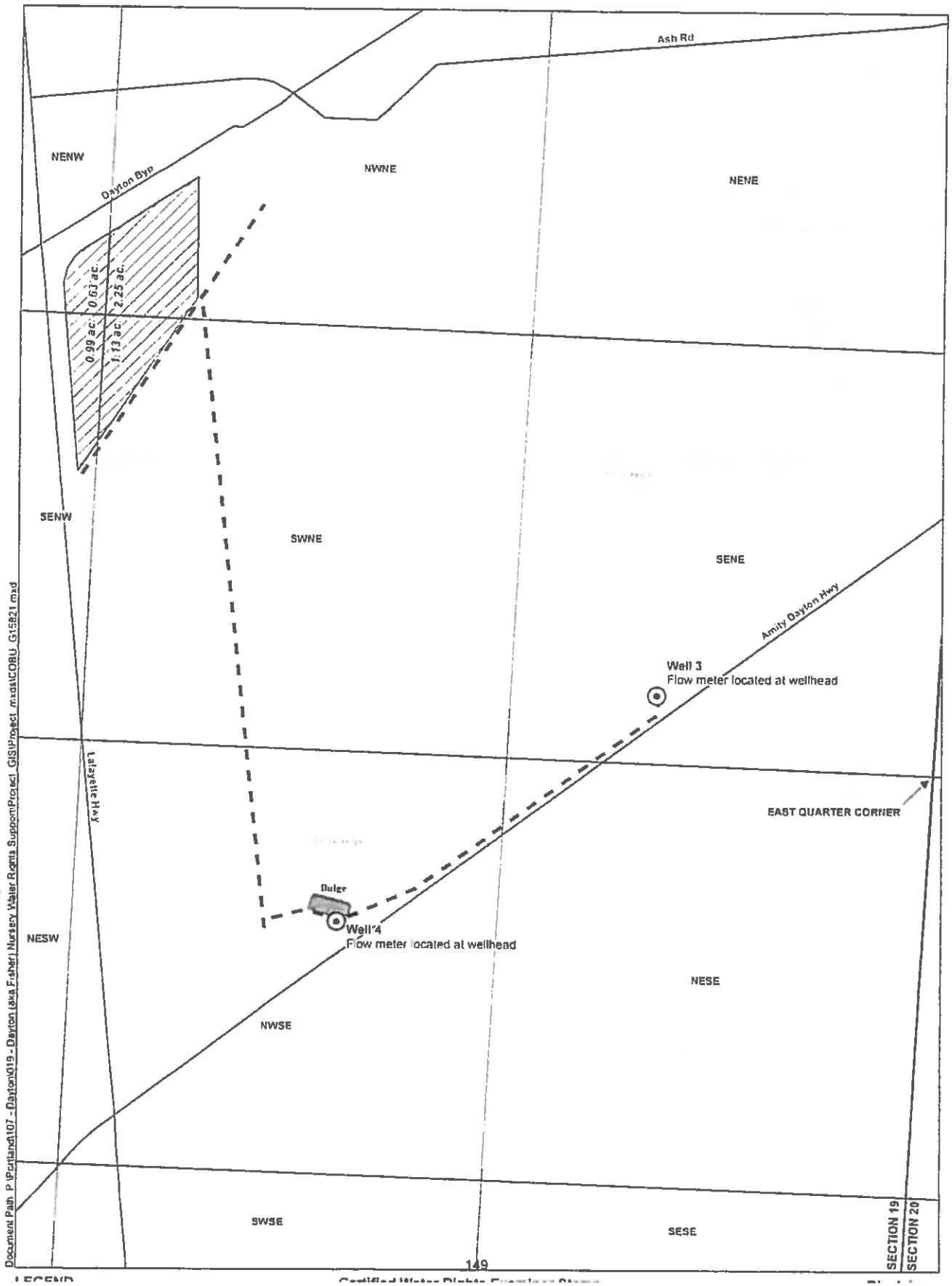
Issued FEB 13 2015

Dwight W. French
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

# Claim of Beneficial Use Map

**Permit G-15821, Application G-16124**
**Water Right in the Name of City of Dayton**

**Township 4 South, Range 3 West, Section 19, as projected within DLC 48 (W.M.)**




CoBu 855

GSI Water Solutions, Inc.

August 18, 2015

P. Kelly Starnes
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301

RE: Application for a Permanent Water Right Transfer
Water Right Certificates 82997, 68768, and 89940.

Mr. Starnes,

On behalf of the applicant, City of Dayton (City), please find enclosed an Application for a Permanent Water Right Transfer involving three water rights held by the City: Certificates 82997, 68768, and 89940. Please also find enclosed a check in the amount of $3,850 for payment of the application filing fee.

The City is seeking to change the character of use, change the place of use, and add additional points of appropriation to the three water right certificates included in the transfer application.

If you have any questions regarding the enclosed application, you can reach me at (503) 239-8799, ext. 106. Please copy me on any correspondence regarding this application.

Sincerely,

Theodore R. Ressler, RG, CWRE
GSI Water Solutions, Inc.

Enclosures: Application for a Permanent Water Right Transfer
Check in the amount of $3,850

CC: Scott Pingel – City of Dayton
Kenny Janssen – GSI Water Solutions, Inc.

21025

**CITY OF DAYTON**
P.O. BOX 339
DAYTON, OR 97114-0339
PHONE (503) 864-2221
FAX (503) 864-2956

usbank. All of us serving you

24-22/1230

| DATE | CHECK NO. | CHECK AMOUNT |
|---|---|---|
| 8/15/2015 | 21025 | **3,850.00** |

Pay to the order of

***Three Thousand Eight Hundred Fifty and 00/100 Dollars***

OREGON WATER RESOURCES DEPT
CERTIFICATE REIMB AUTHORITY PROGRAM
725 SUMMER ST. NE, SUITE A
SALEM OR 97301-1266

AUTHORIZED SIGNATURE

Security features. Details on back.

⑈021025⑈ ⑆123000220⑆ 153601381103⑈

**CITY OF DAYTON, OR 97114**

21025

VENDOR NO. VENDOR NAME

VENDOR: 473 OREGON WATER RESOURCES DEPT 8/15/2015 Check No: 21025

| TRANSACTION DATE | REFERENCE | GROSS AMOUNT | DEDUCTION | NET AMOUNT |
|---|---|---|---|---|

| DATE | INVOICE # | DESCRIPTION | AMOUNT |
|---|---|---|---|
| 8/14/2015 | 081415 | water right transfer app | 3,850.00 |

| CHECK DATE | CHECK NO. | TOTAL GROSS | TOTAL DEDUCTION | CHECK AMOUNT |
|---|---|---|---|---|
| | | | TOTAL AMOUNT | 3,850.00 |

State of Oregon
**Water Resources Department**
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900

# Application for Permanent Water Right Transfer

**Part 1 of 5 – Minimum Requirements Checklist**

**This transfer application will be returned if Parts 1 through 5 and all required attachments are not completed and included.**
For questions, please call (503) 986-0900, and ask for Transfer Section.

**Check all items included with this application. (N/A = Not Applicable)**

☒ Part 1 – Completed Minimum Requirements Checklist.

☒ Part 2 – Completed Transfer Application Map Checklist.

☒ Part 3 – Application Fee, payable by check to the Oregon Water Resources Department, and completed Fee Worksheet, page 3. Try the new online fee calculator at: http://apps.wrd.state.or.us/apps/misc/wrd_fee_calculator. If you have questions, call Customer Service at (503) 986-0801.

☒ Part 4 – Completed Applicant Information and Signature.

☒ Part 5 – Information about Water Rights to be Transferred: **How many water rights are to be transferred? 3 List them here: 82997, 68768, 89940**
Please include a separate Part 5 for each water right. (See instructions on page 6)

**Attachments:**

☒ Completed Transfer Application Map. **See Attachment A**

☒ Completed Evidence of Use Affidavit and supporting documentation. **See Attachment C**

☐ ☒ N/A Affidavit(s) of Consent from Landowner(s) (if the applicant does not own the land the water right is on.)

☐ ☒ N/A Supplemental Form D – For water rights served by or issued in the name of an irrigation district. Complete when the transfer applicant is not the irrigation district.

☒ ☐ N/A Land Use Information Form with approval and signature (or signed land use form receipt stub). Not required if water is to be diverted, conveyed, and/or used only on federal lands or if **all** of the following apply: a) a change in place of use only, b) no structural changes, c) the use of water is for irrigation only, and d) the use is located within an irrigation district or an exclusive farm use zone. **See Attachment D**

☒ ☒ N/A Water Well Report/Well Log for changes in point(s) of appropriation (well(s)) or additional point(s) of appropriation. **See Attachment E for well logs for existing POAs. Proposed POAs have not yet been constructed.**

☐ ☒ N/A Geologist Report for a change from a surface water point of diversion to a ground water point of appropriation (well), if the proposed well is more than 500' from the surface water source and more than 1000' upstream or downstream from the point of diversion. See OAR 690-380-2130 for requirements and applicability.

**(For Staff Use Only)**
**WE ARE RETURNING YOUR APPLICATION FOR THE FOLLOWING REASON(S):**
___ Application fee not enclosed/insufficient ___ Map not included or incomplete
___ Land Use Form not enclosed or incomplete
___ Additional signature(s) required ___ Part _____ is incomplete
Other/Explanation _____
Staff: _____503-986-0___ Date: ____/____/____

## Part 2 of 5 – Transfer Application Map Checklist

**Your transfer application will be returned if any of the map requirements listed below are not met.**

**Please be sure that the transfer application map you submit includes all the required items and matches the existing water right map. Check all boxes that apply.**

☒ ☐ N/A Certified Water Right Examiner (CWRE) Stamp and Original Signature. For a list of CWREs, see http://apps.wrd.state.or.us/apps/wr/cwre_license_view/. CWRE stamp and signature are not required for substitutions.

☐ ☒ N/A If **more than three** water rights are involved, separate maps are needed for each water right.

☒ Permanent quality printed with dark ink on good quality paper.

☒ The size of the map can be 8½ x 11 inches, 8½ x 14 inches, 11 x 17 inches, or up to 30 x 30 inches. For 30 x 30 inch maps, one extra copy is required.

☒ A north arrow, a legend, and scale.

☒ The scale of the map must be: 1 inch = 400 feet, 1 inch = 1,320 feet, the scale of the Final Proof/Claim of Beneficial Use Map (the map used when the permit was certificated), the scale of the county assessor map if the scale is not smaller than 1 inch = 1,320 feet, or a scale that has been pre-approved by the Department.

☒ Township, Range, Section, ¼ ¼, DLC, Government Lot, and other recognized public land survey lines.

☒ Tax lot boundaries (property lines) are required. Tax lot numbers are recommended.

☒ Major physical features including rivers and creeks showing direction of flow, lakes and reservoirs, roads, and railroads.

☒ Major water delivery system features from the point(s) of diversion/appropriation such as main pipelines, canals, and ditches.

☒ Existing place of use that includes separate hachuring for each water right, priority date, and use including number of acres in each quarter-quarter section, government lot, or in each quarter-quarter section as projected within government lots, donation land claims, or other recognized public land survey subdivisions. If less than the entirety of the water right is being changed, a separate hachuring is needed for lands left unchanged.

☒ ☐ N/A Proposed place of use that includes separate hachuring for each water right, priority date, and use including number of acres in each quarter-quarter section, government lot, or in each quarter-quarter section as projected within government lots, donation land claims, or other recognized public land survey subdivisions.

☒ Existing point(s) of diversion or well(s) with distance and bearing or coordinates from a recognized survey corner. This information can be found in your water right certificate or permit.

☒ ☐ N/A If you are proposing a change in point(s) of diversion or well(s), show the proposed location and label it clearly with distance and bearing or coordinates. If GPS coordinates are used, latitude-longitude coordinates may be expressed as either degrees-minutes-seconds with at least one digit after the decimal (example – 42°32'15.5") or degrees-decimal with five or more digits after the decimal (example – 42.53764°).

| FEE WORKSHEET for PERMANENT TRANSFER | **Part 3 of 5 – Fee Worksheet** | | |
|---|---|---|---|
| 1 | Base Fee (includes one type of change to one water right for up to 1 cfs) | *1* | $1,000 |
| 2 | Types of change proposed:<br>☒ Place of Use<br>☒ Character of Use<br>☒ Point of Diversion/Appropriation<br>Number of above boxes checked = 3 (2a)<br>Subtract 1 from the number in line 2a = 2 (2b) *If only one change, this will be 0*<br>Multiply line 2b by $800 and enter » » » » » » » » » » » » » » | *2* | $1,600 |
| 3 | Number of water rights included in transfer 3 (3a)<br>Subtract 1 from the number in 3a above: 2 (3b) *If only one water right this will be 0*<br>Multiply line 3b by $450 and enter » » » » » » » » » » » » » » | *3* | $900 |
| 4 | Do you propose to add or change a well, or change from a surface water POD to a well?<br>☐ No: enter 0 » » » » » » » » » » » » » » » » » » » » » »<br>☒ Yes: enter $350 » » » » » » » » » » » » » » » » » » » » » » | *4* | $350 |
| 5 | Do you propose to change the place of use or character of use?<br>☐ No: enter 0 on line 5 » » » » » » » » » » » » » » » » » » » »<br>☒ Yes: enter the cfs for the portions of the rights to be transferred (see example below*): 0.95 (5a)<br>Subtract 1.0 from the number in 5a above: 0 (5b)<br>If 5b is 0 or less, enter 0 on line 5 » » » » » » » » » » » » » » » »<br>If 5b is greater than 0, round up to the nearest whole number: _____ (5c)<br>and multiply 5c by $300, then enter on line 5 » » » » » » » » » | *5* | $0 |
| 6 | Add entries on lines 1 through 5 above » » » » » » » » » » Subtotal: | *6* | $3,850 |
| 7 | Is this transfer:<br>☐ necessary to complete a project funded by the Oregon Watershed Enhancement Board (OWEB) under ORS 541.932?<br>☐ endorsed in writing by ODFW as a change that will result in a net benefit to fish and wildlife habitat?<br>If one or more boxes is checked, multiply line 6 by 0.5 and enter on line 7 »<br>If no box is applicable, enter 0 on line 7» » » » » » » » » » » » » | *7* | $0 |
| 8 | Subtract line 7 from line 6 » » » » » » » » » » » » **Transfer Fee:** | *8* | **$3,850** |

*Example for Line 5a calculation to transfer 45.0 acres of Primary Certificate 12345 (total 1.25 cfs for 100 acres) and 45.0 acres of Supplemental Certificate 87654 (1/80 cfs per acre) on the same land:

1. For irrigation calculate cfs for each water right involved as follows:
   a. Divide total authorized cfs by total acres in the water right *(for C12345, 1.25 cfs ÷ 100 ac)*; then multiply by the number of acres to be transferred to get the transfer cfs *(x 45 ac = 0.56 cfs)*.
   b. If the water right certificate does not list total cfs, but identifies the allowable use as 1/40 or 1/80 of a cfs per acre; multiply number of acres proposed for change by either 0.025 (1/40) or 0.0125 (1/80). *(For C87654, 45.0 ac x 0.0125 cfs/ac = 0.56 cfs)*
2. Add cfs for the portions of water rights on all the land included in the transfer; however **do not count cfs for supplemental rights on acreage for which you have already calculated the cfs fee for the primary right on the same land.** The fee should be assessed only once for each "on the ground" acre included in the transfer. *(In this example, blank 5a would be only 0.56 cfs, since both rights serve the same 45.0 acres. Blank 5b would be 0 and Line 5 would then also become 0).*

| FEE WORKSHEET for SUBSTITUTION | | | |
|---|---|---|---|
| 1 | Base Fee (includes change to one well) | *1* | $725.00 |
| 2 | Number of wells included in substitution _____ (2a)<br>Subtract 1 from the number in 3a above: _____ (2b) *If only one well this will be 0*<br>Multiply line 2b by $350 and enter » » » » » » » » » » » » » » | *2* | N/A |
| 3 | Add entries on lines 1 through 2 above » » » » » » **Fee for Substitution:** | *3* | N/A |

## Part 4 of 5 – Applicant Information and Signature

### Applicant Information

| APPLICANT/BUSINESS NAME | | | PHONE NO. | ADDITIONAL CONTACT NO. |
|---|---|---|---|---|
| City of Dayton<br>ATTN: Scott Pingel, City Manager | | | (503) 864-2221 | |
| ADDRESS<br>PO Box 339 | | | | FAX NO. |
| CITY<br>Dayton | STATE<br>OR | ZIP<br>97114 | E-MAIL<br>spingel@ci.dayton.or.us | |
| BY PROVIDING AN E-MAIL ADDRESS, CONSENT IS GIVEN TO RECEIVE ALL CORRESPONDENCE FROM THE DEPARTMENT ELECTRONICALLY. COPIES OF THE FINAL ORDER DOCUMENTS WILL ALSO BE MAILED. | | | | |

**Agent Information** – The agent is authorized to represent the applicant in all matters relating to this application.

| AGENT/BUSINESS NAME | | | PHONE NO. | ADDITIONAL CONTACT NO. |
|---|---|---|---|---|
| GSI Water Solutions, Inc. | | | (503) 239-8799 | |
| ADDRESS<br>55 SW Yamhill Street, Suite 300 | | | | FAX NO. |
| CITY<br>Portland | STATE<br>OR | ZIP<br>97204 | E-MAIL<br>tressler@gsiws.com | |
| BY PROVIDING AN E-MAIL ADDRESS, CONSENT IS GIVEN TO RECEIVE ALL CORRESPONDENCE FROM THE DEPARTMENT ELECTRONICALLY. COPIES OF THE FINAL ORDER DOCUMENTS WILL ALSO BE MAILED. | | | | |

Explain in your own words what you propose to accomplish with this transfer application, and why:
The City is seeking to change the character of use from nursery to municipal use, change the place of use to the City of Dayton service area, and add additional points of appropriation to the three water right certificates included in the transfer application.

If you need additional space, continue on a separate piece of paper and attach to the application as "Attachment 1".

☐ Check this box if this project is fully or partially funded by the American Recovery and Reinvestment Act. (Federal stimulus dollars)

**Check One Box**

☐ By signing this application, I understand that, upon receipt of the draft preliminary determination and prior to Department approval of the transfer, I will be required to provide landownership information and evidence that I am authorized to pursue the transfer as identified in OAR 690-380-4010(5); **OR**

☒ I affirm the applicant is a municipality as defined in ORS 540.510(3)(b) and that the right is in the name of the municipality or a predecessor; **OR**

☐ I affirm the applicant is an entity with the authority to condemn property and is acquiring by condemnation the property to which the water right proposed for transfer is appurtenant and have supporting documentation.

I understand that prior to Department approval of the transfer application, I may be required to submit payment to the Department for publication of a notice in a newspaper with general circulation in the area where the water right is located, once per week for two consecutive weeks. If more than one qualifying newspaper is available, I suggest publishing the notice in the following newspaper: Yamhill Valley News Register .

**I (we) affirm that the information contained in this application is true and accurate.**

| Applicant signature | Print Name (and Title if applicable) | Date |
|---|---|---|
| Scott H Pingel | Scott Pingel, City Manager | 9-14-15 |
| | | |

Is the applicant the sole owner of the land on which the water right, or portion thereof, proposed for transfer is located? ☒ Yes ☐ No

*Check the following boxes that apply:*

☒ The applicant is responsible for completion of change(s). Notices and correspondence should continue to be sent to the applicant.

☐ The receiving landowner will be responsible for completing the proposed change(s) after the final order is issued. Copies of notices and correspondence should be sent to this landowner.

☐ Both the receiving landowner and applicant will be responsible for completion of change(s). Copies of notices and correspondence should be sent to this landowner and the applicant.

At this time, are the lands in this transfer application in the process of being sold? ☐ Yes ☒ No

If YES, and you know who the new landowner will be, please complete the receiving landowner information table below. If you do not know who the new landowner will be, then a request for assignment will have to be filed for at a later date.

If a property sells, the certificated water right(s) located on the land belong to the new owner, unless a sale agreement or other document states otherwise. For more information see: http://www.oregon.gov/owrd/docs/transfer-propertytransactions.pdf

| RECEIVING LANDOWNER NAME | | | PHONE NO. | ADDITIONAL CONTACT NO. |
|---|---|---|---|---|
| ADDRESS | | | | FAX NO. |
| CITY | STATE | ZIP | E-MAIL | |

Describe any special ownership circumstances here: _____

☐ Check here if any of the water rights proposed for transfer are or will be located within or served by an irrigation or other water district. (**Tip**: Complete and attach Supplemental Form D.)

| IRRIGATION DISTRICT NAME | ADDRESS | |
|---|---|---|
| CITY | STATE | ZIP |

☐ Check here if water for any of the rights supplied under a water service agreement or other contract for stored water with a federal agency or other entity.

| ENTITY NAME | ADDRESS | |
|---|---|---|
| CITY | STATE | ZIP |

To meet State Land Use Consistency Requirements, you must list all county, city, municipal corporation, or tribal governments within whose jurisdiction water will be diverted, conveyed or used.

| ENTITY NAME<br>**City of Dayton** | ADDRESS<br>**PO Box 339** | |
|---|---|---|
| CITY<br>**Dayton** | STATE<br>**OR** | ZIP<br>**97114** |

| ENTITY NAME<br>**Yamhill County** | ADDRESS<br>**425 NE 4th Street** | |
|---|---|---|
| CITY<br>**McMinnville** | STATE<br>**OR** | ZIP<br>**97128** |

**CERTIFICATE # 82997**

**Description of Water Delivery System**

System capacity: **0.15*** cubic feet per second (cfs) **OR**

____ gallons per minute (gpm)

***Theoretical capacity of Well 1 pump system (as documented in Claim of Beneficial Use for Permit G-15906)**

Describe the current water delivery system or the system that was in place at some time within the last five years. Include information on the pumps, canals, pipelines and sprinklers used to divert, convey and apply the water at the authorized place of use. **Groundwater is appropriated from Well 1 using a submersible pump and conveyed by pipe to an irrigation system that applies the water to the irrigated lands using sprinklers.**

**Table 1. Location of Authorized and Proposed Point(s) of Diversion (POD) or Appropriation (POA)**
(Note: If the POD/POA name is not specified on the certificate, assign it a name or number here.)

| POD/POA Name or Number | Is this POD/POA Authorized on the Certificate or is it Proposed? | If POA, OWRD Well Log ID# (or Well ID Tag # L-___) | Twp | Rng | Sec | ¼ ¼ | Tax Lot, DLC or Gov't Lot | Measured Distances (from a recognized survey corner) |
|---|---|---|---|---|---|---|---|---|
| Well 1 | ☒ Authorized ☐ Proposed | YAMH 5370 | 4 S | 3 W | 19 | SE NE | DLC 48 | 830 feet North and 1100 feet West from the East ¼ corner, Section 19 |
| Well 2[1] | ☒ Authorized ☐ Proposed | YAMH 5369/52382 | 4 S | 3 W | 19 | SE NE | DLC 48 | 1770 feet South and 900 feet West from NE corner, Section 19 |
| Well 3 | ☐ Authorized ☒ Proposed | YAMH 52469 | 4 S | 3 W | 19 | SE NE | DLC 48 | 220 feet North and 880 feet West from the East ¼ Corner, Section 19 |
| Well 4 | ☐ Authorized ☒ Proposed | YAMH 5447 | 4 S | 3 W | 19 | NW SE | DLC 48 | 545 feet South and 1,840 feet West from the East ¼ Corner, Section 19 |
| Well 5 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SE NE | DLC 48 | 685 feet North and 1140 feet West from the East ¼ corner of Section 19 |
| Well 6 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SE NE | DLC 48 | 1085 feet North and 1010 feet West from the East ¼ corner of Section 19 |
| Well 7 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | NW SE | DLC 48 | 300 feet South and 2190 feet West from the East ¼ corner of Section 19 |
| Well 8 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SW NE | DLC 48 | 710 feet North and 2950 feet West from the East ¼ corner of Section 19 |
| Well 9 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | NW NE | DLC 48 | 1530 feet North and 3675 feet West from the East ¼ corner of Section 19 |

[1] **Well 2 is not currently used, but will be used after the transfer.**

**Check all type(s) of change(s) proposed below (change "CODES" are provided in parentheses):**

- ☒ Place of Use (POU)
- ☒ Character of Use (USE)
- ☐ Point of Diversion (POD)
- ☐ Additional Point of Diversion (APOD)
- ☐ Surface Water POD to Ground Water POA (SW/GW)
- ☐ Supplemental Use to Primary Use (S to P)
- ☐ Point of Appropriation/Well (POA)
- ☒ Additional Point of Appropriation (APOA)
- ☐ Substitution (SUB)
- ☐ Government Action POD (GOV)

**Will all of the proposed changes affect the entire water right?**

☐ Yes Complete only the Proposed ("to" or "on" lands) section of Table 2 on the next page. Use the "CODES" listed above to describe the proposed changes.

☒ No Complete all of Table 2 to describe the portion of the water right to be changed.

| Please use and attach additional pages of Table 2 as needed. See page 6 for instructions. | Do you have questions about how to fill-out the tables? Contact the Department at 503-986-0900 and ask for Transfer Staff. |
|---|---|

**Table 2. Description of Changes to Water Right Certificate # 82997**

List the change proposed for the acreage in each ¼ ¼. If more than one change is proposed, specify the acreage associated with each change. If there is more than one POD/POA involved in the proposed changes, specify the acreage associated with each POD/POA.

| AUTHORIZED (the "from" or "off" lands) The listing that appears on the certificate BEFORE PROPOSED CHANGES List only that part or portion of the water right that will be changed. | | | | | | | | | | | | | Proposed Changes (see "CODES" from previous page) | PROPOSED (the "to" or "on" lands) The listing as it would appear AFTER PROPOSED CHANGES are made. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Twp | Rng | Sec | ¼ ¼ | | Tax Lot | Gvt Lot or DLC | Acres | Type of USE listed on Certificate | POD(s) or POA(s) (name or number from Table 1) | Priority Date | | | | Twp | Rng | Sec | ¼ ¼ | | Tax Lot | Gvt Lot or DLC | Acres | New Type of USE | POD(s)/ POA(s) to be used (from Table 1) | Priority Date |
| **EXAMPLE** | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | S | 9 | E | 15 | NE | NW | 100 | | 15.0 | Irrigation | POD #1 POD #2 | 1901 | POU/POD | 2 | S | 9 | E | 1 | NW | NW | 500 | 1 | 10.0 | | POD #5 | 1901 |
| | | | | | | | | | | | | | | 2 | S | 9 | E | 2 | SW | NW | 500 | | 5.0 | | POD #6 | 1901 |
| 4 | S | 3 | W | 19 | SW | NE | | DLC 48 | 0.07 | Nursery Operations | Well 1 | 9/19/ 1986 | POU, USE, APOA | City of Dayton Service Area (See attached map) | | | | | | | | | | Municipal | Well 1, Well 2, Well 3, Well 4, Well 5, Well 6, Well 7, Well 8, Well 9 | 10/1/1987 |
| 4 | S | 3 | W | 19 | SE | NE | | DLC 48 | 9.25 | Nursery Operations | Well 1 | 9/19/ 1986 | POU, USE, APOA | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL ACRES: | | | | | | | | | 9.32 | | | | | TOTAL ACRES: | | | | | | | | | | | | |

Additional remarks: **The Place of Use for the resulting transfer should appear as "City of Dayton Service Area."**

**For Place of Use or Character of Use Changes**

Are there other water right certificates, water use permits or ground water registrations associated with the "from" or the "to" lands? ☒ Yes ☐ No

If YES, list the certificate, water use permit, or ground water registration numbers: **Water right certificates 82997, 68768, and 89940 are all associated with the "from" lands. Although there are other water rights on the "to" lands, the proposed use is municipal purposes, so "layered" water rights are not applicable.**

Pursuant to ORS 540.510, any "layered" water use such as an irrigation right that is supplemental to a primary right proposed for transfer must be included in the transfer or be cancelled. Any change to a ground water registration must be filed separately in a ground water registration modification application.

**For Substitution** (ground water supplemental irrigation will be substituted for surface water primary irrigation)

Ground water supplemental Permit or Certificate # N/A
Surface water primary Certificate # _____.

**For a change from Supplemental Irrigation Use to Primary Irrigation Use**

Identify the primary certificate to be cancelled. Certificate # N/A

**For a change in point(s) of appropriation (well(s)) or additional point(s) of appropriation:**

☒ Well log(s) are attached for each authorized and proposed well(s) that are clearly labeled and associated with the corresponding well(s) in Table 1 above and on the accompanying application map.

**See Attachment E for well logs for Wells 1-4. No well log included for proposed wells (Well 5 - 9), which have not yet been constructed. See below for "best estimates" of construction details.**

**AND/OR**

☒ Describe the construction of the authorized and proposed well(s) in Table 3 for any wells that do not have a well log. For *proposed wells not yet constructed or built*, provide "a best estimate" for each requested information element in the table. The Department recommends you consult a licensed well driller, geologist, or certified water right examiner to assist with assembling the information necessary to complete Table 3.

**Table 3. Construction of Point(s) of Appropriation**

Any well(s) in this listing must be clearly tied to corresponding well(s) described in Table 1 and shown on the accompanying application map. Failure to provide the information will delay the processing of your transfer application until it is received. The information is necessary for the department to assess whether the proposed well(s) will access the same source aquifer as the authorized point(s) of appropriation (POA). The Department is prohibited by law from approving POA changes that do not access the same source aquifer.

| Proposed or Authorized POA Name or Number | Is well already built? (Yes or No) | If an existing well: OWRD Well ID Tag No. L- | Total well depth | Casing Diameter | Casing Intervals (feet) | Seal depth(s) (intervals) | Perforated or screened intervals (in feet) | Static water level of completed well (in feet) | Source aquifer (sand, gravel, basalt, etc.) | Well -specific rate (cfs or gpm). If less than full rate of water right |
|---|---|---|---|---|---|---|---|---|---|---|
| Well 5 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 6 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 7 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 8 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 9 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |

## Part 5 of 5 – Water Right Information

**CERTIFICATE # 68768**

**Description of Water Delivery System**

System capacity: **0.65*** cubic feet per second (cfs) **OR**

___gallons per minute (gpm)

***Theoretical capacity of Well 3 pump system (as documented in Claim of Beneficial Use for Permit G-15906)**

Describe the current water delivery system or the system that was in place at some time within the last five years. Include information on the pumps, canals, pipelines and sprinklers used to divert, convey and apply the water at the authorized place of use. **Groundwater is appropriated from Well 3 using a submersible pump and conveyed by pipe to an irrigation system that applies the water to the irrigated lands using sprinklers.**

**Table 1. Location of Authorized and Proposed Point(s) of Diversion (POD) or Appropriation (POA)**

(Note: If the POD/POA name is not specified on the certificate, assign it a name or number here.)

| POD/POA Name or Number | Is this POD/POA Authorized on the Certificate or is it Proposed? | If POA, OWRD Well Log ID# (or Well ID Tag # L-___) | Twp | Rng | Sec | ¼ ¼ | Tax Lot, DLC or Gov't Lot | Measured Distances (from a recognized survey corner) |
|---|---|---|---|---|---|---|---|---|
| Well 1 | ☐ Authorized ☒ Proposed | YAMH 5370 | 4 S | 3 W | 19 | SE NE | DLC 48 | 830 feet North and 1100 feet West from the East ¼ corner, Section 19 |
| Well 2 | ☐ Authorized ☒ Proposed | YAMH 5369/52382 | 4 S | 3 W | 19 | SE NE | DLC 48 | 1770 feet South and 900 feet West from NE corner, Section 19 |
| Well 3[1] | ☒ Authorized ☐ Proposed | YAMH 52469 | 4 S | 3 W | 19 | SE NE | DLC 48 | 220 feet North and 880 feet West from the East ¼ Corner, Section 19 |
| Well 4 | ☐ Authorized ☒ Proposed | YAMH 5447 | 4 S | 3 W | 19 | NW SE | DLC 48 | 545 feet South and 1,840 feet West from the East ¼ Corner, Section 19 |
| Well 5 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SE NE | DLC 48 | 685 feet North and 1140 feet West from the East ¼ corner of Section 19 |
| Well 6 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SE NE | DLC 48 | 1085 feet North and 1010 feet West from the East ¼ corner of Section 19 |
| Well 7 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | NW SE | DLC 48 | 300 feet South and 2190 feet West from the East ¼ corner of Section 19 |
| Well 8 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SW NE | DLC 48 | 710 feet North and 2950 feet West from the East ¼ corner of Section 19 |
| Well 9 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | NW NE | DLC 48 | 1530 feet North and 3675 feet West from the East ¼ corner of Section 19 |

[1] **This is the same Well 3 as is listed on Certificate 89940. The location of Well 3 is described differently on Certificate 68768, using a different survey corner as a reference point. However, the descriptions identify the same well. For simplicity, the new location description from Certificate 89940 has been listed. This is how the applicant would like the location description to appear.**

**Check all type(s) of change(s) proposed below (change "CODES" are provided in parentheses):**

- ☒ Place of Use (POU)
- ☒ Character of Use (USE)
- ☐ Point of Diversion (POD)
- ☐ Additional Point of Diversion (APOD)
- ☐ Surface Water POD to Ground Water POA (SW/GW)
- ☐ Supplemental Use to Primary Use (S to P)
- ☐ Point of Appropriation/Well (POA)
- ☒ Additional Point of Appropriation (APOA)
- ☐ Substitution (SUB)
- ☐ Government Action POD (GOV)

**Will all of the proposed changes affect the entire water right?**

☐ Yes Complete only the Proposed ("to" or "on" lands) section of Table 2 on the next page. Use the "CODES" listed above to describe the proposed changes.

☒ No Complete all of Table 2 to describe the portion of the water right to be changed.

| Please use and attach additional pages of Table 2 as needed. See page 6 for instructions. | Do you have questions about how to fill-out the tables? Contact the Department at 503-986-0900 and ask for Transfer Staff. |
|---|---|

**Table 2. Description of Changes to Water Right Certificate # 68768**

List the change proposed for the acreage in each ¼ ¼. If more than one change is proposed, specify the acreage associated with each change. If there is more than one POD/POA involved in the proposed changes, specify the acreage associated with each POD/POA.

| AUTHORIZED (the "from" or "off" lands) The listing that appears on the certificate BEFORE PROPOSED CHANGES. List only that part or portion of the water right that will be changed. | | | | | | | | | | | | | Proposed Changes (see "CODES" from previous page) | PROPOSED (the "to" or "on" lands) The listing as it would appear AFTER PROPOSED CHANGES are made. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Twp | | Rng | | Sec | ¼ ¼ | | Tax Lot | Gvt Lot or DLC | Acres | Type of USE listed on Certificate | POD(s) or POA(s) (name or number from Table 1) | Priority Date | | Twp | | Rng | | Sec | ¼ ¼ | | Tax Lot | Gvt Lot or DLC | Acres | New Type of USE | POD(s)/ POA(s) to be used (from Table 1) | Priority Date |
| **EXAMPLE** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | S | 9 | E | 15 | NE | NW | 100 | | 15.0 | Irrigation | POD #1 POD #2 | 1901 | POU/POD | 2 | S | 9 | E | 1 | NW | NW | 500 | 1 | 10.0 | | POD #5 | 1901 |
| | | | | | | | | | | | | | | 2 | S | 9 | E | 2 | SW | NW | 500 | | 5.0 | | POD #6 | 1901 |
| 4 | S | 3 | W | 19 | SW | NE | | DLC 48 | 0.07 | Nursery Operations | Well 3 | 10/1/ 1987 | POU, USE, APOA | City of Dayton Service Area (See attached maps) | | | | | | | | | | | Municipal | Well 1, Well 2, Well 3, Well 4, Well 5, Well 6, Well 7, Well 8, Well 9 | 10/1/1987 |
| 4 | S | 3 | W | 19 | SE | NE | | DLC 48 | 9.25 | Nursery Operations | Well 3 | 10/1/ 1987 | POU, USE, APOA | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL ACRES: | | | | | | | | | 9.32 | | | | | TOTAL ACRES: | | | | | | | | | | | | |

Additional remarks: **The Place of Use for the resulting transfer should appear as "City of Dayton Service Area."**

**For Place of Use or Character of Use Changes**

Are there other water right certificates, water use permits or ground water registrations associated with the "from" or the "to" lands? ☒ Yes ☐ No

If YES, list the certificate, water use permit, or ground water registration numbers: **Water right certificates 82997, 68768, and 89940 are all associated with the "from" lands. Although there are other water rights on the "to" lands, the proposed use is municipal purposes, so "layered" water rights are not applicable.**

Pursuant to ORS 540.510, any "layered" water use such as an irrigation right that is supplemental to a primary right proposed for transfer must be included in the transfer or be cancelled. Any change to a ground water registration must be filed separately in a ground water registration modification application.

**For Substitution** (ground water supplemental irrigation will be substituted for surface water primary irrigation)

Ground water supplemental Permit or Certificate # N/A
Surface water primary Certificate # _____.

**For a change from Supplemental Irrigation Use to Primary Irrigation Use**

Identify the primary certificate to be cancelled. Certificate # N/A

**For a change in point(s) of appropriation (well(s)) or additional point(s) of appropriation:**

☒ Well log(s) are attached for each authorized and proposed well(s) that are clearly labeled and associated with the corresponding well(s) in Table 1 above and on the accompanying application map.

**See Attachment E for well logs for Wells 1-4. No well log included for proposed wells (Well 5 - 9), which have not yet been constructed. See below for "best estimates" of construction details.**

**AND/OR**

☒ Describe the construction of the authorized and proposed well(s) in Table 3 for any wells that do not have a well log. For *proposed wells not yet constructed or built*, provide "a best estimate" for each requested information element in the table. The Department recommends you consult a licensed well driller, geologist, or certified water right examiner to assist with assembling the information necessary to complete Table 3.

**Table 3. Construction of Point(s) of Appropriation**

Any well(s) in this listing must be clearly tied to corresponding well(s) described in Table 1 and shown on the accompanying application map. Failure to provide the information will delay the processing of your transfer application until it is received. The information is necessary for the department to assess whether the proposed well(s) will access the same source aquifer as the authorized point(s) of appropriation (POA). The Department is prohibited by law from approving POA changes that do not access the same source aquifer.

| Proposed or Authorized POA Name or Number | Is well already built? (Yes or No) | If an existing well: OWRD Well ID Tag No. L- | Total well depth | Casing Diameter | Casing Intervals (feet) | Seal depth(s) (intervals) | Perforated or screened intervals (in feet) | Static water level of completed well (in feet) | Source aquifer (sand, gravel, basalt, etc.) | Well -specific rate (cfs or gpm). If less han full rate of water right |
|---|---|---|---|---|---|---|---|---|---|---|
| Well 5 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 6 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 7 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 8 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 9 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |

## Part 5 of 5 – Water Right Information

**CERTIFICATE # 89940**

**Description of Water Delivery System**

System capacity: **0.80*** cubic feet per second (cfs) **OR**

___ gallons per minute (gpm)

***Theoretical capacity of Well 1 & Well 3 pump systems (as documented in Claim of Beneficial Use for Permit G-15906)**

Describe the current water delivery system or the system that was in place at some time within the last five years. Include information on the pumps, canals, pipelines and sprinklers used to divert, convey and apply the water at the authorized place of use. **Groundwater is appropriated from wells using a submersible pump and conveyed by pipe to an irrigation system that applies the water to the irrigated lands using sprinklers.**

**Table 1. Location of Authorized and Proposed Point(s) of Diversion (POD) or Appropriation (POA)**
(Note: If the POD/POA name is not specified on the certificate, assign it a name or number here.)

| POD/POA Name or Number | Is this POD/POA Authorized on the Certificate or is it Proposed? | If POA, OWRD Well Log ID# (or Well ID Tag # L-___) | Twp | Rng | Sec | ¼ ¼ | Tax Lot, DLC or Gov't Lot | Measured Distances (from a recognized survey corner) |
|---|---|---|---|---|---|---|---|---|
| Well 1 | ☒ Authorized ☐ Proposed | YAMH 5370 | 4 S | 3 W | 19 | SE NE | DLC 48 | 830 feet North and 1100 feet West from the East ¼ corner, Section 19 |
| Well 2 | ☐ Authorized ☒ Proposed | YAMH 5369/52382 | 4 S | 3 W | 19 | SE NE | DLC 48 | 1770 feet South and 900 feet West from NE corner, Section 19 |
| Well 3 | ☒ Authorized ☐ Proposed | YAMH 52469 | 4 S | 3 W | 19 | SE NE | DLC 48 | 220 feet North and 880 feet West from the East ¼ Corner, Section 19 |
| Well 4 | ☐ Authorized ☒ Proposed | YAMH 5447 | 4 S | 3 W | 19 | NW SE | DLC 48 | 545 feet South and 1,840 feet West from the East ¼ Corner, Section 19 |
| Well 5 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SE NE | DLC 48 | 685 feet North and 1140 feet West from the East ¼ corner of Section 19 |
| Well 6 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SE NE | DLC 48 | 1085 feet North and 1010 feet West from the East ¼ corner of Section 19 |
| Well 7 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | NW SE | DLC 48 | 300 feet South and 2190 feet West from the East ¼ corner of Section 19 |
| Well 8 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | SW NE | DLC 48 | 710 feet North and 2950 feet West from the East ¼ corner of Section 19 |
| Well 9 | ☐ Authorized ☒ Proposed | N/A | 4 S | 3 W | 19 | NW NE | DLC 48 | 1530 feet North and 3675 feet West from the East ¼ corner of Section 19 |

**Check all type(s) of change(s) proposed below (change "CODES" are provided in parentheses):**

- ☒ Place of Use (POU)
- ☒ Character of Use (USE)
- ☐ Point of Diversion (POD)
- ☐ Additional Point of Diversion (APOD)
- ☐ Surface Water POD to Ground Water POA (SW/GW)
- ☐ Supplemental Use to Primary Use (S to P)
- ☐ Point of Appropriation/Well (POA)
- ☒ Additional Point of Appropriation (APOA)
- ☐ Substitution (SUB)
- ☐ Government Action POD (GOV)

**Will all of the proposed changes affect the entire water right?**

☒ Yes Complete only the Proposed ("to" or "on" lands) section of Table 2 on the next page. Use the "CODES" listed above to describe the proposed changes.

☐ No Complete all of Table 2 to describe the portion of the water right to be changed.

| Please use and attach additional pages of Table 2 as needed.<br>See page 6 for instructions. | Do you have questions about how to fill-out the tables?<br>Contact the Department at 503-986-0900 and ask for Transfer Staff. |
|---|---|

**Table 2. Description of Changes to Water Right Certificate # 89940**

List the change proposed for the acreage in each ¼ ¼. If more than one change is proposed, specify the acreage associated with each change.
If there is more than one POD/POA involved in the proposed changes, specify the acreage associated with each POD/POA.

| AUTHORIZED (the "from" or "off" lands) The listing that appears on the certificate BEFORE PROPOSED CHANGES. List only that part or portion of the water right that will be changed. | | | | | | | | | | | | | Proposed Changes (see "CODES" from previous page) | PROPOSED (the "to" or "on" lands) The listing as it would appear AFTER PROPOSED CHANGES are made. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Twp | Rng | Sec | ¼ ¼ | | Tax Lot | Gvt Lot or DLC | Acres | Type of USE listed on Certificate | POD(s) or POA(s) (name or number from Table 1) | Priority Date | | | | Twp | Rng | Sec | ¼ ¼ | | Tax Lot | Gvt Lot or DLC | Acres | New Type of USE | POD(s)/ POA(s) to be used (from Table 1) | Priority Date |
| **EXAMPLE** | | | | | | | | | | | | | | | | | | | | | | | | |
| **2** | **S** | **9** | **E** | **15** | **NE** | **NW** | **100** | | **15.0** | **Irrigation** | **POD #1 POD #2** | **1901** | **POU/POD** | **2** | **S** | **9** | **E** | **1** | **NW** | **NW** | **500** | **1** | **10.0** | | **POD #5** | **1901** |
| | | | | | | | | | | | | | | **2** | **S** | **9** | **E** | **2** | **SW** | **NW** | **500** | | **5.0** | | **POD #6** | **1901** |
| | | | | | | | | | | | | | **POU, USE, APOA** | **City of Dayton Service Area (See attached maps)** | | | | | | | | | **Municipal** | Well 1, Well 2, Well 3, Well 4, Well 5, Well 6, Well 7, Well 8, Well 9 | 8/22/2001 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL ACRES: | | | | | | | | | | | | | | TOTAL ACRES: | | | | | | | | | | | | |

Additional remarks: **The Place of Use for the resulting transfer should appear as "City of Dayton Service Area."**

Certificate # 89940

**For Place of Use or Character of Use Changes**

Are there other water right certificates, water use permits or ground water registrations associated with the "from" or the "to" lands? ☒ Yes ☐ No

If YES, list the certificate, water use permit, or ground water registration numbers: Water right certificates 82997, 68768, and 89940 are all associated with the "from" lands. Although there are other water rights on the "to" lands, the proposed use is municipal purposes, so "layered" water rights are not applicable.

Pursuant to ORS 540.510, any "layered" water use such as an irrigation right that is supplemental to a primary right proposed for transfer must be included in the transfer or be cancelled. Any change to a ground water registration must be filed separately in a ground water registration modification application.

**For Substitution** (ground water supplemental irrigation will be substituted for surface water primary irrigation)

Ground water supplemental Permit or Certificate # N/A
Surface water primary Certificate # _____.

**For a change from Supplemental Irrigation Use to Primary Irrigation Use**

Identify the primary certificate to be cancelled. Certificate # N/A

**For a change in point(s) of appropriation (well(s)) or additional point(s) of appropriation:**

☒ Well log(s) are attached for each authorized and proposed well(s) that are clearly labeled and associated with the corresponding well(s) in Table 1 above and on the accompanying application map.

See Attachment E for well logs for Wells 1-4. No well log included for proposed wells (Well 5 - 9), which have not yet been constructed. See below for "best estimates" of construction details.

**AND/OR**

☒ Describe the construction of the authorized and proposed well(s) in Table 3 for any wells that do not have a well log. For *proposed wells not yet constructed or built*, provide "a best estimate" for each requested information element in the table. The Department recommends you consult a licensed well driller, geologist, or certified water right examiner to assist with assembling the information necessary to complete Table 3.

**Table 3. Construction of Point(s) of Appropriation**

Any well(s) in this listing must be clearly tied to corresponding well(s) described in Table 1 and shown on the accompanying application map. Failure to provide the information will delay the processing of your transfer application until it is received. The information is necessary for the department to assess whether the proposed well(s) will access the same source aquifer as the authorized point(s) of appropriation (POA). The Department is prohibited by law from approving POA changes that do not access the same source aquifer.

| Proposed or Authorized POA Name or Number | Is well already built? (Yes or No) | If an existing well: OWRD Well ID Tag No. L- | Total well depth | Casing Diameter | Casing Intervals (feet) | Seal depth(s) (intervals) | Perforated or screened intervals (in feet) | Static water level of completed well (in feet) | Source aquifer (sand, gravel, basalt, etc.) | Well -specific rate (cfs or gpm). If less than full rate of water right |
|---|---|---|---|---|---|---|---|---|---|---|
| Well 5 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 6 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 7 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 8 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |
| Well 9 | No | N/A | 200 ft | 10" | 0 to 75 | 0 to 18 ft | 75 to 200 | 25 ft bgs | Alluvium | 300 gpm |

# Attachment A

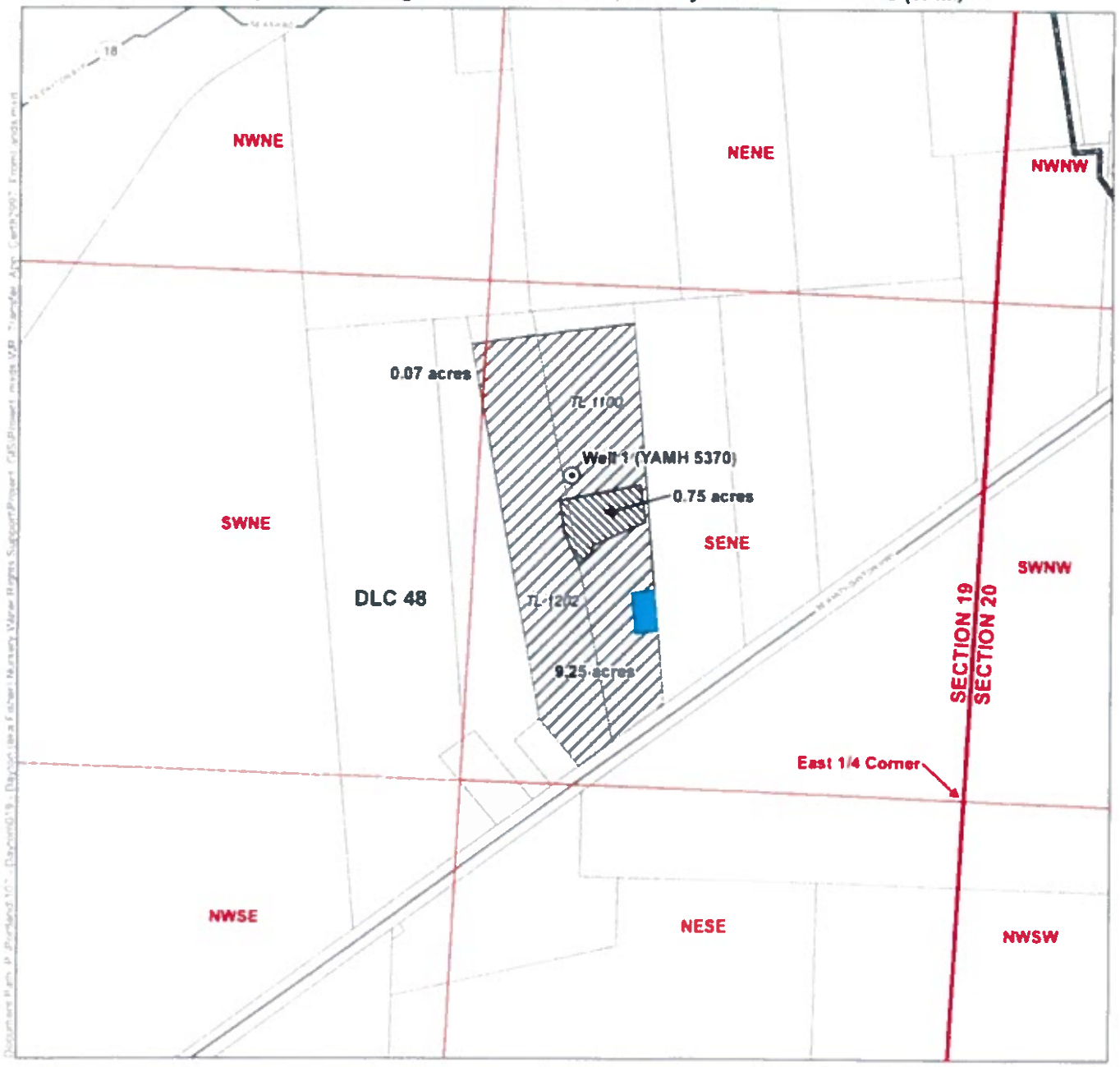
## Transfer Maps

Water Right Transfer Application – City of Dayton

# Application for a Water Right Transfer in the Name of City of Dayton

**FROM LANDS - Certificate 82997, Permit G-10738, Application G-11585**

**Township 4 South, Range 3 West, Section 19, as Projected within DLC 48 (W.M.)**




**LEGEND**

- Authorized Point of Appropriation (POA)
- Authorized Place of Use (POU) to be Transferred
- Authorized POU Remaining
- Dayton City Limits
- Tax Lot
- Waterbody

**POA LOCATION DESCRIPTION**

**Well 1 (YAMH 5370)**
Located 830 feet North and 1,100 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)

**Certified Water Rights Examiner Stamp**

Certified Water Rights Examiner
#78185WRE
Theodore R. Ressler
June 29, 2007
STATE OF OREGON
EXPIRES: 12-31-2016

**DISCLAIMER**

This map was prepared for the purpose of identifying the location of a water right only and it is not intended to provide legal dimensions or location of property ownership lines.

**MAP NOTES**

Date: July 23, 2015
Data Sources: OWRD, Yamhill County GIS, US BLM, USGS, ESRI
Prepared By: GSI Water Solutions, Inc.

N

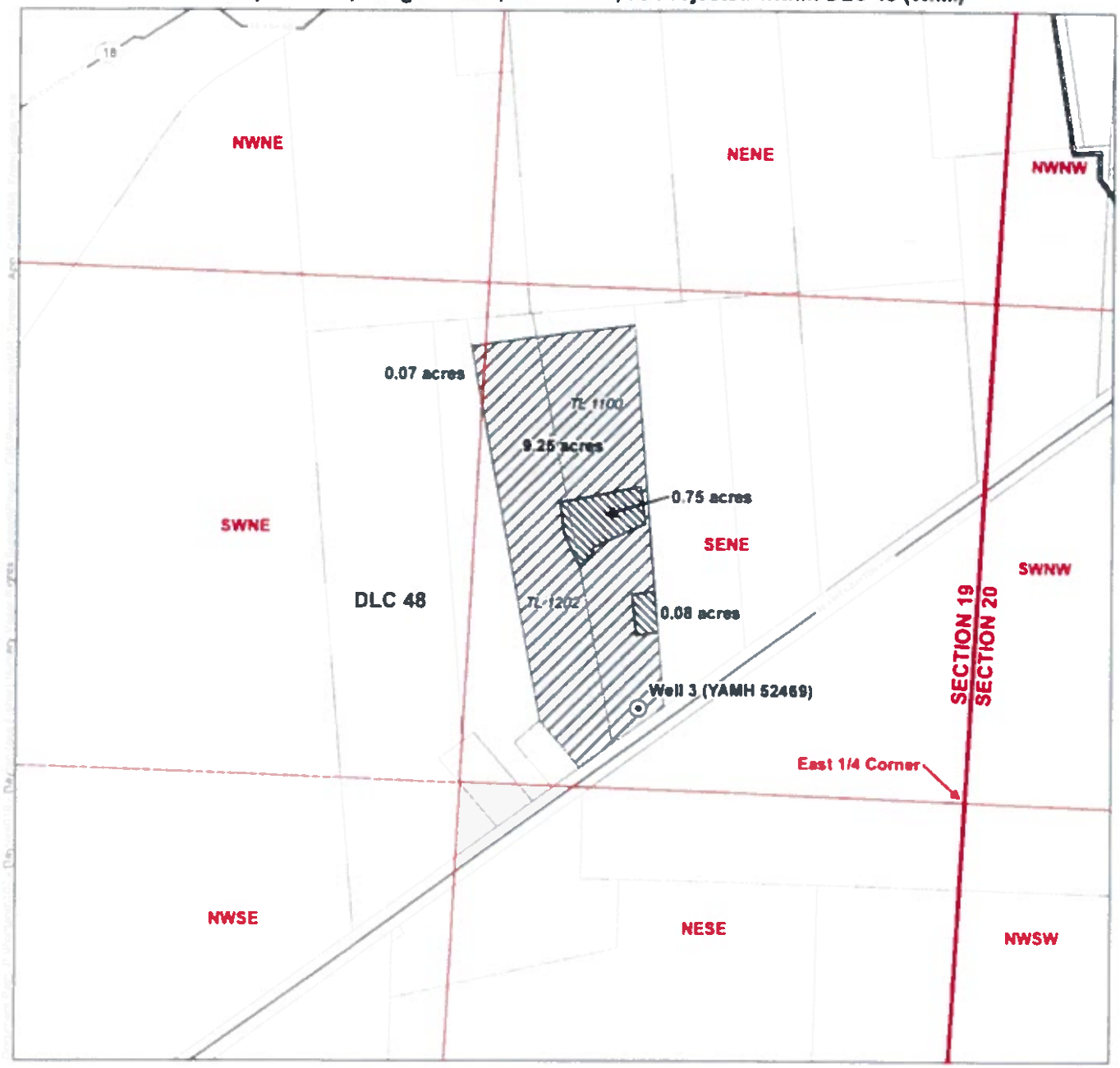
0 200 400
1 inch = 400 feet

GSI Water Solutions, Inc.

# Application for a Water Right Transfer in the Name of City of Dayton

**FROM LANDS - Certificate 68768, Permit G-10797, Application G-11706**

**Township 4 South, Range 3 West, Section 19, as Projected within DLC 48 (W.M.)**




**LEGEND**

- Authorized Point of Appropriation (POA)
- Authorized Place of Use (POU) to be Transferred
- Authorized POU Remaining
- Dayton City Limits
- Tax Lot

**Certified Water Rights Examiner Stamp**

Certified Water Rights Examiner
#78185WRE
Theodore R. Ressler
June 29, 2007
STATE OF OREGON
EXPIRES: 12-31-2016

**DISCLAIMER**

This map was prepared for the purpose of identifying the location of a water right only and it is not intended to provide legal dimensions or location of property ownership lines

**MAP NOTES**

Date: July 23, 2015
Data Sources: OWRD, Yamhill County GIS, US BLM, USGS, ESRI
Prepared By: GSI Water Solutions, Inc.

**POA LOCATION DESCRIPTION**

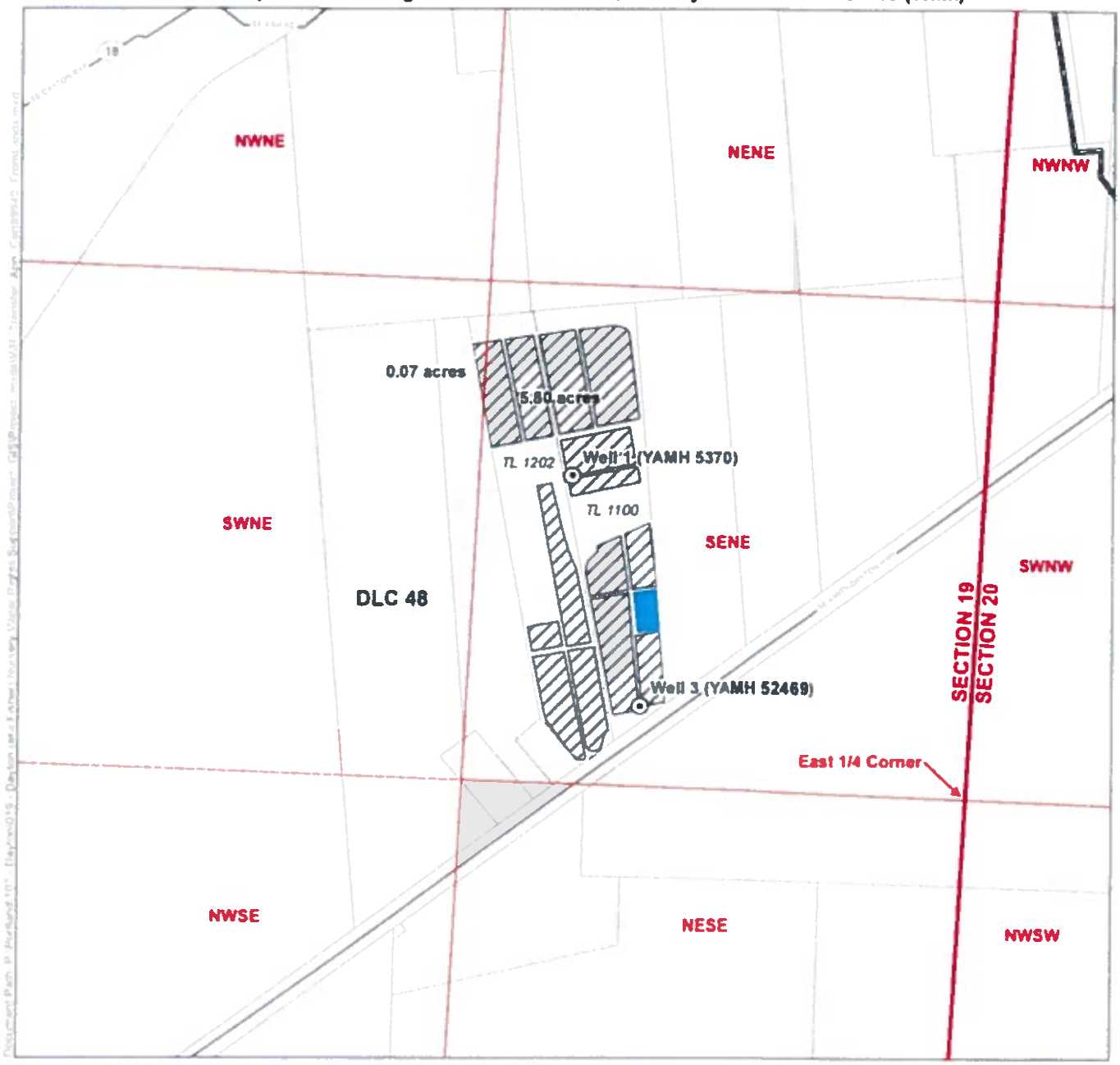
**Well 3 (YAMH 52469)**
Located 220 feet North and 880 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West, W.M.

N
0 200 400
1 inch = 400 feet

# Application for a Water Right Transfer in the Name of City of Dayton

**FROM LANDS - Certificate 89940, Permit G-15906, Application G-15445**

**Township 4 South, Range 3 West, Section 19, as Projected within DLC 48 (W.M.)**




**LEGEND**

- Authorized Point of Appropriation (POA)
- Authorized Place of Use (POU) to be Transferred
- Dayton City Limits
- Tax Lot
- Waterbody

**POA LOCATION DESCRIPTION**

**Well 1 (YAMH 5370)**
Located 830 feet North and 1,100 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)

**Well 3 (YAMH 52469)**
Located 220 feet North and 880 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)

**Certified Water Rights Examiner Stamp**

Certified Water Rights Examiner
#78185WRE
Theodore R. Ressler
June 29, 2007
STATE OF OREGON
EXPIRES: 12-31-2016

**DISCLAIMER**

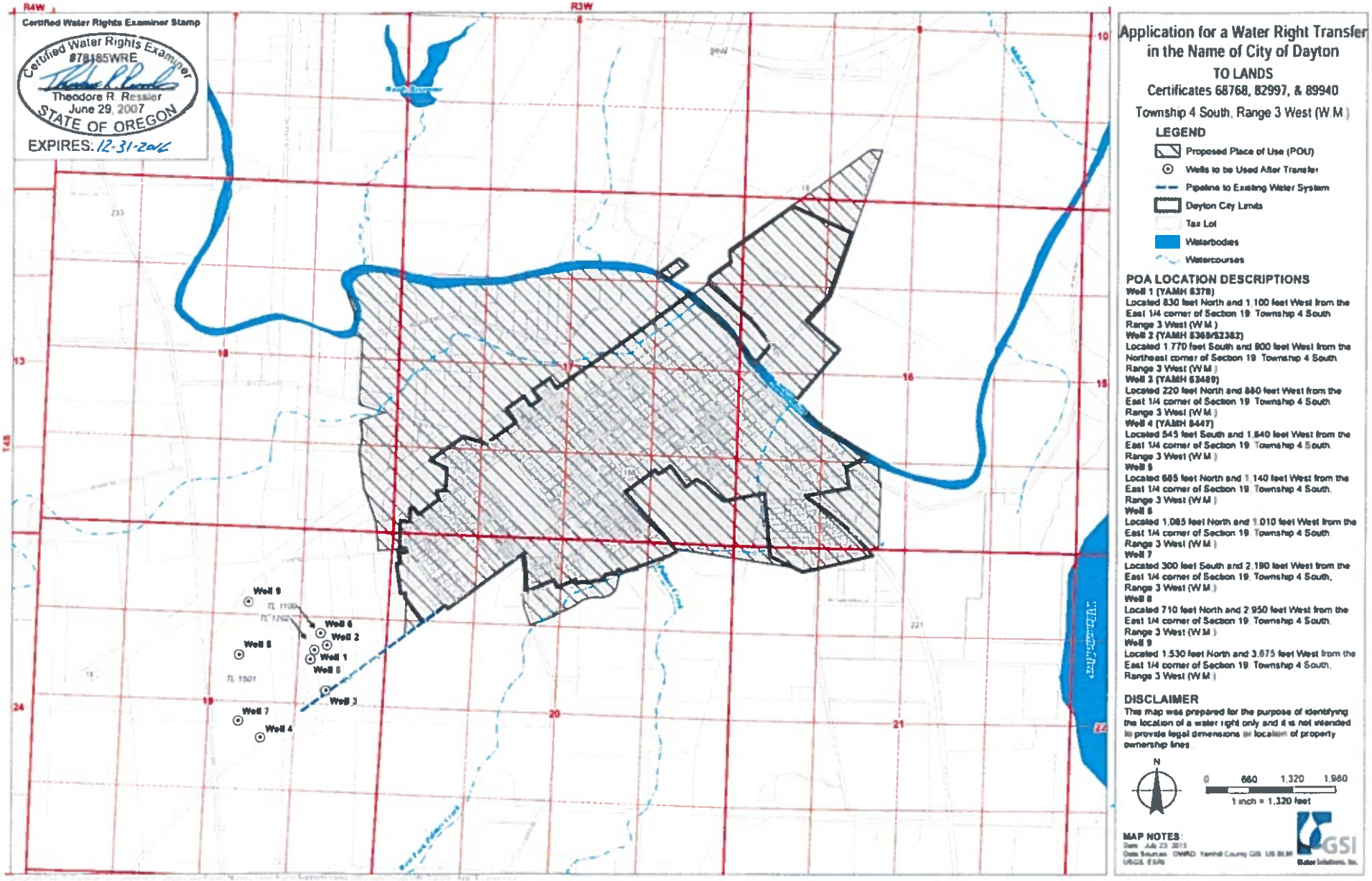
This map was prepared for the purpose of identifying the location of a water right only and it is not intended to provide legal dimensions or location of property ownership lines.

**MAP NOTES**

Date: July 23, 2015
Data Sources: OWRD, Yamhill County GIS, US BLM, USGS, ESRI
Prepared By: GSI Water Solutions, Inc.

N
0 200 400
1 inch = 400 feet

GSI Water Solutions, Inc.


R4W
R3W
Certified Water Rights Examiner Stamp
Certified Water Rights Examiner
#78185WRE
Theodore R. Ressler
June 29, 2007
STATE OF OREGON
EXPIRES: 12-31-2016
Well 9
Well 6
Well 2
Well 5
Well 1
Well 8
Well 3
Well 7
Well 4
Application for a Water Right Transfer
in the Name of City of Dayton
TO LANDS
Certificates 68768, 82997, & 89940
Township 4 South, Range 3 West (W.M.)
LEGEND
Proposed Place of Use (POU)
Wells to be Used After Transfer
Pipeline to Existing Water System
Dayton City Limits
Tax Lot
Waterbodies
Watercourses
POA LOCATION DESCRIPTIONS
Well 1 (YAMH 6378)
Located 830 feet North and 1,100 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 2 (YAMH 6369/52382)
Located 1,770 feet South and 800 feet West from the Northeast corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 3 (YAMH 53469)
Located 220 feet North and 880 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 4 (YAMH 8447)
Located 545 feet South and 1,840 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 5
Located 665 feet North and 1,140 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 6
Located 1,085 feet North and 1,010 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 7
Located 300 feet South and 2,190 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 8
Located 710 feet North and 2,950 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
Well 9
Located 1,530 feet North and 3,675 feet West from the East 1/4 corner of Section 19, Township 4 South, Range 3 West (W.M.)
DISCLAIMER
This map was prepared for the purpose of identifying the location of a water right only and it is not intended to provide legal dimensions or location of property ownership lines.
N
0 660 1,320 1,980
1 inch = 1,320 feet
MAP NOTES:
GSI

# Attachment B

## Water Right Certificates 82997, 68768, and 89940

Water Right Transfer Application – City of Dayton

STATE OF OREGON

COUNTY OF YAMHILL

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

LOUIS SCALVINI
13665 SE AMITY DAYTON HWY
DAYTON OR 97114

confirms the right to use the waters of WELL 1 and WELL 2 in the Willamette Basin for GENERAL NURSERY USES on 10.1 ACRES and GREENHOUSE USES ON 5.87 ACRES.

This right was perfected under Permit G-10738. The date of priority is SEPTEMBER 19, 1986. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 88 GALLONS PER MINUTE (GPM), BEING 56 GPM FROM WELL 1 AND 32 GPM FROM WELL 2 or its equivalent in case of rotation, measured at the well.

The wells are located as follows:

| Well | Twp | Rng | Mer | Sec | Q-Q | DLC | Survey Coordinates |
|---|---|---|---|---|---|---|---|
| 1 | 4 S | 3 W | WM | 19 | SE NE | 48 | 1800 FEET SOUTH AND 1040 FEET WEST FROM NE CORNER, SECTION 19 |
| 2 | 4 S | 3 W | WM | 19 | SE NE | 48 | 1770 FEET SOUTH AND 900 FEET WEST FROM NE CORNER, SECTION 19 |

A description of the place of use to which this right is appurtenant is as follows:

| Twp | Rng | Mer | Sec | Q-Q | DLC | General Nursery Acres | General Nursery & Greenhouse Acres |
|---|---|---|---|---|---|---|---|
| 4 S | 3 W | WM | 19 | SW NE | 48 | 0.1 | 0 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | 4.13 | 5.87 |

The well shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon.

The water user shall install and maintain a weir, meter, or other suitable measuring device and keep a complete record of the amount of ground water withdrawn.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080, you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate at any time before it has issued, and after the time has expired for the completion of the appropriation under the permit, or within three months after issuance of the certificate.

WITNESS the signature of the Water Resources Director, affixed FEB 0 9 2007.

Phillip C. Ward, Director
Water Resources Department

STATE OF OREGON

COUNTY OF YAMHILL

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

LOUIS J. SCALVINI
ROUTE 1, BOX 12-W
DAYTON, OREGON 97114

confirms the right to use the waters of WELL NO. 3 in the WILLAMETTE BASIN for NURSERY OPERATIONS, INCLUDING CONTAINERIZED NURSERY STOCK ON 3.36 ACRES, GREENHOUSE USE ON 1.34 ACRES AND RELATED NURSERY USES ON 5.45 ACRES.

This right was perfected under Permit G-10797. The date of priority is OCTOBER 1, 1987. The amount of water to which this right is entitled is limited to an amount actually beneficially used and shall not exceed 120.0 GALLONS PER MINUTE, BEING 120.0 GPM FOR CONTAINERIZED NURSERY STOCK, 90.0 GPM FOR GREENHOUSE, AND 120.0 GPM FOR RELATED NURSERY USES or its equivalent in case of rotation, measured at the point of diversion from the source.

The well is located as follows:

SE 1/4 NE 1/4, SECTION 19, T 4 S, R 3 W, W.M.; 2410 FEET SOUTH AND 870 FEET WEST FROM THE NE CORNER OF SECTION 19.

The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

A description of the place of use to which this right is appurtenant is as follows:

SW 1/4 NE 1/4 0.07 ACRES NURSERY OPERATIONS
SE 1/4 NE 1/4 10.08 ACRES NURSERY OPERATIONS
SECTION 19
TOWNSHIP 4 SOUTH, RANGE 3 WEST, W.M.

The well shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The water user shall maintain a weir, meter, or other suitable measuring device and shall keep a complete record of the amount of ground water withdrawn.

The use of water under this right shall be limited to appropriation of water only to the extent that it does not impair or substantially interfere with prior surface water rights as well as ground water rights of others.

The right to use water for the above purpose is restricted to beneficial use on the lands or place of use described.

WITNESS the signature of the Water Resources Director, affixed JANUARY 29, 1996.

Martha O. Pagel

Recorded in State Record of Water Right Certificates numbered 68768.

G-11706.RK

STATE OF OREGON

COUNTY OF YAMHILL

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CITY OF DAYTON
PO BOX 339
DAYTON OR 97114-0339

confirms the right to use the waters of TWO WELLS in the PALMER CREEK BASIN for NURSERY USE on 5.87 ACRES.

This right was perfected under Permit G-15906. The date of priority is AUGUST 22, 2001. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 0.56 CUBIC FOOT PER SECOND measured at the wells.

The period of use is year round.

The wells are located as follows:

| Twp | Rng | Mer | Sec | Q-Q | DLC | Measured Distances |
|---|---|---|---|---|---|---|
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 1 (YAMH 5370) - 830 FEET NORTH AND 1100 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 3 (YAMH 52469) - 220 FEET NORTH AND 880 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |

The amount of water used for nursery use is limited to a maximum of 5.0 acre feet per acre and a diversion of 0.15 cubic foot per second per acre. For irrigation of containerized nursery plants, the amount of water diverted is limited to one fortieth of one cubic foot per second and 5.0 acre feet per acre per year. For irrigation of in-ground nursery plants the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre per year. The use of water for nursery use may be made any time, during the period of allowed use specified above, that the use is beneficial. For irrigation of any other crop, the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre during the irrigation season of each year.

The place of use is located as follows:

| NURSERY USE | | | | | | |
|---|---|---|---|---|---|---|
| Twp | Rng | Mer | Sec | Q-Q | DLC | Acres |
| 4 S | 3 W | WM | 19 | SW NE | 48 | 0.07 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | 5.80 |

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

Measurement, recording and reporting conditions:

A. The water user shall maintain the meter or other suitable measuring device in good working order, shall keep a complete record of the amount of water used each month, and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the water user to report general water-use information, including the place and nature of use of water under the right.

B. The water user shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

To monitor the effect of water use from the wells authorized under this right, the Department requires the water user to make and report annual static water level measurements. The static water level shall be measured in the month of March. Reports shall be submitted to the Department within 30 days of measurement.

Measurements must be made according to the following schedule:

Following the first year of water use, the user shall submit seven consecutive annual reports of static water level measurements. Based on an analysis of the data collected, the Director may require that the user obtain and report additional annual static water level measurements beyond the seven year minimum reporting period. The additional measurements may be required in a different month. If the measurement requirement is stopped, the Director may restart it at any time.

All measurements shall be made by a certified water rights examiner, registered professional geologist, registered professional engineer, licensed well constructor or pump installer licensed by the Construction Contractors Board and be submitted to the Department on forms provided by the Department. The Department requires the individual performing the measurement to:

(A) Identify each well with its associated measurement; and
(B) Measure and report water levels to the nearest tenth of a foot as depth-to-water below ground surface; and
(C) Specify the method used to obtain each well measurement; and
(D) Certify the accuracy of all measurements and calculations submitted to the Department.

The water user shall discontinue use of, or reduce the rate or volume of withdrawal from, the wells if annual water level measurements reveal any of the following events:

(A) An average water level decline of three or more feet per year for five consecutive years; or
(B) A water level decline of 15 or more feet in fewer than five consecutive years; or
(C) A water level decline of 25 or more feet; or
(D) Hydraulic interference leading to a decline of 25 or more feet in any neighboring well with senior priority.

The levels from which the cited declines in (A), (B) and (C) above will be referenced are as follows: The reference level for Well 1 (YAMH 5370) is 30.00 below ground surface. The reference level for Well 3 (YAMH 52469) is 25.50 below ground surface.

The period of non or restricted use shall continue until the annual water level rises above the decline level which triggered the action or until the Department determines, based on the water user's and/or the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or senior water rights. The water user shall in no instance allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this right. If more than one well is involved, the water user may submit an alternative measurement and reporting plan for review and approval by the Department.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this right, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interference.

The wells shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge to determine the water level elevation in the well at all times.

Where two or more water users agree among themselves as to the manner of rotation in the use of water and such agreement is placed in writing and filed by such water users with the watermaster, and such rotation system does not infringe upon such prior rights of any water user not a party to such rotation plan, the watermaster shall distribute the water according to the agreement.

The Director may require water level or pump test results every ten years.

Failure to comply with any of the provisions of this right may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the right.

This right is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

This certificate is issued to supersede certificate 89862, as it contains a scrivener's error.

Issued FEB 13 2015

Dwight W. Fremont
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

# Attachment C
## Evidence of Use Affidavits
Water Right Transfer Application – City of Dayton

# Application for Water Right
# Transfer
## Evidence of Use Affidavit

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

**Please print legibly or type. Be as specific as possible. Attach additional pages if you need more spacing. Supporting documentation must be attached.**

State of Oregon )
) ss
County of YAMHILL)

I, THEODORE RESSLER, in my capacity as CONSULTANT FOR CITY OF DAYTON,

mailing address GSI WATER SOLUTIONS, INC., 55 SW YAMHILL STREET, SUITE 300, PORTLAND, OR 97217

telephone number (503) 239-8799, being first duly sworn depose and say:

1. My knowledge of the exercise or status of the water right is based on (check one):

☐ Personal observation ☒ Professional expertise

2. I attest that:

☐ Water was used during the previous five years on the **entire** place of use for Certificate # ____; **OR**

☒ My knowledge is specific to the use of water at the following locations within the last five years:

| Certificate # | Township | | Range | | Mer | Sec | ¼ ¼ | Gov't Lot or DLC | Acres (if applicable) |
|---|---|---|---|---|---|---|---|---|---|
| 82997 | 4 | S | 3 | W | WM | 19 | SW NE | 48 | 0.07 |
| 82997 | 4 | S | 3 | W | WM | 19 | SE NE | 48 | 9.25 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

**OR**

☐ Confirming Certificate # ____ has been issued within the past five years; **OR**

☐ Part or all of the water right was leased instream at some time within the last five years. The instream lease number is: ____ (Note: If the entire right proposed for transfer was not leased, additional evidence of use is needed for the portion not leased instream.); **OR**

☐ The water right is not subject to forfeiture and documentation that a presumption of forfeiture for non-use would be rebutted under ORS 540.610(2) is attached.

☐ Water has been used at the actual current point of diversion or appropriation for more than 10 years for Certificate # ____(For Historic POD/POA Transfers)

**(continues on reverse side)**

3. The water right was used for: (e.g., crops, pasture, etc.): NURSERY AND GREENHOUSE

4. I understand that if I do not attach one or more of the documents shown in the table below to support the above statements, my application will be considered incomplete.

Signature of Affiant

8/17/2015
Date

Signed and sworn to (or affirmed) before me this 17 day of August, 2015.

OFFICIAL STAMP
KALEESA DIANE THANASOUK
NOTARY PUBLIC-OREGON
COMMISSION NO. 941484
MY COMMISSION EXPIRES JULY 30, 2019

Notary Public for Oregon

My Commission Expires: July 30, 2019

| Supporting Documents | Examples |
|---|---|
| ☐ Copy of a water right certificate that has been issued within the last five years. (not a remaining right certificate) | Copy of **confirming** water right certificate that shows issue date |
| ☐ Copies of receipts from sales of irrigated crops or for expenditures related to use of water | • Power usage records for pumps associated with irrigation use<br>• Fertilizer or seed bills related to irrigated crops<br>• Farmers Co-op sales receipt |
| ☐ Records such as FSA crop reports, irrigation district records, NRCS farm management plan, or records of other water suppliers | • District assessment records for water delivered<br>• Crop reports submitted under a federal loan agreement<br>• Beneficial use reports from district<br>• IRS Farm Usage Deduction Report<br>• Agricultural Stabilization Plan<br>• CREP Report |
| ☒ Aerial photos containing sufficient detail to establish location and date of photograph<br><br>AERIAL PHOTOGRAPH DOCUMENTATION SUPPORTED BY STATEMENTS PROVIDED BY RUFINO REYES (FORMER SITE MANAGER FOR FISHER FARMS) REGARDING WATER USE DURING NURSERY OPERATIONS AT THE PROPERTY. | Multiple photos can be submitted to resolve different areas of a water right.<br>If the photograph does not print with a "date stamp" or without the source being identified, the date of the photograph and source should be added.<br><br>Sources for aerial photos:<br>OSU –www.oregonexplorer.info/imagery<br>OWRD – www.wrd.state.or.us<br>Google Earth – earth.google.com<br>TerraServer – www.terraserver.com |
| ☐ Approved Lease establishing beneficial use within the last 5 years | Copy of instream lease or lease number |

## Certificate 82997

# Application for Water Right
# Transfer
## Evidence of Use Affidavit

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

**Please print legibly or type. Be as specific as possible. Attach additional pages if you need more spacing. Supporting documentation must be attached.**

State of Oregon )
) ss
County of YAMHILL)

I, THEODORE RESSLER, in my capacity as CONSULTANT FOR CITY OF DAYTON,

mailing address GSI WATER SOLUTIONS, INC., 55 SW YAMHILL STREET, SUITE 300, PORTLAND, OR 97217

telephone number (503) 239-8799, being first duly sworn depose and say:

1. My knowledge of the exercise or status of the water right is based on (check one):

☐ Personal observation ☒ Professional expertise

2. I attest that:

☐ Water was used during the previous five years on the **entire** place of use for Certificate # ____; **OR**

☒ My knowledge is specific to the use of water at the following locations within the last five years:

| Certificate # | Township | | Range | | Mer | Sec | ¼ ¼ | | Gov't Lot or DLC | Acres (if applicable) |
|---|---|---|---|---|---|---|---|---|---|---|
| 68768 | 4 | S | 3 | W | WM | 19 | SW | NE | 48 | 0.07 |
| 68768 | 4 | S | 3 | W | WM | 19 | SE | NE | 48 | 9.25 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**OR**

☐ Confirming Certificate # ____ has been issued within the past five years; **OR**

☐ Part or all of the water right was leased instream at some time within the last five years. The instream lease number is: ____ (Note: If the entire right proposed for transfer was not leased, additional evidence of use is needed for the portion not leased instream.); **OR**

☐ The water right is not subject to forfeiture and documentation that a presumption of forfeiture for non-use would be rebutted under ORS 540.610(2) is attached.

☐ Water has been used at the actual current point of diversion or appropriation for more than 10 years for Certificate # ____(For Historic POD/POA Transfers)

**(continues on reverse side)**

3. The water right was used for: (e.g., crops, pasture, etc.): NURSERY OPERATIONS

4. I understand that if I do not attach one or more of the documents shown in the table below to support the above statements, my application will be considered incomplete.

Signature of Affiant

8/17/2015
Date

Signed and sworn to (or affirmed) before me this 17 day of August, 2015.

OFFICIAL STAMP
KALEESA DIANE THANASOUK
NOTARY PUBLIC-OREGON
COMMISSION NO. 941484
MY COMMISSION EXPIRES JULY 30, 2019

Notary Public for Oregon

My Commission Expires: July 30, 2019

| Supporting Documents | Examples |
|---|---|
| ☐ Copy of a water right certificate that has been issued within the last five years. (not a remaining right certificate) | Copy of **confirming** water right certificate that shows issue date |
| ☐ Copies of receipts from sales of irrigated crops or for expenditures related to use of water | • Power usage records for pumps associated with irrigation use<br>• Fertilizer or seed bills related to irrigated crops<br>• Farmers Co-op sales receipt |
| ☐ Records such as FSA crop reports, irrigation district records, NRCS farm management plan, or records of other water suppliers | • District assessment records for water delivered<br>• Crop reports submitted under a federal loan agreement<br>• Beneficial use reports from district<br>• IRS Farm Usage Deduction Report<br>• Agricultural Stabilization Plan<br>• CREP Report |
| ☒ Aerial photos containing sufficient detail to establish location and date of photograph<br><br>AERIAL PHOTOGRAPH DOCUMENTATION SUPPORTED BY STATEMENTS PROVIDED BY RUFINO REYES (FORMER SITE MANAGER FOR FISHER FARMS) REGARDING WATER USE DURING NURSERY OPERATIONS AT THE PROPERTY. | Multiple photos can be submitted to resolve different areas of a water right.<br>If the photograph does not print with a "date stamp" or without the source being identified, the date of the photograph and source should be added.<br><br>Sources for aerial photos:<br>OSU –www.oregonexplorer.info/imagery<br>OWRD – www.wrd.state.or.us<br>Google Earth – earth.google.com<br>TerraServer – www.terraserver.com |
| ☐ Approved Lease establishing beneficial use within the last 5 years | Copy of instream lease or lease number |

## Certificate 68768

# Application for Water Right
# Transfer
## Evidence of Use Affidavit

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

**Please print legibly or type. Be as specific as possible. Attach additional pages if you need more spacing. Supporting documentation must be attached.**

State of Oregon )
) ss
County of YAMHILL)

I, SCOTT PINGEL, in my capacity as CITY MANAGER,

mailing address PO BOX 339, DAYTON, OR 97114

telephone number (503)864-2221, being first duly sworn depose and say:

1. My knowledge of the exercise or status of the water right is based on (check one):

☒ Personal observation ☐ Professional expertise

2. I attest that:

☐ Water was used during the previous five years on the **entire** place of use for Certificate # ____; **OR**

☐ My knowledge is specific to the use of water at the following locations within the last five years:

| Certificate # | Township | | Range | | Mer | Sec | ¼ ¼ | Gov't Lot or DLC | Acres (if applicable) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
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**OR**

☒ Confirming Certificate # 89940 has been issued within the past five years: **OR**

☐ Part or all of the water right was leased instream at some time within the last five years. The instream lease number is: ____ (Note: If the entire right proposed for transfer was not leased, additional evidence of use is needed for the portion not leased instream.): **OR**

☐ The water right is not subject to forfeiture and documentation that a presumption of forfeiture for non-use would be rebutted under ORS 540.610(2) is attached.

☐ Water has been used at the actual current point of diversion or appropriation for more than 10 years for Certificate # ____(For Historic POD/POA Transfers)

**(continues on reverse side)**

3. The water right was used for: (e.g., crops, pasture, etc.): ____

4. I understand that if I do not attach one or more of the documents shown in the table below to support the above statements, my application will be considered incomplete.

Signature of Affiant

6-11-15
Date

Signed and sworn to (or affirmed) before me this 11 day of June, 2015.

OFFICIAL STAMP
PATTY JO NICHOLS-RINGNALDA
NOTARY PUBLIC-OREGON
COMMISSION NO. 936052
MY COMMISSION EXPIRES FEBRUARY 18, 2019

Patty Ringnalda
Notary Public for Oregon

My Commission Expires: 2/18/19

| Supporting Documents | Examples |
|---|---|
| ☒ Copy of a water right certificate that has been issued within the last five years. (not a remaining right certificate) | Copy of confirming water right certificate that shows issue date |
| ☐ Copies of receipts from sales of irrigated crops or for expenditures related to use of water | • Power usage records for pumps associated with irrigation use<br>• Fertilizer or seed bills related to irrigated crops<br>• Farmers Co-op sales receipt |
| ☐ Records such as FSA crop reports, irrigation district records, NRCS farm management plan, or records of other water suppliers | • District assessment records for water delivered<br>• Crop reports submitted under a federal loan agreement<br>• Beneficial use reports from district<br>• IRS Farm Usage Deduction Report<br>• Agricultural Stabilization Plan<br>• CREP Report |
| ☐ Aerial photos containing sufficient detail to establish location and date of photograph | Multiple photos can be submitted to resolve different areas of a water right.<br>If the photograph does not print with a "date stamp" or without the source being identified, the date of the photograph and source should be added.<br><br>Sources for aerial photos:<br>OSU –www.oregonexplorer.info/imagery<br>OWRD – www.wrd.state.or.us<br>Google Earth – earth.google.com<br>TerraServer – www.terraserver.com |
| ☐ Approved Lease establishing beneficial use within the last 5 years | Copy of instream lease or lease number |

STATE OF OREGON

COUNTY OF YAMHILL

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

CITY OF DAYTON
PO BOX 339
DAYTON OR 97114-0339

confirms the right to use the waters of TWO WELLS in the PALMER CREEK BASIN for NURSERY USE on 5.87 ACRES.

This right was perfected under Permit G-15906. The date of priority is AUGUST 22, 2001. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 0.56 CUBIC FOOT PER SECOND measured at the wells.

The period of use is year round.

The wells are located as follows:

| Twp | Rng | Mer | Sec | Q-Q | DLC | Measured Distances |
|---|---|---|---|---|---|---|
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 1 (YAMH 5370) - 830 FEET NORTH AND 1100 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | WELL 3 (YAMH 52469) - 220 FEET NORTH AND 880 FEET WEST FROM THE EAST 1/4 CORNER, SECTION 19 |

The amount of water used for nursery use is limited to a maximum of 5.0 acre feet per acre and a diversion of 0.15 cubic foot per second per acre. For irrigation of containerized nursery plants, the amount of water diverted is limited to one fortieth of one cubic foot per second and 5.0 acre feet per acre per year. For irrigation of in-ground nursery plants the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre per year. The use of water for nursery use may be made any time, during the period of allowed use specified above, that the use is beneficial. For irrigation of any other crop, the amount of water diverted is limited to one eightieth of one cubic foot per second and 2.5 acre feet per acre during the irrigation season of each year.

The place of use is located as follows:

| NURSERY USE | | | | | | |
|---|---|---|---|---|---|---|
| Twp | Rng | Mer | Sec | Q-Q | DLC | Acres |
| 4 S | 3 W | WM | 19 | SW NE | 48 | 0.07 |
| 4 S | 3 W | WM | 19 | SE NE | 48 | 5.80 |

**NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW**

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

Measurement, recording and reporting conditions:

A. The water user shall maintain the meter or other suitable measuring device in good working order, shall keep a complete record of the amount of water used each month, and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the water user to report general water-use information, including the place and nature of use of water under the right.

B. The water user shall allow the watermaster access to the meter or measuring device, provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

To monitor the effect of water use from the wells authorized under this right, the Department requires the water user to make and report annual static water level measurements. The static water level shall be measured in the month of March. Reports shall be submitted to the Department within 30 days of measurement.

Measurements must be made according to the following schedule:

Following the first year of water use, the user shall submit seven consecutive annual reports of static water level measurements. Based on an analysis of the data collected, the Director may require that the user obtain and report additional annual static water level measurements beyond the seven year minimum reporting period. The additional measurements may be required in a different month. If the measurement requirement is stopped, the Director may restart it at any time.

All measurements shall be made by a certified water rights examiner, registered professional geologist, registered professional engineer, licensed well constructor or pump installer licensed by the Construction Contractors Board and be submitted to the Department on forms provided by the Department. The Department requires the individual performing the measurement to:

(A) Identify each well with its associated measurement; and
(B) Measure and report water levels to the nearest tenth of a foot as depth-to-water below ground surface; and
(C) Specify the method used to obtain each well measurement; and
(D) Certify the accuracy of all measurements and calculations submitted to the Department.

The water user shall discontinue use of, or reduce the rate or volume of withdrawal from, the wells if annual water level measurements reveal any of the following events:

(A) An average water level decline of three or more feet per year for five consecutive years; or
(B) A water level decline of 15 or more feet in fewer than five consecutive years; or
(C) A water level decline of 25 or more feet; or
(D) Hydraulic interference leading to a decline of 25 or more feet in any neighboring well with senior priority.

The levels from which the cited declines in (A), (B) and (C) above will be referenced are as follows: The reference level for Well 1 (YAMH 5370) is 30.00 below ground surface. The reference level for Well 3 (YAMH 52469) is 25.50 below ground surface.

The period of non or restricted use shall continue until the annual water level rises above the decline level which triggered the action or until the Department determines, based on the water user's and/or the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or senior water rights. The water user shall in no instance allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this right. If more than one well is involved, the water user may submit an alternative measurement and reporting plan for review and approval by the Department.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this right, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interference.

The wells shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge to determine the water level elevation in the well at all times.

Where two or more water users agree among themselves as to the manner of rotation in the use of water and such agreement is placed in writing and filed by such water users with the watermaster, and such rotation system does not infringe upon such prior rights of any water user not a party to such rotation plan, the watermaster shall distribute the water according to the agreement.

The Director may require water level or pump test results every ten years.

Failure to comply with any of the provisions of this right may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the right.

This right is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

This certificate is issued to supersede certificate 89862, as it contains a scrivener's error.

Issued FEB 13 2015

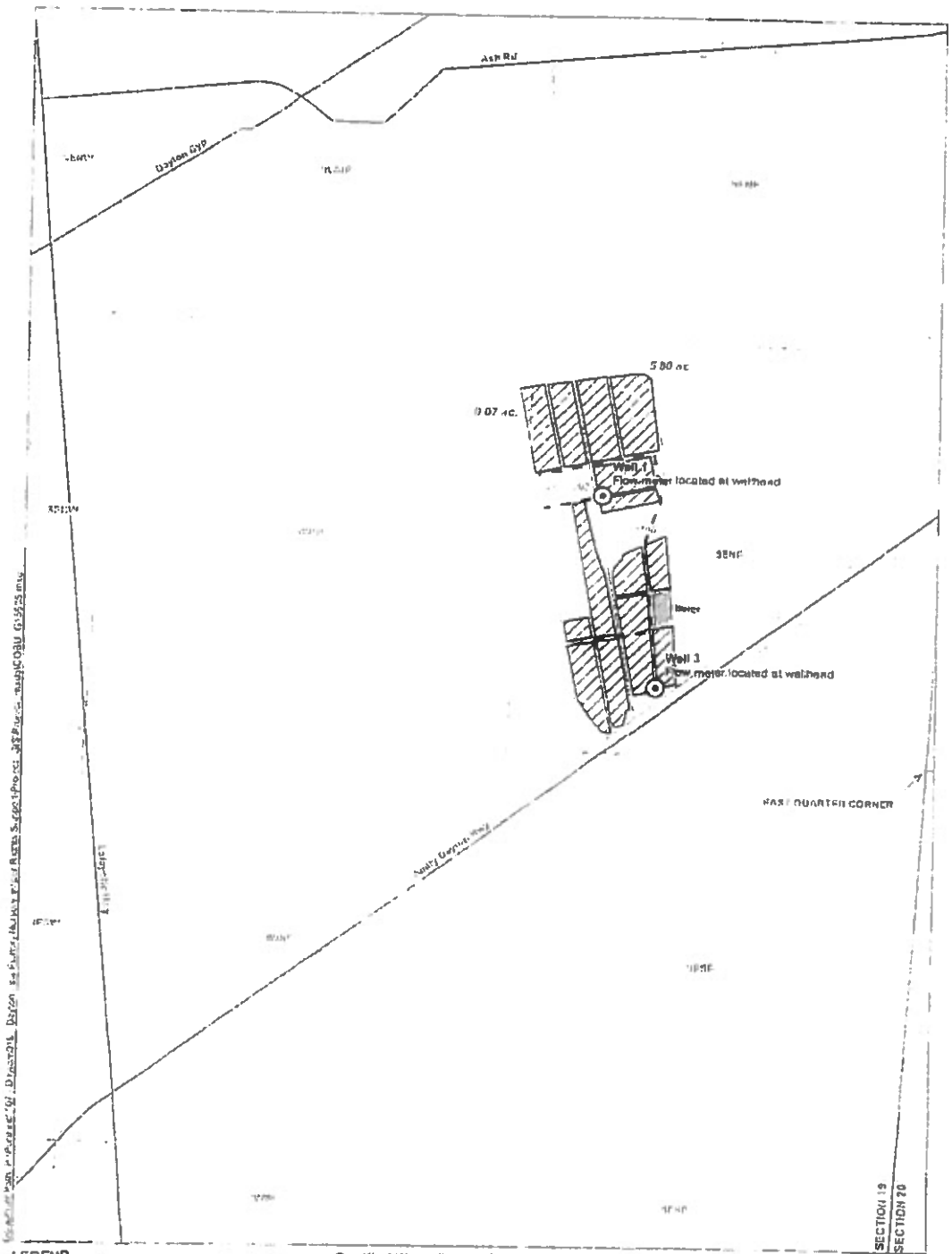
Dwight W. French
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

850

# Claim of Beneficial Use Map

**Permit G-15906, Application G-15445**
**Water Right in the Name of City of Dayton**

**Township 4 South, Range 3 West, Section 19, as projected within DLC 48 (W.M.)**




COBU MAP #850

**LEGEND**

- Point of Appropriation (POA)
- Place of Use (POU)
- Township
- Section
- Water body

**POA Location Description**

Well 1 (YAMH 6378)
Located 830 feet North and 1,100 feet West from the East quarter corner of Section 19, Township 4 South, Range 3 West, W.M.
Well 3 (YAMH 82466)
Located 200 feet North and 900 feet West from the East quarter corner of Section 19, Township 4 South, Range 3 West, W.M.

**Certified Water Rights Examiner Stamp**

Certified Water Rights Examiner
#78185WRE
Theodore R. Ressler
June 29, 2007
STATE OF OREGON
EXPIRES: 12-31-2014

**Disclaimer**

This map was prepared for the purpose of identifying the location of a water right only and is not intended to provide legal dimensions or location of property ownership lines.

**Map Notes**

Date: September 22, 2014
Sources: BLM, USGS, ESRI
Prepared By: GSI Water Solutions, Inc.

N
0 200 400
Feet

GSI Water Solutions, Inc.

# Attachment D

## Land Use Form

Water Right Transfer Application – City of Dayton

# Land Use Information Form

**Oregon Water Resources Department**
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

## NOTE TO APPLICANTS

In order for your application to be processed by the Water Resources Department (WRD), this Land Use Information Form must be completed by a local government planning official in the jurisdiction(s) where your water right will be used and developed. The planning official may choose to complete the form while you wait, or return the receipt stub to you. Applications received by WRD without the Land Use Form or the receipt stub will be returned to you. Please be aware that your application will not be approved without land use approval.

**This form is NOT required if:**

1) Water is to be diverted, conveyed, and/or used only on federal lands; **OR**

2) The application is for a water right transfer, allocation of conserved water, exchange, permit amendment, or ground water registration modification, and **all** of the following apply:
   a) The existing and proposed water use is located entirely within lands zoned for exclusive farm-use or within an irrigation district;
   b) The application involves a change in place of use only;
   c) The change does not involve the placement or modification of structures, including but not limited to water diversion, impoundment, distribution facilities, water wells and well houses; and
   d) The application involves irrigation water uses only.

## NOTE TO LOCAL GOVERNMENTS

The person presenting the attached Land Use Information Form is applying for or modifying a water right. The Water Resources Department (WRD) requires its applicants to obtain land-use information to be sure the water rights do not result in land uses that are incompatible with your comprehensive plan. Please complete the form or detach the receipt stub and return it to the applicant for inclusion in their water right application. You will receive notice once the applicant formally submits his or her request to the WRD. The notice will give more information about WRD's water rights process and provide additional comment opportunities. You will have 30 days from the date of the notice to complete the land-use form and return it to the WRD. If no land-use information is received from you within that 30-day period, the WRD may presume the land use associated with the proposed water right is compatible with your comprehensive plan. Your attention to this request for information is greatly appreciated by the Water Resources Department. If you have any questions concerning this form, please contact the WRD's Customer Service Group at 503-986-0801.

# Land Use Information Form

**Oregon Water Resources Department**
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Applicant(s): City of Dayton

Mailing Address: ATTN: Scott Pingel
PO Box 339

City: Dayton State: OR Zip Code: 97114 Daytime Phone: (503) 864-2221

## A. Land and Location

Please include the following information for all tax lots where water will be diverted (taken from its source), conveyed (transported), and/or used or developed. Applicants for municipal use, or irrigation uses within irrigation districts may substitute existing and proposed service-area boundaries for the tax-lot information requested below.

| Township | Range | Section | ¼ ¼ | Tax Lot # | Plan Designation (e.g., Rural Residential/RR-5) | Water to be: | | | Proposed Land Use |
|---|---|---|---|---|---|---|---|---|---|
| 4 S | 3 W | 19 | SE NE | 1202, 1100 | AF-10/EF-80 | ☒ Diverted | ☒ Conveyed | ☐ Used | No Change |
| 4 S | 3 W | 19 | NW SE | 1501 | AF-10/EF-80 | ☒ Diverted | ☒ Conveyed | ☐ Used | No Change |
| 4 S | 3 W | 19 | SW NE | 1501 | AF-10/EF-80 | ☒ Diverted | ☒ Conveyed | ☐ Used | No Change |
| 4 S | 3 W | 19 | NW NE | 1501 | AF-10/EF-80 | ☒ Diverted | ☒ Conveyed | ☐ Used | No Change |
| 4 S | 3 W | 19 | SW NW | Road ROW | AF-10/EF-80 | ☐ Diverted | ☒ Conveyed | ☐ Used | No Change |
| 4 S | 3 W | 19 | NW NW | Road ROW | AF-10/EF-80 | ☐ Diverted | ☒ Conveyed | ☐ Used | No Change |
| City of Dayton Service Area (see attached maps) | | | | | CITY | ☐ Diverted | ☒ Conveyed | ☒ Used | No Change |

List all counties and cities where water is proposed to be diverted, conveyed, and/or used or developed:

City of Dayton
Yamhill County

## B. Description of Proposed Use

Type of application to be filed with the Water Resources Department:

☐ Permit to Use or Store Water ☒ Water Right Transfer ☐ Permit Amendment or Ground Water Registration Modification
☐ Limited Water Use License ☐ Allocation of Conserved Water ☐ Exchange of Water

Source of water: ☐ Reservoir/Pond ☒ Ground Water ☐ Surface Water (name) _____

Estimated quantity of water needed: 0.952 ☒ cubic feet per second ☐ gallons per minute ☐ acre-feet

Intended use of water: ☐ Irrigation ☐ Commercial ☐ Industrial ☐ Domestic for _____ household(s)
☒ Municipal ☐ Quasi-Municipal ☐ Instream ☐ Other _____

Briefly describe:

The applicant is proposing to change the character of use for three water rights from nursery to municipal the place of use to the City of Dayton service area, and add points of appropriation to each certificate such that each water right will have nine points of appropriation.
**See attached maps for details.**

**Note to applicant:** If the Land Use Information Form cannot be completed while you wait, please have a local government representative sign the receipt at the bottom of the next page and include it with the application filed with the Water Resources Department.

**See bottom of Page 3.** →

# For Local Government Use Only

The following section must be completed by a planning official from each county and city listed unless the project will be located entirely within the city limits. In that case, only the city planning agency must complete this form. This deals only with the local land-use plan. Do not include approval for activities such as building or grading permits.

## Please check the appropriate box below and provide the requested information

☑ Land uses to be served by the proposed water uses (including proposed construction) are allowed outright or are not regulated by your comprehensive plan. Cite applicable ordinance section(s):

☐ Land uses to be served by the proposed water uses (including proposed construction) involve discretionary land-use approvals as listed in the table below. (Please attach documentation of applicable land-use approvals which have already been obtained. Record of Action/land-use decision and accompanying findings are sufficient.) **If approvals have been obtained but all appeal periods have not ended, check "Being pursued."**

| Type of Land-Use Approval Needed (e.g., plan amendments, rezones, conditional-use permits, etc.) | Cite Most Significant, Applicable Plan Policies & Ordinance Section References | Land-Use Approval | |
|---|---|---|---|
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |

Local governments are invited to express special land-use concerns or make recommendations to the Water Resources Department regarding this proposed use of water below, or on a separate sheet.

Name: Joseph Shearer Title: City Planner

Signature: [signature] Phone: 503.540.1616 Date: 7/30/2015

Government Entity: City of Dayton

**Note to local government representative:** Please complete this form or sign the receipt below and return it to the applicant. If you sign the receipt, you will have 30 days from the Water Resources Department's notice date to return the completed Land Use Information Form or WRD may presume the land use associated with the proposed use of water is compatible with local comprehensive plans.

---

## Receipt for Request for Land Use Information

Applicant name: _____

City or County: _____ Staff contact: _____

Signature: _____ Phone: _____ Date: _____

# For Local Government Use Only

The following section must be completed by a planning official from each county and city listed unless the project will be located entirely within the city limits. In that case, only the city planning agency must complete this form. This deals only with the local land-use plan. Do not include approval for activities such as building or grading permits.

## Please check the appropriate box below and provide the requested information

☑ Land uses to be served by the proposed water uses (including proposed construction) are allowed outright or are not regulated by your comprehensive plan. Cite applicable ordinance section(s): 501 + 402 of the Yamhill Co. Zoning Ordinance

☐ Land uses to be served by the proposed water uses (including proposed construction) involve discretionary land-use approvals as listed in the table below. (Please attach documentation of applicable land-use approvals which have already been obtained. Record of Action/land-use decision and accompanying findings are sufficient.) **If approvals have been obtained but all appeal periods have not ended, check "Being pursued."**

| Type of Land-Use Approval Needed (e.g., plan amendments, rezones, conditional-use permits, etc.) | Cite Most Significant, Applicable Plan Policies & Ordinance Section References | Land-Use Approval: | |
|---|---|---|---|
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |
| | | ☐ Obtained ☐ Denied | ☐ Being Pursued ☐ Not Being Pursued |

Local governments are invited to express special land-use concerns or make recommendations to the Water Resources Department regarding this proposed use of water below, or on a separate sheet.

Name: Kenneth P. Friday Title: P.D.M.

Signature: [signature] Phone: 503-434-7516 Date: 7/30/2015

Government Entity: Yamhill County

**Note to local government representative:** Please complete this form or sign the receipt below and return it to the applicant. If you sign the receipt, you will have 30 days from the Water Resources Department's notice date to return the completed Land Use Information Form or WRD may presume the land use associated with the proposed use of water is compatible with local comprehensive plans.

---

## Receipt for Request for Land Use Information

Applicant name: _____

City or County: _____ Staff contact: _____

Signature: _____ Phone: _____ Date: _____

# Attachment E

## Well Logs

Water Right Transfer Application – City of Dayton

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the
WATER RESOURCES DEPARTMENT, SALEM, OREGON 97310 within 30 days from the date of well completion.

# WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line) YAMH 5370

State Well No. 4S/3W-19aa
State Permit No.

## (1) OWNER:
Name Louis Scalvini
Address Rt 1 Bx 12N
Dayton, OR. 97114

## (2) TYPE OF WORK (check):
New Well ☑ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

## (3) TYPE OF WELL:
Rotary ☑ Driven ☐
Cable ☐ Jetted ☐
[redacted] ☐ Bored ☐

## (4) PROPOSED USE (check):
Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☑ Test Well ☐ Other ☐

## (5) CASING INSTALLED:
Threaded ☐ Welded ☑
6" Diam. from +2 ft. to 105 ft. Gage .250
" Diam. from ft. to ft. Gage
[redacted]" Diam. from ft. to ft. Gage

## (6) PERFORATIONS:
Perforated? ☐ Yes ☑ ~~No~~
Type of perforator used
Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

## (7) SCREENS:
Well screen installed? ☑ Yes ☐ No
Manufacturer's Name Johnson
Type Stainless Model No.
Diam. 6 T.S. Slot size .080 Set from 110 ft. to 115 ft.
Diam. 6 T.S. Slot size .100 Set from 115 ft. to 120 ft.

## (8) WELL TESTS:
Drawdown is amount water level is lowered below static level
[redacted]s a pump test made? ☐ Yes ☐ No If yes, by whom?
[redacted]d: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
air test 80 gal./min. with 87 ft. drawdown after 5 hrs.
[redacted]sian flow g.p.m.
Temperature of water Depth artesian flow encountered ft.

## (9) CONSTRUCTION:
Well seal—Material used Cement Grout
Well sealed from land surface to 18 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 9 sacks
How was cement grout placed? Pumped to bottom of annulus
Was a drive shoe used? ☑ Yes ☐ No Plugs Size: location ft.
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? ☐ Yes ☑ No Size of gravel:
Gravel placed from ft. to ft.

## (10) LOCATION OF WELL:
County Yamhill Driller's well number
NE ¼ NE ¼ Section 19 T. 4S R. 3W W.M.
Bearing and distance from section or subdivision corner

## (11) WATER LEVEL: Completed well.
Depth at which water was first found 111 ft.
Static level 35 ft. below land surface. Date 10-10-79
Artesian pressure lbs. per square inch. Date

## (12) WELL LOG:
Diameter of well below casing 6
Depth drilled 140 ft. Depth of completed well 127 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

| MATERIAL | From | To | SWL |
|---|---|---|---|
| Top Soil | 0 | 3 | |
| Brown Clay | 3 | 34 | |
| Grey Clay | 34 | 71 | |
| Sandy Blue Clay | 71 | 88 | |
| Black Sand | 88 | 94 | |
| Sandy Grey Clay | 94 | 111 | |
| Sand & Small Gravel | 111 | 121 | |
| Blue Clay | 121 | 140 | |

RECEIVED
NOV - 7 1979
WATER RESOURCES DEPT
SALEM, OREGON

Work started 10-5 1979 Completed 10-10 1979
Date well drilling machine moved off of well 10-10 1979

**Drilling Machine Operator's Certification:**
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Keith M Palmer (Drilling Machine Operator) Date 10-17, 1979
Drilling Machine Operator's License No. 1330

**Water Well Contractor's Certification:**
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Name AQUA-TECH Well Construction Inc. (Person, firm or corporation) (Type or print)
Address 868 Delta Dr. N.E. Salem
[Signed] David Brock (Water Well Contractor)
Contractor's License No. 696 Date 11/1, 1979

(USE ADDITIONAL SHEETS IF NECESSARY)
SP*45656-119

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the

WATER RESOURCES DEPARTMENT,
SALEM, OREGON 97310
within 30 days from the date of well completion.

# WATER WELL REPORT
## STATE OF OREGON
(Please type or print)
(Do not write above this line)

YAMH 5369

State Well No. 4S/2W-19aa
State Permit No.

## (1) OWNER:
Name Louis Scalvini #2 Well
Address Rt. 1 Bx 12N
Dayton, OR

## (2) TYPE OF WORK (check):
New Well ☑ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

## (3) TYPE OF WELL:
Rotary ☑ Driven ☐
Cable ☐ Jetted ☐
Dug ☐ Bored ☐

## (4) PROPOSED USE (check):
Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

## (5) CASING INSTALLED:
Threaded ☐ Welded ☑
6 " Diam. from +2 ft. to 121 ft. Gage .250
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

## (6) PERFORATIONS:
Perforated? ☐ Yes ☑ No.
Type of perforator used
Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

## (7) SCREENS:
Well screen installed? ☐ Yes ☑ No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

## (8) WELL TESTS:
Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom?
Bailed: gal./min. with ft. drawdown after hrs.
" " " "
" " " "
Air test 50 gal./min. with 100 ft. drawdown after 4 hrs.
Artesian flow g.p.m.
Temperature of water Depth artesian flow encountered ft.

## (9) CONSTRUCTION:
Well seal—Material used Cement Grout
Well sealed from land surface to 18 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 12 sacks
How was cement grout placed? Pumped to bottom of annulus

Was a drive shoe used? ☑ Yes ☐ No Plugs Size: location ft.
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? ☐ Yes ☑ No Size of gravel:
Gravel placed from ft. to ft.

## (10) LOCATION OF WELL:
County Yamhill Driller's well number
NE ¼ NE ¼ Section 19 T 4S R 3W W.M.
Bearing and distance from section or subdivision corner

## (11) WATER LEVEL: Completed well.
Depth at which water was first found 89 ft.
Static level 21 ft. below land surface. Date 5-1-80
Artesian pressure lbs. per square inch. Date

## (12) WELL LOG:
Diameter of well below casing —
Depth drilled 121 ft. Depth of completed well 121 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

| MATERIAL | From | To | SWL |
|---|---|---|---|
| Top soil & Silt | 0 | 2 | |
| Brown Clay | 2 | 32 | |
| Grey Clay | 32 | 71 | |
| Sandy Grey Clay | 71 | 89 | |
| Black Sand with | 89 | | |
| Some Clay | | 109 | |
| Small gravel & | 109 | | |
| Sand | | 118 | |
| Medium gravel & | 118 | | |
| Sand | | 121 | |

RECEIVED
MAY 9 1980
WATER RESOURCES DEPT
SALEM, OREGON

Work started 4-30 1980 Completed 5-1 1980
Date well drilling machine moved off of well 5-1 1980

**Drilling Machine Operator's Certification:**
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Keith Mahon Date 5-5, 1980
(Drilling Machine Operator)
Drilling Machine Operator's License No. 1330

**Water Well Contractor's Certification:**
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Name AQUA-TECH Well Construction Inc.
(Person, firm or corporation) (Type or print)
Address 868 Delta Dr. N.E. Salem
[Signed] David Beach
(Water Well Contractor)
Contractor's License No. 696 Date 5/16, 1980

(USE ADDITIONAL SHEETS IF NECESSARY)

SP*45656-119

RECEIVED

OCT 2 6 2000

WATER RESOURCES DEPT.
SALEM, OREGON

YAMH 52382

State of Oregon
WATER WELL REPORT (as required by ORS 537.765) Page 1 of 1

State Well ID LJ6779
Start Card # 133824

(1) OWNER: Well No. 2014
Name FISHER FARMS LLC
Address 9650 SW HARDEBECK
City GASTON St OR Zip 97119

(2) TYPE OF WORK: RECONDITION

(3) DRILL METHOD: ROTARY AIR

(4) PROPOSED USE: IRRIGATION

(5) BORE HOLE CONSTRUCTION:
Special Construction Approval NO Depth of Compl. Well 137 ft
Explosives used NO Type _____ Amount _____

| HOLE Diam. | From | To | Material | SEAL From | To | Amount |
|---|---|---|---|---|---|---|
| 8 | 0 | 137 | NA | | | |

Seal placement method NA
Backfill: from ___ ft to ___ ft Material
Gravel: from 15 ft to 137 ft Size 6X9 SAND

(6) CASING/LINER:

| | Diam. | From | To | Gauge | Material | Connection |
|---|---|---|---|---|---|---|
| Casing | 6 | 0 | 105 | .25 | STEEL | WELDED |
| | 6 | 115 | 126 | .25 | STEEL | WELDED |
| | 6 | 136 | 137 | .25 | STEEL | WELDED |
| Liner | | | | | | |

Final Location of shoe(s) NO SHOE, 6" PLATE

(7) PERFORATIONS/SCREENS:
[_] Perf. Method _____
[X] Screens Type CONT. V-WIRE Material STAINLESS STEEL

| From | To | Slot Size | Number | Diam. | Tele/pipe Size | Casing/liner |
|---|---|---|---|---|---|---|
| 105 | 110 | 45 | ___ | 6" PS | ____ | CASING |
| 110 | 115 | 50 | ___ | 6" PS | ____ | CASING |
| 126 | 131 | 45 | ___ | 6" PS | ____ | CASING |
| 131 | 136 | 50 | ___ | 6" PS | ____ | CASING |

(8) WELL TESTS: Minimum testing time is 1 hour
Test type AIR

| Yield GPM | Draw-down | Drill stem at | Time |
|---|---|---|---|
| 25 | ____ | 137 | 1 hr. |
| 25 | ____ | 137 | 3 |

Temperature of water 52F Depth Artesian Flow Found ____
Was water analysis done? NO By whom _____
Reason for water not suitable for use _____
Depth of strata ___

(9) LOCATION OF WELL by legal description:
County YAMHILL Lat. ° ' " Long. ° ' "
Township 4 S Range 3 W WM.
Section 19 SE 1/4 NE 1/4
Tax Lot 1100 Lot Block Subdivision
Street Address of Well (or nearest Address)
13665 SE AMITY/DAYTON HWY DAYTON, OR

(10) STATIC WATER LEVEL:
38 ft. below land surface. Date 10/19/00
Artesian pressure _____ lb per square in. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found ____

| From | To | Est Flow Rate | SWL |
|---|---|---|---|
| 107 | 137 | 125 | 38 |

(12) WELL LOG:
Ground elevation 160

| Material | From | To | SWL |
|---|---|---|---|
| WELL HEAVING SAND AS A RESULT OF SUSPECTED OVERPUMPING. | | | |
| 6" PIPE SIZE SCREEN ASSEMBLY INSTALLED AND FILTER PACKED WITH 6X9 SILICA SAND. | | | |
| WELL THEN REDEVELOPED FOR OVER 5 HOURS WITH COMPRESSED AIR. | | | |
| EXISTING CASING AND SEAL UNDISTURBED. | | | |

DAVE PAYSINGER, BLUE WATER DRILLING CO.
(503) 868-7878

Date started 10/18/00 Completed 10/19/00

(unbonded) Water Well Constructor Certification: I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number ____
Signed _____ Date _____

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 1438
Signed [signature] Date 10/18/00

ORIGINAL & FIRST COPY - WATER RESOURCES DEPTARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER 9809C 10/91

YAMH 52469

State of Oregon
WATER WELL REPORT (as required by ORS 537.765) Page 1 of 1 3

State Well ID LA2910
Start Card # 127882

(1) OWNER: Well No. 2034
Name FISHER FARMS LLC
Address 9650 SW HARDEBECK
City GASTON St OR Zip 97119

(2) TYPE OF WORK: NEW WELL

(3) DRILL METHOD: CABLE

(4) PROPOSED USE: IRRIGATION

(5) BORE HOLE CONSTRUCTION:
Special Construction Approval NO Depth of Compl. Well 195 ft
Explosives used NO Type _____ Amount _____

| HOLE Diam. | From | To | Material | SEAL From | To | Amount |
|---|---|---|---|---|---|---|
| 15 | 0 | 40 | BENTONITE CHIP | 0 | 38 | 51 SAX |
| 12.5 | 44 | 195 | | | | |

Seal placement method POURED/PROBED
Backfill: from ___ ft to ___ ft Material
Gravel: from 38 ft to 195 ft Size 6X9 SAND

(6) CASING/LINER:

| | Diam. | From | To | Gauge | Material | Connection |
|---|---|---|---|---|---|---|
| Casing | 8 | +1 | 108 | .25 | STEEL | WELDED |
| | 8 | 118 | 140 | .25 | STEEL | WELDED |
| | 8 | 147 | 177 | .25 | STEEL | WELDED |
| | 8 | 186 | 188 | .25 | STEEL | WELDED |
| | 8 | 192 | 195 | .25 | STEEL | WELDED |
| | 2 | +1 | 38.5 | SCH40 | PLASTIC | WELDED |

Final Location of shoe(s) NO SHOE, PLATE ON BOTTOM

(7) PERFORATIONS/SCREENS:
[_] Perf. Method _____
[X] Screens Type ALLOY MACHINE Material STAINLESS STEEL

| From | To | Slot Size | Number | Diam. | Tele/pipe Size | Casing/liner |
|---|---|---|---|---|---|---|
| 108 | 118 | 80 | ___ | 8"PIPE | SIZE | CASING |
| 140 | 147 | 60 | ___ | 8"PIPE | SIZE | CASING |
| 177 | 186 | 80 | ___ | 8"PIPE | SIZE | CASING |
| 188 | 192 | 80 | ___ | 8"PIPE | SIZE | CASING |

(8) WELL TESTS: Minimum testing time is 1 hour
Test type AIR

| Yield GPM | Draw-down | Drill stem at | Time |
|---|---|---|---|
| 325 | [illegible] | 194 | 1 hr. |
| 325 | [illegible] | 194 | 9 |

Temperature of water 53F Depth Artesian Flow Found ___
Was water analysis done? NO By whom _____
Reason for water not suitable for use _____
Depth of strata ___

(9) LOCATION OF WELL by legal description:
County YAMHILL Lat. ° ' " Long. ° ' "
Township 4 S Range 3 W WM.
Section 19 SE 1/4 NE 1/4
Tax Lot 1100 Lot Block Subdivision
Street Address of Well (or nearest Address)
13665 SE AMITY-DAYTON HWY DAYTON, OR

(10) STATIC WATER LEVEL:
30 ft. below land surface. Date 02/14/01
Artesian pressure _____ lb per square in. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 107

| From | To | Est Flow Rate | SWL |
|---|---|---|---|
| 107 | 147 | 150 | 30 |
| 177 | 192 | 175 | 30 |
| ___ | ___ | ___ | ___ |
| ___ | ___ | ___ | ___ |

(12) WELL LOG:
Ground elevation 160

| Material | | From | To | SWL |
|---|---|---|---|---|
| TOP SOIL | | 0 | 5 | |
| CLAY, BROWN | | 5 | 15 | |
| CLAY, BLUE/FIRM | | 15 | 79 | |
| CLAY, BLUE W/SOME FINE SAND | | 79 | 89 | |
| CLAY, GRAY/BLUE/FIRM | | 89 | 107 | |
| SAND, FINE/MEDIUM W/FINE GRAVEL | WB | 107 | 115 | 30 |
| CLAY, W/FINE SAND | | 115 | 122 | |
| SAND, FINE | | 122 | 123 | |
| CLAY, BLUE | | 123 | 136 | |
| SAND, W/BLUE CLAY | | 136 | 140 | |
| SAND, FINE W/SOME FINE GRAVEL | WB | 140 | 147 | 30 |
| CLAY, BLUE/GRAY | | 147 | 177 | |
| SAND, FINE TO MEDIUM W/FINE GRAVEL | WB | 177 | 186 | 30 |
| CLAY, BLUE W/FINE SAND | | 186 | 187 | |
| CLAY, BLUE | | 187 | 188.5 | |
| SAND, FINE TO MEDIUM, CLEAN | WB | 188.5 | 192.5 | 30 |
| CLAY, BLUE | | 192.5 | 195 | |

Date started 01/29/01 Completed 02/14/01

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the w ... band-
comment ... ply
well ... m
repor ...

Blue Water Drilling Company
16303 SE Wallace Road
Dayton, Oregon 97114

Sign ___ ___

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed [signature] WWC Number 1438
Date 02/14/01

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[illegible] 2001
WATER RESOURCES DEPT
SALEM, OREGON

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STATE OF OREGON

# WATER WELL REPORT

(as required by ORS 537.765)

SEP 1 2 1989

WATER RESOURCES DEPT.
SALEM, OREGON

YAMH 5449

4s/3w/29ac

(START CARD) # 12890

## (1) OWNER:

Well Number: 1085

Name SCAVINI NURSERY

Address 13665 SE AMITY-DAYTON HWY

City DAYTON State OR Zip 97114

## (2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

## (3) DRILL METHOD

☐ Rotary Air ☐ Rotary Mud ☒ Cable

☐ Other

## (4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation

☐ Thermal ☐ Injection ☐ Other

## (5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☒ Depth of Completed Well 157 ft.

Explosives used Yes ☐ No ☒ Type ____ Amount ____

| HOLE Diameter | From | To | SEAL Material | From | To | Amount sacks or pounds |
|---|---|---|---|---|---|---|
| 14" ~~12~~ | 0 | ~~18~~ 18 | Cement | 0 | 18 | 18 |
| 12" | 18 | ~~157~~ | | | | |
| | | 157 | | | | |

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E

☐ Other

Backfill placed from ____ ft. to ____ ft. Material ____

Gravel placed from 18 ft. to 155 ft. Size of gravel 3/8" P

## (6) CASING/LINER:

| | Diameter | From | To | Gauge | Steel | Plastic | Welded | Threaded |
|---|---|---|---|---|---|---|---|---|
| Casing: | 8" | +3 | 157 | .250 | ☒ | ☐ | ☒ | ☐ |
| | | | | | ☐ | ☐ | ☐ | ☐ |
| | | | | | ☐ | ☐ | ☐ | ☐ |
| Liner: | | | | | ☐ | ☐ | ☐ | ☐ |
| | | | | | ☐ | ☐ | ☐ | ☐ |

Final location of shoe(s) ____

## (7) PERFORATIONS/SCREENS:

☒ Perforations Method TORCH

☐ Screens Type ____ Material ____

| From | To | Slot size | Number | Diameter | Tele/pipe size | Casing | Liner |
|---|---|---|---|---|---|---|---|
| ~~102~~ | 157 | | | | | ☐ | ☐ |
| | | | | | | ☐ | ☐ |
| | | | | | | ☐ | ☐ |
| 117 | 152 | 1/4x6 | 280 | | | ☒ | ☐ |
| | | | | | | ☐ | ☐ |
| | | | | | | ☐ | ☐ |

## (8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

| Yield gal/min | Drawdown | Drill stem at | Time |
|---|---|---|---|
| 150 | | 154 | 1 hr. 10 HRS |

Temperature of water ____ Depth Artesian Flow Found ____

Was a water analysis done? ☐ Yes By whom ____

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other ____

Depth of strata: ____

## (9) LOCATION OF WELL by legal description:

County YAMHILL Latitude ____ Longitude ____

Township 4 N or S Range 3 E or W WM.

Section 29 SW ¼ NE ¼

Tax Lot ____ Lot ____ Block ____ Subdivision ____

Street Address of Well (or nearest address) ____

## (10) STATIC WATER LEVEL:

40 ft. below land surface. Date 9-6-89

Artesian pressure ____ lb. per square inch. Date ____

## (11) WATER BEARING ZONES:

Depth at which water was first found ____

| From | To | Estimated Flow Rate | SWL |
|---|---|---|---|
| 75 | 105 | 20 | 40 |
| | | | |
| 115 | 157 | 150 | 40 |
| | | | |

## (12) WELL LOG:

Ground elevation ____

| Material | From | To | SWL |
|---|---|---|---|
| Top Soil | 0 | 4 | |
| Brown Clay | 4 | 10 | |
| Blue Clay | 10 | 75 | |
| " " w/med. Sand | 75 | 105 | |
| Blue Clay | 105 | 115 | |
| Blue Clay w/ Coarse Sand & Fine Gravel | 115 | 157 | 40 |

Date started 8-31-89 Completed 9-6-89

**(unbonded) Water Well Constructor Certification:**

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Licensed Payseur 1958 WWC Number 417

Signed Robert L Payseur Date 9-6-89

**(bonded) Water Well Constructor Certification:**

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 417

Signed ____ Date 9-6-89

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT SECOND COPY - CONSTRUCTOR THIRD COPY - CUSTOMER 9809C 3/88

# Attachment 19 - ODOT Permit Application Form

Oregon Department of Transportation

**APPLICATION AND PERMIT TO OCCUPY OR PERFORM OPERATIONS UPON A STATE HIGHWAY**

See Oregon Administrative Rule, Chapter 734, Division 55

PERMIT NUMBER

CLASS | KEY#

## GENERAL LOCATION

HIGHWAY NAME AND ROUTE NUMBER: OR-99W / 1W(91) / Pacific Highway West

HIGHWAY NUMBER: 91

COUNTY: Yamhill

BETWEEN OR NEAR LANDMARKS: at McDougall Corner (Hwy 99W & Hwy 18 intersection)

HWY. REFERENCE MAP

DESIGNATED FREEWAY: ☐ YES ☒ NO

IN U.S. FOREST: ☐ YES ☒ NO

## PURPOSE OF APPLICATION (TO CONSTRUCT/OPERATE/MAINTAIN)

☐ POLE LINE — TYPE — MIN. VERT. CLEARANCE

☐ BURIED CABLE — TYPE

☒ PIPE LINE — TYPE: Water

☐ NON-COMMERCIAL SIGN — FEE AMOUNT

☐ MISCELLANEOUS OPERATIONS AND/OR FACILITIES AS DESCRIBED BELOW

APPLICANT NAME AND ADDRESS

City of Dayton
PO Box 339
416 Ferry Street
Dayton, OR 97114-0339

FOR ODOT USE ONLY

BOND REQUIRED ☐ YES ☐ NO — REFERENCE: OAR 734-55 035(2) — AMOUNT OF BOND

INSURANCE REQUIRED ☐ YES ☐ NO — REFERENCE: OAR 734-55 035(1) — SPECIFIED COMP. DATE

## DETAIL LOCATION OF FACILITY (For more space attach additional sheets)

| MILE POINT | TO MILE POINT | ENGINEERS STATION | TO ENGINEERS STATION | SIDE OF HWY OR ANGLE OF CROSSING | DISTANCE FROM CENTER OF PVMT | DISTANCE FROM R/W LINE | BURIED CABLE OR PIPE DEPTH/VERT. | BURIED CABLE OR PIPE SIZE AND KIND | SPAN LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 29.79 | 29.79 | | | 90° crossing | n/a | n/a | 48" min cover | 12" WL inside steel casing | |

DESCRIPTION AND LOCATION OF NON-COMMERCIAL SIGNS OR MISCELLANEOUS OPERATIONS FACILITIES

Replacement of existing 1932 vintage waterline from Dayton watershed to town with new 12" waterline inside steel casing.

SPECIAL PROVISIONS (FOR MORE SPACE ATTACH ADDITIONAL SHEETS)

TRAFFIC CONTROL REQUIRED

◆ ☐ YES [OAR 734-55-025(6)] ☐ NO

OPEN CUTTING OF PAVED OR SURFACED AREAS ALLOWED?

◆ ☐ YES [OAR 734-55-100(2)] ☐ NO [OAR 734-55-100(1)]

◆ **AT LEAST 48 HOURS BEFORE BEGINNING WORK, THE APPLICANT OR HIS CONTRACTOR SHALL NOTIFY THE DISTRICT REPRESENTATIVE AT TELEPHONE NUMBER: _____ OR FAX A COPY OF THIS PAGE TO THE DISTRICT OFFICE AT: _____ SPECIFY TIME AND DATE IN THE SPACE BELOW.**

◆ A COPY OF THIS PERMIT AND ALL ATTACHMENTS SHALL BE AVAILABLE AT THE WORK AREA DURING CONSTRUCTION.

◆ **ATTENTION: Oregon Law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503) 232-1987.**
***CALL BEFORE YOU DIG 1-800-332-2344***

COMMENTS - ODOT USE ONLY

IF THE PROPOSED APPLICATION WILL AFFECT THE LOCAL GOVERNMENT, THE APPLICANT SHALL ACQUIRE THE LOCAL GOVERNMENT OFFICIAL'S SIGNATURE BEFORE ACQUIRING THE DISTRICT MANAGER'S SIGNATURE.

| LOCAL GOVERNMENT OFFICIAL SIGNATURE | | TITLE | DATE |
|---|---|---|---|
| X | | Dayton City Manager | |
| **APPLICANT SIGNATURE** | **APPLICATION DATE** | **TITLE** | **TELEPHONE NO.** |
| X | | Dayton City Manager | 503-864-2221 |
| When this application is approved by the Department, the applicant is subject to, accepts and approves the terms and provisions contained and attached; and the terms of Oregon Administrative Rules, Chapter 734, Division 55, which is by this reference made a part of this permit. | | DISTRICT MANAGER OR REPRESENTATIVE | APPROVAL DATE |
| | | X | |

734-3457(2-06)

Oregon Department of Transportation

# APPLICATION AND PERMIT TO OCCUPY OR PERFORM OPERATIONS UPON A STATE HIGHWAY

See Oregon Administrative Rule, Chapter 734, Division 55

PERMIT NUMBER

CLASS | KEY#

## GENERAL LOCATION

HIGHWAY NAME AND ROUTE NUMBER: OR-18 / 39 / Salmon River

HIGHWAY NUMBER: 39

COUNTY: Yamhill

BETWEEN OR NEAR LANDMARKS: from McDougall Corner (Hwy 99W intersection) to Kreder Road

HWY. REFERENCE MAP

DESIGNATED FREEWAY: ☐ YES ☒ NO

IN U.S. FOREST: ☐ YES ☒ NO

APPLICANT NAME AND ADDRESS

City of Dayton
PO Box 339
416 Ferry Street
Dayton, OR 97114-0339

## PURPOSE OF APPLICATION (TO CONSTRUCT/OPERATE/MAINTAIN)

☐ POLE LINE | TYPE | MIN. VERT. CLEARANCE

☐ BURIED CABLE | TYPE

☒ PIPE LINE | TYPE: Water

☐ NON-COMMERCIAL SIGN | FEE AMOUNT

☐ MISCELLANEOUS OPERATIONS AND/OR FACILITIES AS DESCRIBED BELOW

FOR ODOT USE ONLY

BOND REQUIRED ☐ YES ☐ NO | REFERENCE: OAR 734-55 035(2) | AMOUNT OF BOND

INSURANCE REQUIRED ☐ YES ☐ NO | REFERENCE: OAR 734-55 035(1) | SPECIFIED COMP. DATE

## DETAIL LOCATION OF FACILITY (For more space attach additional sheets)

| MILE POINT | TO MILE POINT | ENGINEERS STATION | TO ENGINEERS STATION | SIDE OF HWY OR ANGLE OF CROSSING | DISTANCE FROM CENTER OF PVMT | DISTANCE FROM R/W LINE | BURIED CABLE OR PIPE DEPTH/VERT. | BURIED CABLE OR PIPE SIZE AND KIND | SPAN LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 52.71 (@Hwy 99W) | 52.27 (Kreder Rd) | | 367+62 | southeast side | varies (±5' from edge AC) | varies | 3' minimum cover | 12" Waterline | |

DESCRIPTION AND LOCATION OF NON-COMMERCIAL SIGNS OR MISCELLANEOUS OPERATIONS FACILITIES

Replacement of existing 1932 vintage waterline from Dayton watershed to town with new 12" waterline.

SPECIAL PROVISIONS (FOR MORE SPACE ATTACH ADDITIONAL SHEETS)

TRAFFIC CONTROL REQUIRED

◆ ☐ YES (OAR 734-55-025(6)) ☐ NO

OPEN CUTTING OF PAVED OR SURFACED AREAS ALLOWED?

◆ ☐ YES (OAR 734-55-100(2)) ☐ NO (OAR 734-55-100(1))

◆ **AT LEAST 48 HOURS BEFORE BEGINNING WORK, THE APPLICANT OR HIS CONTRACTOR SHALL NOTIFY THE DISTRICT REPRESENTATIVE AT TELEPHONE NUMBER: _____ OR FAX A COPY OF THIS PAGE TO THE DISTRICT OFFICE AT: _____ SPECIFY TIME AND DATE IN THE SPACE BELOW.**

◆ A COPY OF THIS PERMIT AND ALL ATTACHMENTS SHALL BE AVAILABLE AT THE WORK AREA DURING CONSTRUCTION.

◆ **ATTENTION: Oregon Law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503) 232-1987.**
***CALL BEFORE YOU DIG 1-800-332-2344***

COMMENTS - ODOT USE ONLY

IF THE PROPOSED APPLICATION WILL AFFECT THE LOCAL GOVERNMENT, THE APPLICANT SHALL ACQUIRE THE LOCAL GOVERNMENT OFFICIAL'S SIGNATURE BEFORE ACQUIRING THE DISTRICT MANAGER'S SIGNATURE.

| LOCAL GOVERNMENT OFFICIAL SIGNATURE | | TITLE | DATE |
|---|---|---|---|
| X | | Dayton City Manager | |
| **APPLICANT SIGNATURE** | **APPLICATION DATE** | **TITLE** | **TELEPHONE NO.** |
| X | | Dayton City Manager | 503-864-2221 |
| When this application is approved by the Department, the applicant is subject to, accepts and approves the terms and provisions contained and attached; and the terms of Oregon Administrative Rules, Chapter 734, Division 55, which is by this reference made a part of this permit. | | DISTRICT MANAGER OR REPRESENTATIVE: X | APPROVAL DATE |

734-3457(2-06)

# STATE OF OREGON
# DEPARTMENT OF HUMAN SERVICES
# DRINKING WATER PROGRAM
# LAND USE COMPATIBILITY STATEMENT

Certain plan review approvals for drinking water projects have been identified by the Department of Land Conservation and Development as Class B permits affecting land use. The Department of Human Services is therefore required by ORS 197-180, OAR 660-30-065 to - 070, OAR 660-31-010-040, the Department of Human Service=s state agency coordination program and OAR 333-61-062 to ensure that projects defined in OAR 333-61-062(1) are compatible with city and county comprehensive plans and land use regulations. This form or other acceptable documentation and necessary attachments must accompany each set of project plans to ensure that compatibility.

1. GENERAL INFORMATION

a. Project Title FISHER FARM WELL IMPROVEMENTS

b. Applicant CITY OF Dayton
Name of Water System

c. Type of project ☆ SOURCE WATER (WELLS) piping & control IMPROVEMENTS
Treatment, Transmission, Storage, Distribution, Etc.

d. Project contact person DENNY MUCHMORE, PE WESTECH ENGINEERING
Engineer/owners, etc., including title
3841 FAIRVIEW INDUSTRIAL DRIVE SE, SUITE 100
Street Address
SALEM OR 97302
City, State, Zip Code Phone

e. The local government entity* having comprehensive planning authority over the site of the proposed project is:

Agency Name YAMHILL COUNTY Phone 503-434-7516

Address 525 NE 4TH STR, McMINNVILLE, OR Zip 97128
(*If the proposed project is located within the jurisdiction of more than one planning authority, all entities must certify compatibility.)

f. If a statement of compatibility previously has been submitted to the Department to cover a master water system plan, of which this project is a segment, no further information is required. If such a statement has been filed, the date of the submittal was _____.

(Continued on the back)

☆ upgrade of EXISTING WELLS & controls to comply WITH CURRENT STATE STANDARDS FOR MUNICIPAL WELLS. ALL WORK WILL BE ADJACENT TO EXISTING well HEADS & control SYSTEMS.

## LAND USE COMPATIBILITY DETERMINATION (Complete either 2 or 3)

2. PLANNING AUTHORITY STATEMENT: (To be completed by local planning authority)

a. I certify that this project has been reviewed for compatibility with:

1. ~ The acknowledged comprehensive plan and land use regulations.

2. ~ Statewide planning goals. The goals apply because:

~ There is no acknowledged plan, or
~ Conditions described in OAR 660-31-025(3) apply.

b. I find that this project **(circle one)** IS or IS NOT, compatible.
Attach appropriate land use decision(s) written findings as required in ORS 215.416 (8) or (9) or 227.173 (1) OR (2), or OAR 660-31-025 (2) or (3).

Signed_____ Title_____
Date_____

3. APPLICANT REQUEST FOR PLAN REVIEW APPROVAL

I hereby certify that I have applied to the local governments cited in 1.e above for a determination of compatibility with the local acknowledged plan or the statewide planning goals as applicable. I hereby request that the Department issue the plan review approval with the understanding that issuance of said approval is not a finding of compliance with the statewide planning goals or compatibility with the applicable, acknowledged comprehensive plan and land use regulations, but will be conditional, pending the applicant receiving a land use approval from each unit of local government. When signed, such approval shall be forwarded to the Department. I understand that plan review approval for this project will not be effective until and unless the Department of Human Services has received a copy of the land use approval and determined it to be complete and adequate.

Signed_____Title_____Date_____

DRAWINGS FOR:

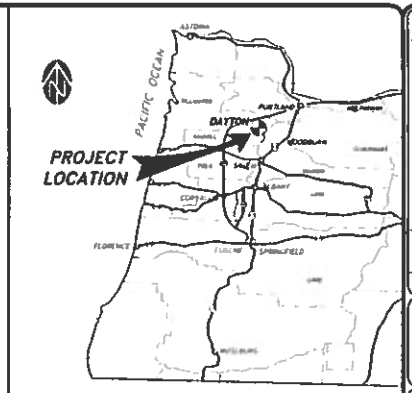
# WATERSHED TRANSMISSION LINE, RESERVOIRS TO MCDOUGALL WELLS

(See G-02 for Sheet Index)

Schedule A: Watershed Reservoirs to McDougall Water Service
(±2094' of 12" mainline, NOT CONSTRUCTED)

Schedule B: Old Chlorination Building to McDougall Water Service
(±1431' of 12" mainline, CONSTRUCTED)

(See G-03 for Map of Area Limits for each Schedule)




RECORD DRAWINGS

Reproduced Drawn By: DMM Date: 10/31/2014

THESE RECORD DRAWINGS HAVE BEEN PREPARED IN PART ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

FOR: City Dayton, OR
PO Box 339
416 Ferry Street
Dayton, OR 97114
(503) 864-2221

PLAN CONSTRUCTION SET July 7 2014

**CONFORMED**

811 Know what's below. Call before you dig.

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE
RESERVOIRS TO MCDOUGALL WELLS
COVER SHEET

DRAWING G-01

JOB NUMBER 2609.4090.0

## SHEET INDEX

21

| Drawing | Title |
|---|---|
| G-01 | COVER SHEET |
| G-02 | SHEET INDEX |
| G-03 | MAP OF AREA LIMITS FOR EACH SCHEDULE |
| G-04 | CONSTRUCTION NOTES |
| G-05 | LEGEND |
| G-06 | EROSION CONTROL NOTES & DETAILS |
| G-07 | STREET & TRENCH DETAILS |
| G-08 | WATER DETAILS |
| G-09 | WATER DETAILS |

"G" SHEETS APPLY SEPARATELY TO ALL SCHEDULES

9

REFERENCE DRAWING

| | |
|---|---|
| A-01 | ACCESS ROAD FROM McDOUGALL ROAD |

SCHEDULE B

| | |
|---|---|
| A-02 | WATERLINE PLAN AND PROFILE STA. 9+50 - 14+00 |
| A-03 | WATERLINE PLAN AND PROFILE STA. 14+00 - 18+50 |
| A-04 | WATERLINE PLAN AND PROFILE STA. 18+50 - 23+00 |
| A-05 | WATERLINE PLAN AND PROFILE STA. 23+00 - 27+50 |
| ~~A-05.1~~ | ~~SERVICE ALIGNMENT OPTION 1~~ |
| | ~~4195 NE BREYMAN ORCHARDS RD PLAN AND PROFILE~~ |
| ~~A-05.2~~ | ~~SERVICE ALIGNMENT OPTION 2~~ |
| | ~~4195 NE BREYMAN ORCHARDS RD PLAN AND PROFILE~~ |

12

SCHEDULE A (not constructed)

| | |
|---|---|
| A-05 | WATERLINE PLAN AND PROFILE STA. 23+00 - 27+50 |
| A-06 | WATERLINE PLAN AND PROFILE STA. 27+50 - 32+00 |
| A-07 | WATERLINE PLAN AND PROFILE STA. 32+00 - 36+50 |
| A-08 | WATERLINE PLAN AND PROFILE STA. 36+50 - 41+00 |
| A-09 | WATERLINE PLAN AND PROFILE STA. 41+00 - 45+50 |
| A-010 | WATERLINE CONNECTION DETAILS |

**RECORD DRAWINGS**

Revisions Shown By: DJM Date: 10/31/2014

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| NO | DATE | DESCRIPTION / REVISIONS | BY |
|---|---|---|---|
| | | | |

DJM 2014
DJM 2014
DJM JAN 2014

AS-CONSTRUCTED

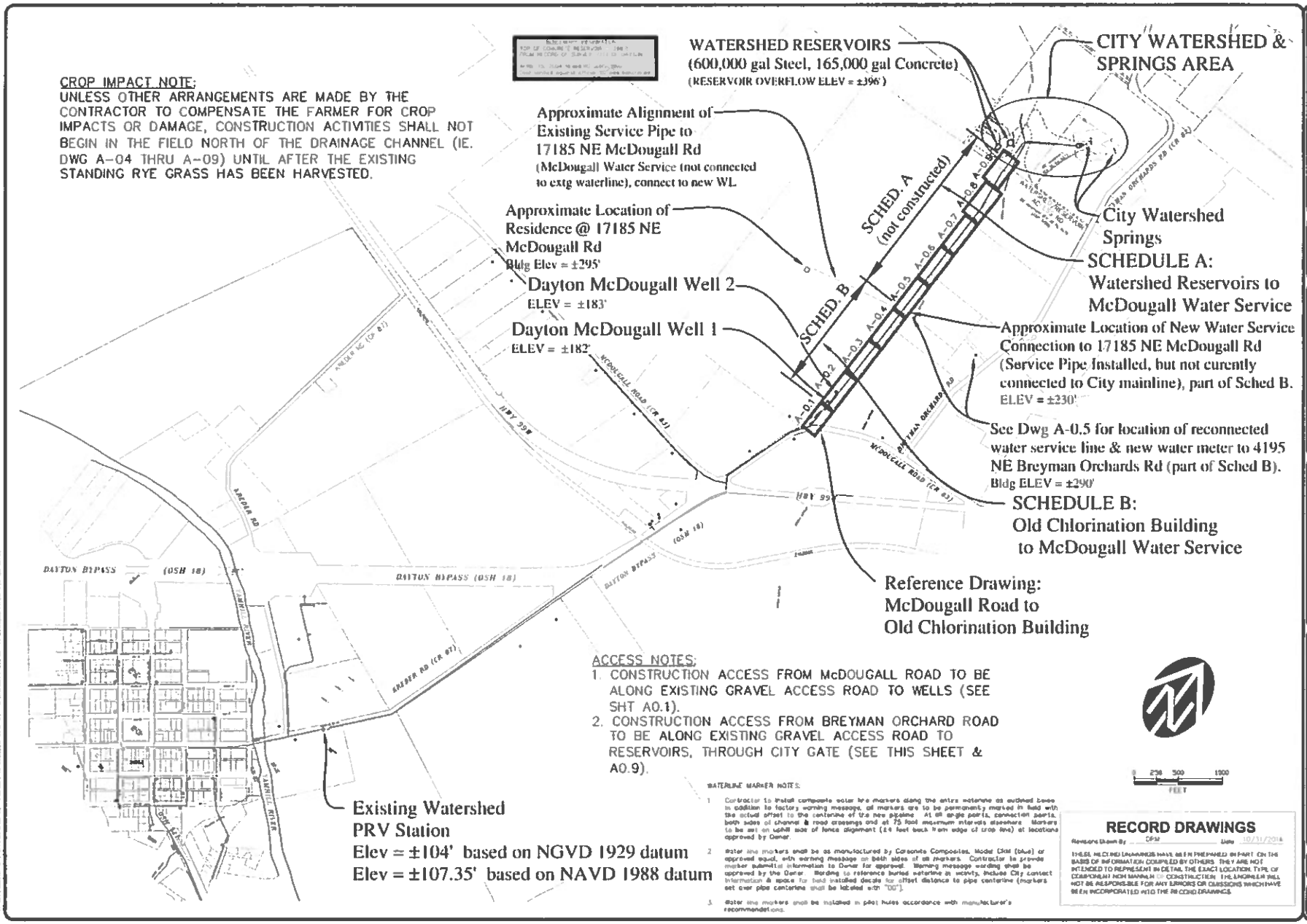
WESTECH ENGINEERING, INC.
CIVIL & STRUCTURAL ENGINEERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: mail@westech-eng.com

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE,
RESERVOIRS TO McDOUGALL WELLS

SHEET INDEX

DRAWING
G-02

JOB NUMBER
2609.4090.0


CROP IMPACT NOTE:
UNLESS OTHER ARRANGEMENTS ARE MADE BY THE CONTRACTOR TO COMPENSATE THE FARMER FOR CROP IMPACTS OR DAMAGE, CONSTRUCTION ACTIVITIES SHALL NOT BEGIN IN THE FIELD NORTH OF THE DRAINAGE CHANNEL (IE. DWG A-04 THRU A-09) UNTIL AFTER THE EXISTING STANDING RYE GRASS HAS BEEN HARVESTED.
WATERSHED RESERVOIRS
(600,000 gal Steel, 165,000 gal Concrete)
(RESERVOIR OVERFLOW ELEV = ±396')
CITY WATERSHED & SPRINGS AREA
Approximate Alignment of Existing Service Pipe to 17185 NE McDougall Rd
(McDougall Water Service (not connected to extg waterline), connect to new WL
Approximate Location of Residence @ 17185 NE McDougall Rd
Bldg Elev = ±295'
Dayton McDougall Well 2
ELEV = ±183'
Dayton McDougall Well 1
ELEV = ±182'
SCHED. A (not constructed)
SCHED. B
A-0.1
A-0.2
A-0.3
A-0.4
A-0.5
A-0.6
A-0.7
A-0.8
A-0.9
City Watershed Springs
SCHEDULE A:
Watershed Reservoirs to McDougall Water Service
Approximate Location of New Water Service Connection to 17185 NE McDougall Rd (Service Pipe Installed, but not curently connected to City mainline), part of Sched B.
ELEV = ±230'
See Dwg A-0.5 for location of reconnected water service line & new water meter to 4195 NE Breyman Orchards Rd (part of Sched B).
Bldg ELEV = ±290'
SCHEDULE B:
Old Chlorination Building to McDougall Water Service
Reference Drawing:
McDougall Road to
Old Chlorination Building
McDOUGALL ROAD (CR 83)
BREYMAN ORCHARDS RD
HWY 99W
DAYTON BYPASS (OSH 18)
ARDER RD (CR 87)
YAMHILL RIVER
Existing Watershed
PRV Station
Elev = ±104' based on NGVD 1929 datum
Elev = ±107.35' based on NAVD 1988 datum
ACCESS NOTES:
1. CONSTRUCTION ACCESS FROM McDOUGALL ROAD TO BE ALONG EXISTING GRAVEL ACCESS ROAD TO WELLS (SEE SHT A0.1).
2. CONSTRUCTION ACCESS FROM BREYMAN ORCHARD ROAD TO BE ALONG EXISTING GRAVEL ACCESS ROAD TO RESERVOIRS, THROUGH CITY GATE (SEE THIS SHEET & A0.9).
WATERLINE MARKER NOTES:
1. Contractor to install composite water line markers along the entire waterline as outlined below. In addition to factory warning messages, all markers are to be permanently marked in field with the actual offset to the centerline of the new pipeline. At all angle points, connection points, both sides of channel & road crossings and at 75 foot maximum intervals elsewhere. Markers to be set on uphill side of fence alignment (±4 feet back from edge of crop line) at locations approved by Owner.
2. Water line markers shall be as manufactured by Carsonite Composites, Model 3GM (blue) or approved equal, with warning messages on both sides of all markers. Contractor to provide marker submittal information to Owner for approval. Warning message wording shall be approved by the Owner. Wording to reference buried waterline in vicinity, include City contact information & space for hand installed decals for offset distance to pipe centerline (markers set over pipe centerline shall be labeled with "00").
3. Water line markers shall be installed in plumb holes accordance with manufacturer's recommendations.
0 250 500 1000
FEET
RECORD DRAWINGS
Revisions Drawn By: DPM Date: 10/31/2014
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CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS
MAP OF AREA LIMITS FOR EACH SCHEDULE
DRAWING
G-03
JOB NUMBER
2609.4090.0

## GENERAL NOTES

1. Contractor shall procure and conform to all construction permits required by the City of Dayton and Yamhill County.
2. Contractor shall provide all bonds and insurance required by public and/or private agencies having jurisdiction.
3. All materials and workmanship for facilities in street right-of-way or easements shall conform to approving agencies' construction specifications wherein each has jurisdiction, including but not limited to the City, County, Oregon Health Division (OHD) and the Oregon Department of Environmental Quality (DEQ).
4. Unless otherwise approved by the Public Works Superintendent, construction of all public facilities shall be done between 7:00 a.m. and 6:00 p.m., Monday through Friday, and between 9:00 a.m. and 6:00 p.m. Saturday.
5. The Contractor shall perform all work necessary to complete the project in accordance with the approved construction drawings including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.
6. Contractor to notify City, County, ODOT and all utility companies a minimum of 48 business hours (2 business days) prior to start of construction, and comply with all other requirements of ORS 757.541 to 757.571.
7. Any inspection by the City, County or other agencies shall not, in any way, relieve the Contractor from any obligation to perform the work in strict compliance with the applicable codes and agency requirements.
8. Contractor shall erect and maintain barricades, warning signs, traffic cones (and all other traffic control devices required) per City, County and ODOT requirements in accordance with the current MUTCD (including Oregon amendments). Access to driveways shall be maintained at all times. All traffic control measures shall be approved and in place prior to any construction activity.
9. Record Drawings. The Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record any approved deviations in construction from the approved drawings, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the City upon request.
10. Upon completion of construction of public facilities, Contractor shall submit a clean set of field record drawings containing all as-built information to the Design Engineer for use in the preparation of As-Built drawings for submittal to the City.
11. Contractor is solely responsible for ensuring that any site, street or utility work within the jurisdiction of the City meets or exceeds any and all legal requirements and any and all industry best practices in the design, construction and/or performance of such site, street or utility work. Contractor is solely responsible for payment of any assessment, fine, penalty, claim, damages or costs that result from Contractor's (1) performing site, street or utility work or (2) failing to perform site, street or utility work that meets or exceeds any and all legal requirements and industry best practices. The City may require and Contractor shall provide the City with confined space entry plans conforming with the requirements of OR-OSHA, traffic control plans, or other plans or performance descriptions necessary or desirable for the Public Works Director to assure that these requirements can be met in performing the work. The City's acceptance, review, or comments on or about the adequacy of any such plan shall not relieve or reduce Contractor's sole responsibility to meet any and all legal requirements, administrative requirements, or industry best practices, and Contractor specially assumes, will defend, and will indemnify the City for any liability, damages, fines, fees or assessments related in any manner to Contractor's site, street or utility work.

## EXISTING UTILITIES & FACILITIES

12. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).
13. The location and descriptions of existing utilities shown on the drawings are compiled from available records and/or field surveys. The engineer or utility companies do not guarantee the accuracy or the completeness of such records. Contractor shall field verify sizes and locations of all existing utilities prior to construction.
14. The Contractor shall locate and mark all existing property and street monuments prior to construction. Any monuments disturbed during construction of the project shall be replaced by a Registered Land Surveyor at the Contractor's expense. The monuments shall be replaced within a maximum of 90 days, and the County Surveyor shall be notified in writing as required by ORS 209.150.
15. Contractor shall field verify location and depth of all existing utilities where new facilities cross or are closely parallel to the existing facilities. All utility crossings marked or shown on the drawings shall be potholed using hand tools or other non-invasive methods prior to excavating or boring. Contractor shall be responsible for exposing potential utility conflicts far enough ahead of construction to make necessary grade modifications without delaying the work. If grade modification is necessary, Contractor shall notify and obtain approval from the City Engineer prior to construction. All utility crossings shall be potholed as necessary prior to excavating or boring to allow the Contractor to prevent grade or alignment conflicts.
16. All existing facilities shall be maintained in-service by the Contractor unless otherwise shown or directed. Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. Contractor to leave existing facilities in an equal or better-than-original condition and to the satisfaction of the City Engineer.
17. Utilities, or interfering portions of utilities, that are abandoned in place shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug the remaining exposed ends of abandoned utilities.
18. Contractor shall remove all existing signs, mailboxes, fences, landscaping, etc., as required to avoid damage during construction and replace them to existing or better condition.

## GRADING, PAVING & DRAINAGE

19. The Contractor shall be responsible for managing construction activities to ensure that public streets and right-of-ways are kept clean of mud, dust or debris. Dust abatement shall be maintained by adequate watering of the site by the Contractor.
20. Unless otherwise noted, all grading, rocking and paving to conform to OSSC (ODOT/APWA) Specifications, 2008 edition.
21. Clear and grub within work limits all surface vegetation, trees, stumps, brush, roots, etc. Do not damage or remove trees except as approved by the engineer or as shown on the drawings. Protect all roots two inches in diameter or larger.
22. Unless otherwise shown on the drawings, straight grades shall be run between all finish grade elevations and/or finish contour lines shown.
23. Crushed rock shall conform to the requirements of OSSC (ODOT/APWA) 02630.10 (Dense Graded Base Aggregate), with no more than 10% passing the #40 sieve and no more than 5% passing the #200 sieve. Prior to placing AC pavement, written compaction test results for baserock and trench backfill must be received by the City, and a proof-roll (witnessed by the City) must be performed.
24. Paving of streets shall not be allowed until after completion of all required testing and inspection of new water, sewer and storm drain lines under paved areas, and review and approval of the private (franchise) utility plans by the City Engineer.
25. A.C. Pavement shall conform to OSSC (ODOT/APWA) 00744 (Level Hot Mixed Asphalt Concrete (HMAC) Pavements) for standard duty mix. AC Pavement shall be compacted to a minimum of 91% of maximum density (at all locations) as determined by the Rice standard method.
26. All existing or constructed manholes, cleanouts, monuments, gas valves, water valves and similar structures shall be adjusted to match finish grade of the pavement, sidewalk, landscaped area or median strip wherein they lie.
27. Contractor shall hydroseed all exposed slopes and disturbed areas which are not scheduled to be landscaped.

## PIPED UTILITIES

28. Contractor shall coordinate and pay all costs associated with connecting to existing water, sanitary sewer and storm sewer facilities.
29. Unless otherwise noted, materials and workmanship for water, sanitary sewer and storm sewer shall conform to OSSC (ODOT/APWA) Specifications, 2008 edition.
30. The Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade. The bottom of the trench excavation shall be shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.
31. Bedding and Backfill. All pipes shall be bedded with minimum 6-inches of 3/4" minus crushed rock bedding and backfilled with compacted 3/4" minus crushed rock in the pipe zone (crushed rock shall extend a minimum of 12-inches over the top of the pipe in all cases). Crushed rock trench backfill shall be used under all improved areas, including sidewalks. Granular trench backfill shall be compacted to 92% of the maximum dry density per AASHTO T-180 test method (Modified Proctor).
32. Contractor shall arrange for and pay all costs to abandon existing water services not scheduled to remain in service.
33. All piped utilities abandoned in place shall have all openings closed with concrete plugs with a minimum length equal to 2 times the diameter of the abandoned pipe.
34. Contractor shall provide all materials, equipment and facilities required for testing all utility piping in accordance with City construction specifications.
35. Tracer Wire. All water piping shall have an electrically conductive insulated 12 gauge solid core copper tracer wire the full length of the installed pipe using blue wire for water and green for storm and sanitary piping. Tracer wire shall be extended up into all valve boxes. All tracer wire splices shall be made with waterproof splices or waterproof/corrosion resistant wire nuts.
36. Warning Tape. Detectable or non-detectable [illegible] color coded safety warning tape shall be provided along all water mainline segments not located under sidewalks or paved portions of public streets.
37. No trenches in roads or driveways shall be left in an open condition overnight. All such trenches shall be closed before the end of each work day and normal traffic flows restored.

Water

38. City forces to operate all valves, including fire hydrants, on existing public mains.
39. All water mains shall be C-900 PVC (DR 18) or Class 52 ductile iron. All fittings 4-inches through 24-inches in diameter shall be ductile iron fittings in conformance with AWWA C-153 or AWWA C-110. The minimum working pressure for all MJ cast iron or ductile iron fittings 4-inches through 24-inch in diameter shall be 350 psi for MJ fittings and 250 psi for flanged fittings.
40. All water mains to be installed with a minimum 36 inch cover to finish grade unless otherwise noted or directed. Service lines to be installed with a minimum 30 inches cover within the right-of-way. Deeper depths may be required as shown on the drawings or to avoid obstructions.
41. Thrust restraint shall be provided on all bends, tees and other direction changes per local jurisdiction requirements and as specified or shown on the drawings. Unless otherwise approved by the City Engineer, all valves shall be flange connected to adjacent tees or crosses.
42. Unless otherwise approved by the City, 1" and 1½" water service pipe on the public side of the meter shall be CenCore blue HDPE tubing (CTS, SDR 9, 200 psi) conforming to AWWA C901 (ASTM D2239 & D2737) with 316 long compression inserts and compression [illegible] style compression fittings.
43. Unless otherwise noted, water service pipe on the private side of the meter shall be Schedule 40 PVC.
44. Domestic and fire backflow prevention devices and vaults shall conform to requirements of public and/or private agencies having jurisdiction.
45. Contractor shall install temporary plug and blowoff as required at the end of waterline for flushing, testing and chlorination.
46. The work shall be performed in a manner designated to maintain water service to buildings supplied from the existing waterlines. In no case shall service to any main line or building be interrupted for more than four (4) hours in any one day. Contractor shall notify the City and all affected residents and businesses a minimum of 24 business hours (1 business day) prior to any interruption of service.
47. Pressure Testing. All waterlines, services and appurtenances shall be pressure tested for leakage. All testing shall conform to requirements as outlined on City testing forms contained in the PWDS. The hydrostatic test shall be performed with all service line corporation stops open and meter stops closed, and with all hydrant line valves open. Prior to the start of each pressure test, the position of all mainline valves, hydrant line valves and service line corporation stops in the test segment shall verified.
48. Cleaning & Flushing. After the pressure test and prior to disinfecting, the water lines shall be thoroughly flushed through hydrants, blow offs or by other approved means.
49. Disinfection & Bacteriological Testing. All water mains and service lines shall be chlorine disinfected per local jurisdiction requirements, AWWA C-651 or OAR 333-061 (25 mg/L minimum chlorine solution, 24 hours contact time), whichever is more stringent. Unless otherwise approved by the Public Works Superintendent, a City representative shall witness the application of the chlorine solution and the chlorine testing at the end of the 24 hour contact period. After the 24 hour chlorine contact period, the free chlorine concentration shall be checked, and if it is found to be 10 mg/L or more, the chlorine solution shall be drained (otherwise the line shall be rechlorinated), the waterline flushed with potable water, and a minimum of two consecutive samples taken at least 24 hours apart shall be collected from the waterline for microbiological analysis (ie. one sample immediately after flushing, and another sample 24 hours later). Contractor to pay for laboratory analysis of water samples taken under the supervision of the City. If the results of both analyses indicate that the water is free of coliform organisms, the waterline may be placed in service. Should the initial treatment prove ineffective, the chlorination shall be repeated until confirmed tests show acceptable results.
50. Disinfection of Connections. For connections which cannot be disinfected with the waterline mainlines as noted above, all fittings, valves and appurtenances, including tool surfaces which will come in contact with potable water, shall be thoroughly cleaned by washing with potable water and then swabbed or sprayed with a one percent (1%) hypochlorite solution (10,000 mg/L) in accordance with the requirements of AWWA C-651 and OAR 333-061.

## FRANCHISE UTILITIES

51. Contractor shall notify and coordinate with private utilities for relocation of power poles, vaults, etc. to avoid conflict with City utility structures, fire hydrants, meters, etc.

## TESTING AND INSPECTION

52. The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems and/or corrective measures arising from uninspected work.
53. Unless otherwise specified, the attached "Minimum Required Testing and Frequency" table outlines the minimum testing schedule for the project. This testing schedule is not complete, and does not relieve the Contractor of the responsibility of obtaining all necessary inspections or observations for all work performed, regardless of who is responsible for payment. Cost for retesting shall be borne by the Contractor.

## REQUIRED TESTING AND FREQUENCY TABLE

| | | Party Responsible for payment: Contractor | Others (see note 1) |
|---|---|---|---|
| **Piped Utilities, All** | | | |
| Trench Backfill | 1 Test/200 Foot Trench/Lift (4 min) | ✓ | See note 2 |
| Trench AC Restoration | 1 Test/300 Foot Trench (4 min) | ✓ | See note 2 |
| **Water** | | | |
| Pressure Test (to be witnessed by Owner's Representative or approving agency) | | ✓ | See note 4 |
| Bacterial Water Test | Per Oregon Health Division | ✓ | See note 2 |
| Chlorine Residual Test | Per City Requirements | ✓ | |

Note 1 "Others" refers to Owner's authorized Representative or Approving Agency as appropriate. Contractor responsible for scheduling testing. All testing must be completed prior to performing subsequent work.

Note 2 Testing shall be performed by an approved independent testing laboratory.

Note 3 Reserved

Note 4 To be witnessed by the Owner's Representative or approving agency. The Contractor shall perform preliminary tests prior to scheduling witnessed tests [illegible].

## RECORD DRAWINGS

Revisions Drawn By: LAM Date: 10/21/2014

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AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS

CONSTRUCTION NOTES

DRAWING G-04

JOB NUMBER 2609.4090.0

DSN DW | DWN JSN | CKD DW | DATE JUN 2014

REVISIONS: NO. | DATE | DESCRIPTION | BY

CITY OF DAYTON, OREGON

WATERSHED TRANSMISSION LINE,
RESERVOIRS TO McDOUGAL WELLS

# LEGEND

DRAWING
G-05

JOB NUMBER
2609.4090.0


WESTECH ENGINEERING, INC.
CIVIL AND STRUCTURAL CONSULTANTS
3841 Fairview Industrial Dr. S.E. Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-2486
E-mail westech@westech-eng.com


AS-CONSTRUCTED
EXPIRES: 12/31/2014
CLAY A. WILLIAMS

| DESIGN | DATE: JAN 2014 |
|---|---|
| DRN | CHK'D |
| DSN | CHK |

VERT. SCALE

| NO. | DESCRIPTION | BY |
|---|---|---|
| | REVISIONS | |

RECORD DRAWINGS

Revisions Drawn By: _____ Date: 12/31/2014

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BARRIE STERTING
CWI #00-09111
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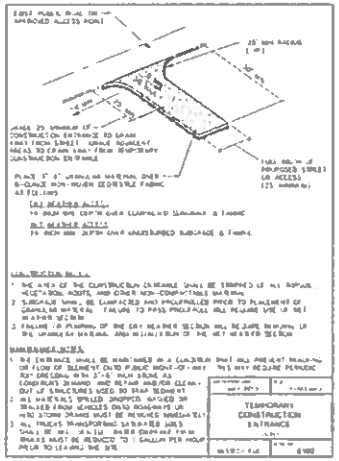
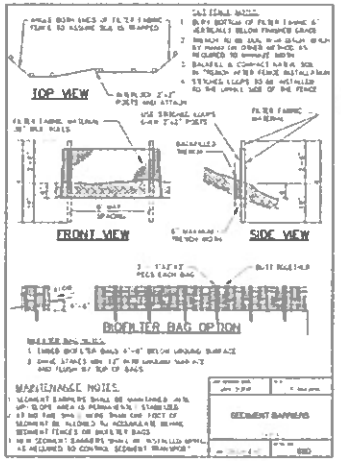
PHONE (503) 363-7446
FAX (503) 363-7446
barrie.sterting@frontier.com

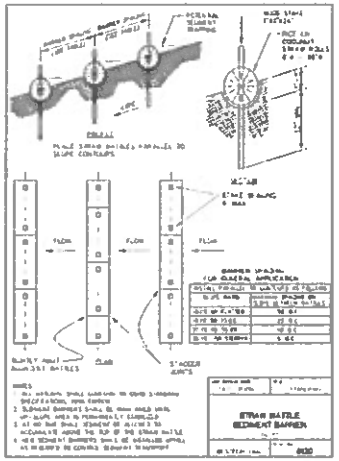


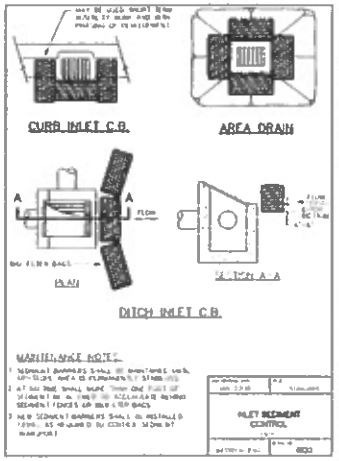
ISSUED FOR PERMIT PURPOSES ONLY BASED ON EVIDENCE FOUND IN THE FIELD, MANUFACTURERS DATA, AND/OR PLANS AND SPECIFICATIONS PROVIDED BY OTHERS. NOT TO BE USED FOR CONSTRUCTION PURPOSES. RECORD DRAWINGS SHALL BE ISSUED AFTER THE DATE OF ACTUAL SUBSTANTIAL COMPLETION AS DEFINED IN THE CONTRACT DOCUMENTS.

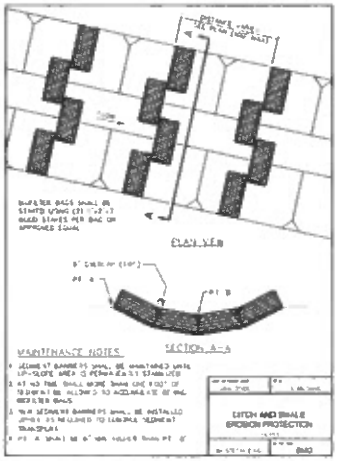
DRIVE-OUT POSITIONS INDICATED ON THE GROUND SURFACE PROVIDED BY LOCATOR SERVICE MAY VARY DUE TO UNDERGROUND UTILITIES CONGESTION.

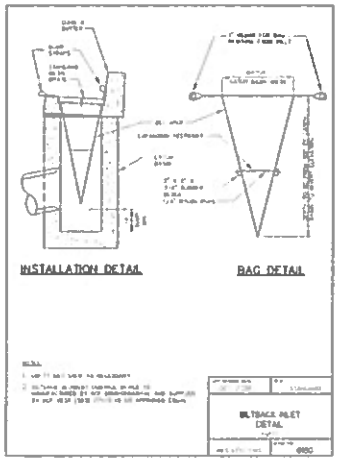


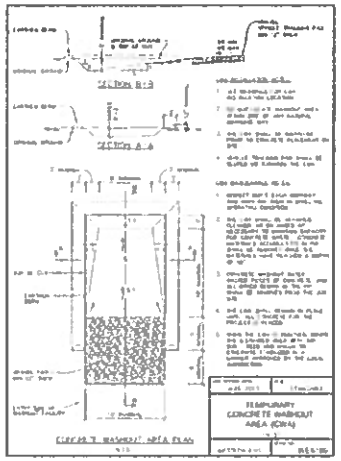












EROSION CONTROL NOTES

1. Clearing and grading erosion control measures shall be in place prior to the disturbance. All other necessary erosion control measures shall be implemented prior to starting work on the portion/phase of the project to which the measures are related. Erosion control measures shall be maintained in such a manner as to ensure that sediment and sediment-laden water does not enter the drainage system, roadways, or violate applicable water quality standards.

2. The erosion control construction, maintenance, replacement and upgrading of the erosion control facilities is the responsibility of the Contractor until all construction is completed and approved, and permanent erosion control (i.e. vegetation/landscaping) is established on all disturbed areas.

3. All recommended erosion control procedures are dependent on construction methods, staging, site conditions, weather and scheduling. During the construction period, erosion control facilities shall be upgraded as necessary due to unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.

4. The Contractor is responsible for control of sediment transport within project limits. If an installed erosion control system does not adequately contain sediment on site, then the erosion control measures shall be adjusted or supplemented by the Contractor as necessary to ensure that sediment laden water does not leave the site. Additional measures shall be provided as required to ensure that all paved areas are kept clean for the duration of the project. Additional priority measures will include, at a minimum, installation of sediment barriers or silt fences in accordance with the details shown on the drawings. These measures shall be installed along all exposed embankments and cut slopes to prevent sediment transport.

5. All existing and newly constructed storm inlets and drains shall be protected and pavement surfaces are compared and/or vegetation is established.

6. Erosion control facilities and sediment basins on active sites shall be inspected by the Contractor at least daily during any period with measurable precipitation. Any required repairs or maintenance shall be completed immediately. The erosion control facilities on inactive sites shall be inspected and maintained by the Contractor a minimum of once a month or within 24 hours following the start of a storm event.

7. All on site and sediment accumulation within a trapped catch basin around 2/3 of the sediment capacity. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system. The Contractor shall remove all deposited sediment from all inspected catch basins and storm pipes prior to acceptance by the Owner.

8. The Contractor is solely responsible for protection of all adjacent property and downstream facilities from sediment during any phase of grading or construction. Any damage resulting from such erosion and siltation shall be corrected at the sole expense of the Contractor.

9. The Contractor shall process site watering as necessary to prevent wind erosion of the graded areas.

10. Unless otherwise indicated on the drawings, all temporary erosion control facilities, including sediment fences, silt socks, bio-bags, etc. shall be removed by the Contractor within 30 days after permanent landscaping/vegetation is established.

11. Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to a post.

12. Sediment fence shall be installed per drawing details. Sediment fences shall have adequate support to contain all silt and sediment captured.

13. The required strength filter fabric shall be fastened securely to stapled wire installed on the upslope side of the posts, and 6 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

14. Bio-filter bags shall be clean 100 percent wood product excelsior. Bags shall be 18 inch x 18-inch x 36-inch, weigh approximately 45 lbs., and be contained in a bag made of 1/2-inch plastic mesh.

15. Sediment barriers shall be maintained until the up-slope area has been permanently stabilized. At the time shall more than 10-inches of sediment be allowed to accumulate behind sediment fences. No more than 3 inches of sediment shall be allowed to accumulate behind bio-filter bags. Sediment shall be removed prior to reaching the above stated depths. Two sediment barriers shall be installed upon as required to control sediment transport.

16. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

17. The Contractor shall verify that all trucks are not loaded when transporting saturated soils from the site. Water dripping from trucks transporting saturated soils shall be reduced to less than 5 gallon per hour prior to leaving the site.

18. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto the public right-of-way or approved access point. The entrance may require periodic top dressing as conditions dictate, and repair and/or cleanout of any structures used to trap sediment.

19. All disturbed soiled, dropped, washed, or tracked from adjacent onto roadways or into storm drains must be removed immediately, and the Contractor shall provide protection of downstream inlets and catch basins to ensure sediment laden water does not enter the storm drain system.

20. Temporary grass cover measures must be fully established by Oct 15th, or other cover measures (i.e. erosion control blankets with anchors, 3-inches minimum of straw mulch, 6 mil HDPE plastic cover, etc.) shall be in place over all disturbed soil areas until April 30th. To maintain an adequate grass stand for controlling erosion by Oct 15th, it is recommended that seeding and mulching occur by September 1st. Straw mulch, if used, shall not have any bare ground visible through the cover.

21. Sediment and another slope protection. For 3H:1V or steeper slopes use Tenax Type C2 or North American Green Type C125 erosion control product. Use a minimum of 2-inches straw mulch or North American Green Type S150 for slopes flatter than 3H:1V. Slope protection shall be placed on all disturbed areas immediately after completion of each location of construction activity, and the erosion control matting has been established. As an option during temporary or seasonal work stoppages, a 6-mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be pinned with an anchor trench at the top and bottom of the slope, and shall be maintained on the slopes as required to prevent damage or displacement by wind.

22. Permanent erosion control vegetation on all embankments and disturbed areas shall be re-established as soon as construction is completed.

23. Soil preparation. Topsoil should be prepared assuring by landscape plans, if available, or recommendations of grass seed supplier. All to remove debris that shapes be tracked before seeding by road walking (i.e. during a seeding tractor up and down the slopes to leave a pattern of shallow grooves parallel to slope contours) or other method to provide water areas for seeds to root.

24. Grass seed, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 15, or between September 1 and October 1. On slopes steeper than 3H:1V, hydromulch and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.

25. When used in lieu of hydromulch, e.g. straw, weed free straw used as mulch shall be applied at a rate of 4000 lbs per acre (assume two hydromulch application requirements). Another straw e.g. packing is by hand or with equipment (rakers, seed blowers, etc.) Mulch shall be spread uniformly immediately following seeding.

26. When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to maintain the grass cover.

27. Seeding. Recommended erosion control grass seed mix is as follows. Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80% by weight), creeping red fescue (20% by weight). Application rate shall be 100 lbs. per acre minimum.

28. Grass seed shall be fertilized at a rate of 10 lbs. per 1000 S.F. with 16-16-16 grow release type fertilizer. Development areas within 30 feet of water bodies and wetlands shall use a non-phosphorous fertilizer.

## RECORD DRAWINGS

Information Drawn By: DPM Date: 10/31/2014

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| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | REVISIONS |

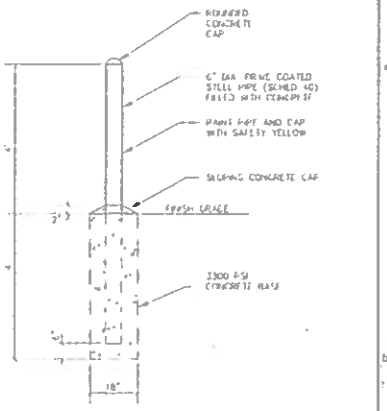
AS-CONSTRUCTED

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE,
RESERVOIRS TO McDOUGALL WELLS

EROSION CONTROL
NOTES & DETAILS

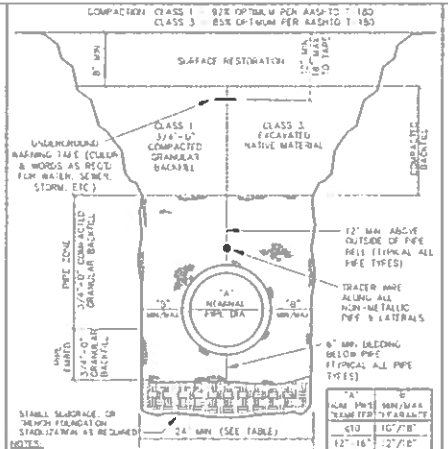
DRAWING
G–06

JOB NUMBER
2609 4090.0




6-INCH BOLLARD (GUARD POST)

SEPT 226 | 226



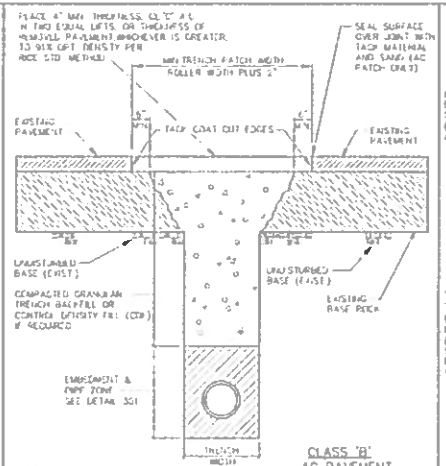

| "A" NOM PIPE DIAMETER | "B" MIN/MAX TRENCH WIDTH |
|---|---|
| ≤10" | 16"/18" |
| 12"-16" | 20"/26" |
| 18"-21" | 18"/28" |
| 24"-30" | 18"/30" |
| >30" | 24"/36" |

NOTES:
1. CLASS 1 BACKFILL UNDER ALL ROAD OR DRIVELINE AREAS INCLUDING SHOULDERS.
2. WHERE NEW PIPING IS AN EXPANSION OF EXISTING PIPING, THE PIPE EMBEDMENT SHALL EXTEND TO A MIN. OF 6" BELOW THE NEW PIPING OR 6" BELOW EXISTING PIPING WHICHEVER IS DEEPER.
3. FOR FLEXIBLE PIPE, BOTTOM OF TRENCH SHORING SHALL BE ABOVE PIPE SPRINGLINE PRIOR TO COMPACTING BACKFILL BELOW THE PIPE SPRINGLINE AND UNDER THE PIPE HAUNCHES.
4. MINIMUM CLEARANCES SHOWN ("B") ASSUME STANDARD WALL TRENCH BOXES SET ON TRENCH BOTTOM AND REPRESENTS WIDTH REQUIRED TO CONSOLIDATE GRANULAR MATERIAL UNDER PIPE HAUNCHES (TO AVOID LOSS OF SIDE SUPPORT WHEN TRENCH BOX IS MOVED OR PULLED FORWARD). TRENCH WIDTH MUST BE INCREASED FOR ADDITIONAL WIDTH REQUIRED FOR SHORING EQUIPMENT.

SEPT 301

TRENCH BACKFILL, BEDDING AND PIPE ZONE

DAYTON, OR | 301



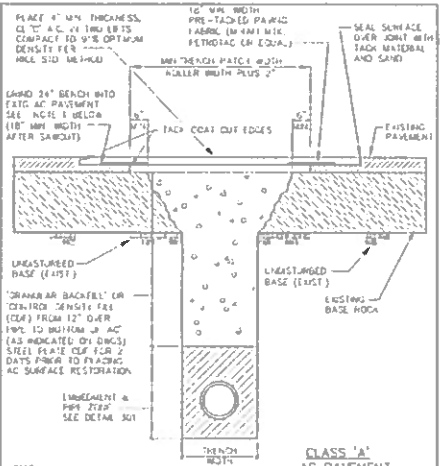

NOTES:
1. A.C. EXISTING AC OR PCC PAVEMENT SHALL BE SAWCUT PRIOR TO REPAVING.
2. PCC CONCRETE MINIMUM SHALL BE REPLACED WITH 3,500 PSI PCC TO A MINIMUM THICKNESS OF 6" OR TO THE THICKNESS OF REMOVED CONCRETE, WHICHEVER IS GREATER.
3. FOR PAVED DRIVEWAYS, (EXCEPT COMMERCIAL OR INDUSTRIAL) PAVEMENT THICKNESS MAY BE REDUCED TO 3" & 7" ABS, AND OVERCUT MAY BE REDUCED TO 3" EACH SIDE.

CLASS 'B' AC PAVEMENT

SEE 303B

MINOR OR PRIVATE STREET AND AC DRIVEWAY CUT SURFACE RESTORATION

DAYTON, OR | 302




NOTES:
1. FOLLOWING BACKFILL COMPACTION OR C/W INSTALLATION, GRIND 24" WIDE BENCH IN EXISTING AC ON BOTH SIDES & TRENCH END, 1-1/2" DEEP OR HALF THE DEPTH OF EXISTING AC WHICHEVER IS GREATER.
2. FOLLOWING GRINDING, SAWCUT ALL TRENCH EDGES 6" BACK FROM TRENCH EDGE.
3. TACK COAT CUT EDGES AND INSTALL BASE LIFT OF AC TO LEVEL OF BENCH GRIND.
4. INSTALL JOINT SEAL FABRIC, TACK COAT EDGES & INSTALL TOP LIFT OF AC. SAND SEAL ALL EDGES (REMOVE EXCESS SAND AFTER CURE).

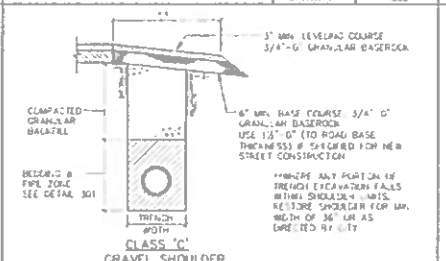
CLASS 'A' AC PAVEMENT

SEE 302A

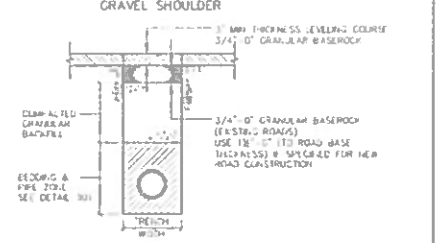
AC STREET CUT SURFACE RESTORATION W/BENCH GRIND

DAYTON, OR | 302A

TRENCH 301 NOTE
30" MINIMUM TRENCH REQUIRED FOR NEW 12" WATERLINE, ASSUMING SPEED SHORING OR MINIMUM SHORING SYSTEM IS USED WHERE REQUIRED. SEE SYSTEM OTHER THAN TRENCH BOXES REFERENCED IN NOTE 4). USE OF STANDARD TRENCH BOXES WILL REQUIRE EXCAVATION OF A TRENCH 24" WIDER THAN THE OUTSIDE DIAMETER OF THE PIPE.




CLASS 'C' GRAVEL SHOULDER



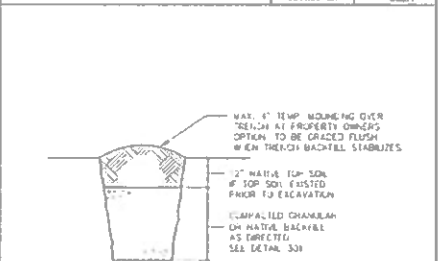

CLASS 'D' GRAVEL STREET

NOTES:
1. COMPACTION STANDARD WILL BE 92% OPTIMUM PER AASHTO T 180

SEE 303

GRAVEL SURFACE RESTORATION

DAYTON, OR | 303




CLASS 'E' UNIMPROVED & OPEN AREAS

NOTES:
1. COMPACTION STANDARD WILL BE AASHTO T 180

SEE 304

NATIVE SURFACE RESTORATION

DAYTON, OR | 304

**RECORD DRAWINGS**

Reviewed Drawn By: DRW Date: 10/3/2008

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| NO | DATE | DESCRIPTION |
|---|---|---|
| 1 | 10/3/08 | REVISIONS |

VERIFY SCALE

DSN DRW CHK DATE: APR 2008

AS-CONSTRUCTED

OREGON REGISTERED PROFESSIONAL ENGINEER

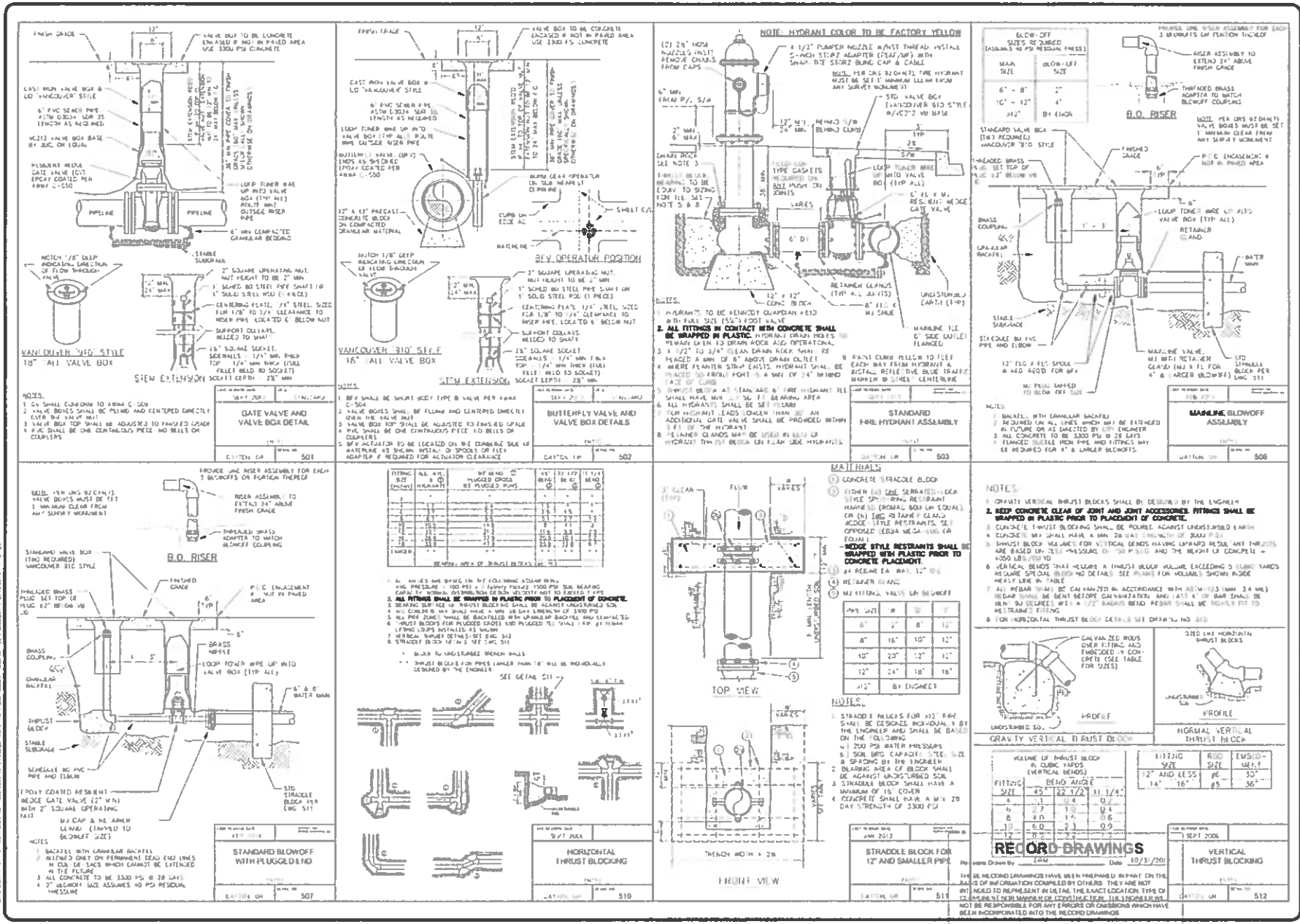

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-3986
E-mail mail@westech-eng.com

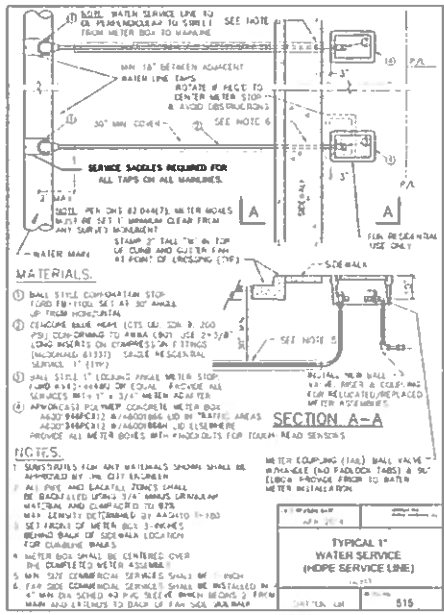

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS

STREET & TRENCH DETAILS

DRAWING G-07

JOB NUMBER 2609.4090.0


GATE VALVE AND VALVE BOX DETAIL
STANDARD
501
BUTTERFLY VALVE AND VALVE BOX DETAILS
STANDARD
502
STANDARD FIRE HYDRANT ASSEMBLY
STANDARD
503
MAINLINE BLOWOFF ASSEMBLY
STANDARD
506
STANDARD BLOWOFF WITH PLUGGED END
STANDARD
507
HORIZONTAL THRUST BLOCKING
STANDARD
510
STRADDLE BLOCK FOR 12" AND SMALLER PIPE
STANDARD
511
VERTICAL THRUST BLOCKING
STANDARD
512
RECORD DRAWINGS
CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS
WATER DETAILS
DRAWING
G-08
JOB NUMBER
2609.4090.0




MATERIALS.

1. BALL STYLE CORPORATION STOP (CORD FIP x TYCEL SET AT 30° ANGLE UP FROM HORIZONTAL
2. CENCURE BLUE MEGA (CTS UL 3CN D. 200 PSI) CLAY-DRAWING TO AWWA (967) (CE 2-3/8" LONG INSERTS ON CORPORATION FITTINGS (MCDONALD 61333) SINGLE RESIDENTIAL SERVICE, 1" (1IPY)
3. BALL STYLE 1" (DOUBLE) ANGLE METER STOP (CORD #48-4444) OR EQUAL PROVIDE ALL SERVICES 8H x 1" x 3/4" METER ADAPTER
4. APPROVED PLASTIC CONCRETE METER BOX A6301944PK12 W/A6001844 LID OR "PLASTIC AREAS A6301344PK12 W/A6001844H LID ELSEWHERE PROVIDE ALL METER BOXES WITH KNOCKOUTS FOR TOUCH READ SENSORS

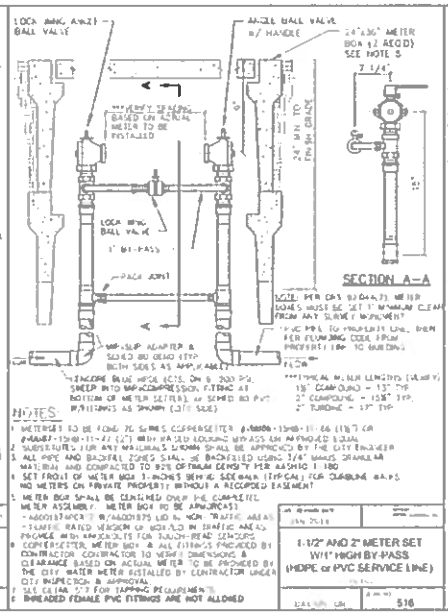
NOTES.

1. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER
2. ALL PIPE AND BACKFILL ZONES SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED MATERIAL AND COMPACTED TO 92% OF MAXIMUM DENSITY PER AASHTO T-180
3. SET AREAS OF METER BOX 3-INCHES BEHIND BACK OF SIDEWALK LOCATION FOR CURBLINE SERVICES
4. METER BOX SHALL BE CENTERED OVER THE COMPLETED METER ASSEMBLY
5. MIN SIZE COMMERCIAL SERVICES SHALL BE 1" INCH
6. FOR ZERO COMMERCIAL SERVICES SHALL BE INSTALLED IN 4" MIN DIA SCHED 40 PVC SLEEVE (WHICH BEGINS 2' FROM MAIN AND EXTENDS TO BACK OF PAVEMENT

METER COUPLING (TAIL) BALL VALVE W/HANDLE (NO PADLOCK TABS) & 90° ELBOW PROVIDE PRIOR TO WATER METER INSTALLATION

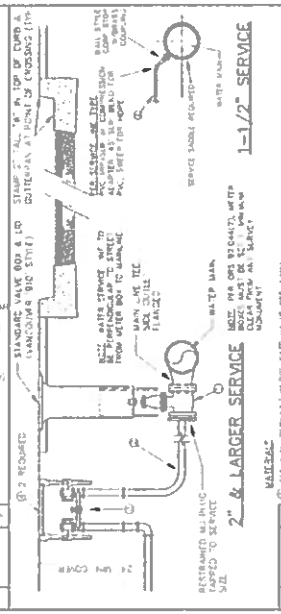
**TYPICAL 1" WATER SERVICE (HDPE SERVICE LINE)**

SHEET NO. 515



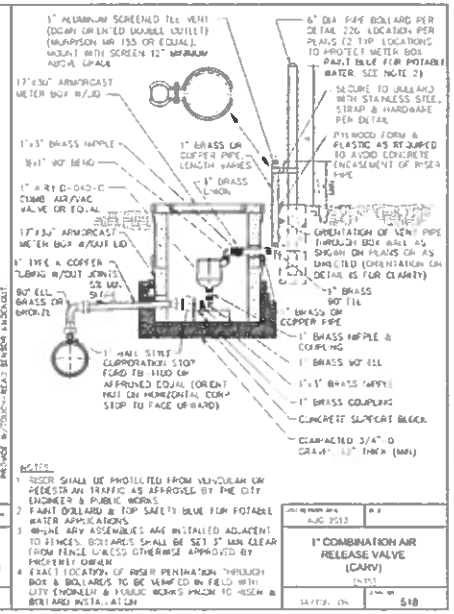

**1-1/2" AND 2" METER SET W/1" HIGH BY-PASS (HDPE or PVC SERVICE LINE)**

SHEET NO. 516




**TAPPING REQUIREMENTS, 1-1/2" AND LARGER SERVICE (HDPE or PVC SERVICE LINE)**

SHEET NO. 517




**1" COMBINATION AIR RELEASE VALVE (CARV)**

SHEET NO. 518

## RECORD DRAWINGS

Revisions Drawn By _____ Date 10/31/2014

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| NO. | DATE | DESCRIPTION REVISIONS | BY |
|---|---|---|---|
| | | | |

VERIFY SCALE

DSN. AM
DWN. AM
CKD. AM
DATE JUN 2014

AS-CONSTRUCTED

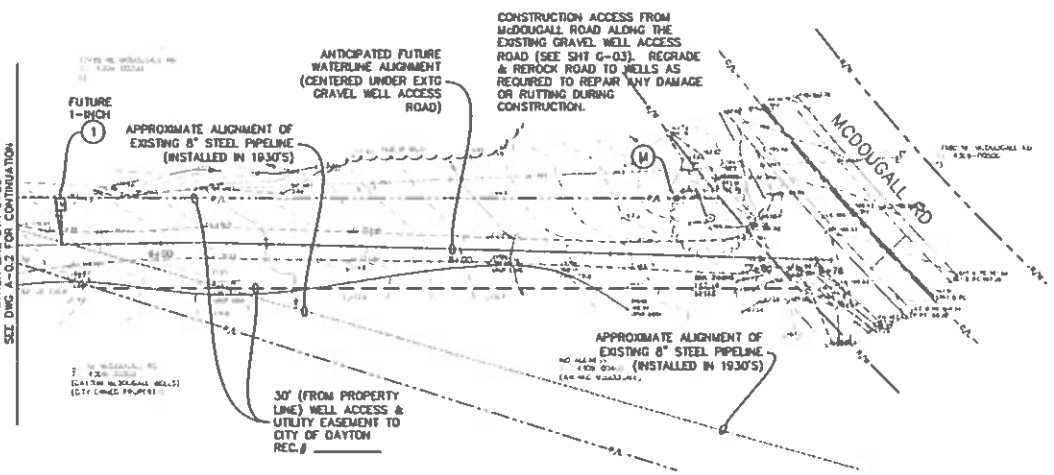
CITY OF DAYTON, OREGON

WATERSHED TRANSMISSION LINE, RESERVOIRS TO MCDOUGALL WELLS

WATER DETAILS

DRAWING
G-09

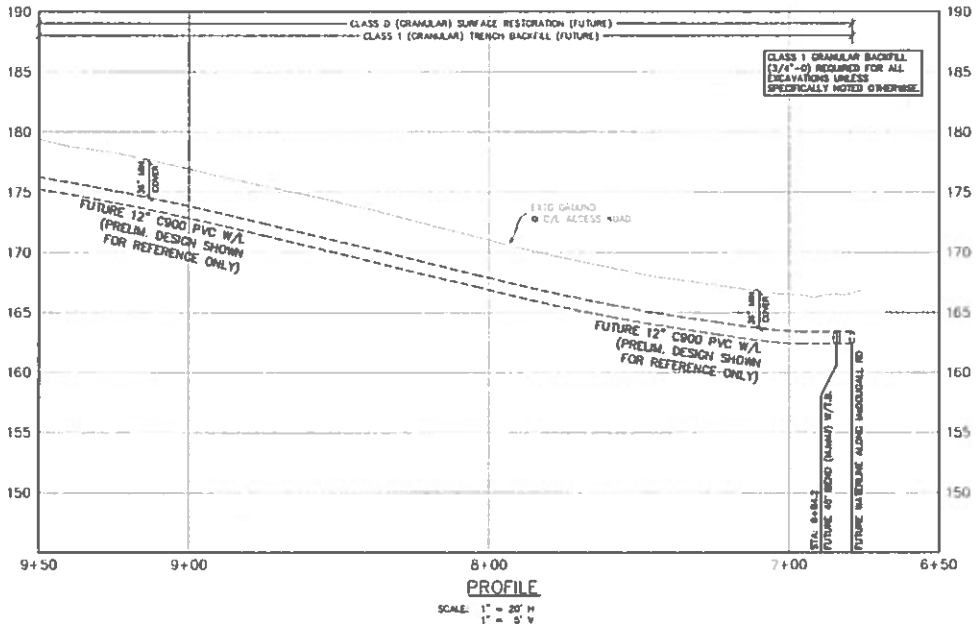
JOB NUMBER
2609.4090.0




THIS SHEET IS INCLUDED FOR REFERENCE ONLY, TO SHOW CONSTRUCTION ACCESS TO THE WATERLINE ALIGNMENT FROM McDOUGALL ROAD (SEE DWG A-0.02 FOR START OF SCHEDULE B WATERLINE CONSTRUCTION)

PLAN

SCALE: 1" = 20'




PROFILE

SCALE: 1" = 20' H
1" = 5' V

INTERNAL PROPERTY LINES SHOWN ARE APPROXIMATE

0 10 20 40
1" = 20'

NOTES:

1. A MINIMUM OF 10 DAYS PRIOR TO CONSTRUCTION, CONTRACTOR TO POTHOLE EXTG CITY WATERLINE AT 75± FT MAXIMUM INTERVALS (TO STATION 13+00). MARK ACTUAL WATERLINE LOCATIONS & ALIGNMENTS WITH OFFSET STAKES AND NOTIFY ENGINEER OF ANY ALIGNMENT CONFLICTS. ADJUST NEW W/L ALIGNMENT PER CITY DIRECTION TO MINIMIZE CONFLICTS.

## RECORD DRAWINGS

Revisions Drawn By: [illegible] Date: 10/31/2016

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**DEMOLITION/RELOCATION/RESTORATION NOTES:**

- (A) ABANDON EXISTING WATERLINE IN PLACE AFTER NEW WATERLINE IS TESTED, DISINFECTED AND PLACED IN SERVICE, AND ALL WATER SERVICES ARE RECONNECTED. REMOVE VALVE BOXES ON ABANDONED VALVES.
- (M) CONTRACTOR TO PROTECT EXISTING SURVEY MONUMENTS, OR ARRANGE FOR REPLACEMENT IF DISTURBED (ALL MONUMENTS MAY NOT BE SHOWN).
- (P) CONTRACTOR TO PROTECT, REPLACE TO MATCH EXISTING IF DAMAGED.
- (R) CONTRACTOR TO REMOVE AS REQUIRED.
- (RR) CONTRACTOR TO RELOCATE TO LOCATION SHOWN.
- (S) SAWCUT (NOT ALL SAWCUT LINES SHOWN). CONTRACTOR TO VERIFY WIDTH AND ALIGNMENT (SEE GENERAL NOTE 10 BELOW).
- (V) CONTRACTOR TO POTHOLE (OR VACUUM EXCAVATE) AND VERIFY EXISTING UTILITY LOCATION, ELEVATION, DIAMETER & DEPTH PRIOR TO CONSTRUCTION. REPORT LOCATION, COVER DEPTH AND ELEVATION TO ENGINEER. ALIGN WITH NOT CONFLICTS.

**WATERLINE CAUTION:**

1. NEW WATER SERVICE LINE (SERVICE SIZE AS INDICATED ON DWGS) TO NEW METER BOX AND METER SET (INSTALL NEW SERVICE LINE ALIGNMENT TO EXISTING WATER SERVICE LINE) RESET (EXISTING METER AND EQUIPMENT TO EXISTING FOR NEW) SERVICE LINE PER DETAIL 515 OR 516 AS APPLICABLE.
2. RESERVED
3. RESERVED

**GENERAL NOTES:**

A. SURFACE RESTORATION SHOWN ON PROFILE ALSO APPLIES TO ADJACENT WATER SERVICE LINE OR HYDRANT LEAD TRENCHES AS APPLICABLE. RESTORE ALL STRIPING TO MATCH EXTG.

B. PRIOR TO SAWCUTTING ALONG NEW MAINLINE TRENCH OR CROSSING CONNECTION PATHWAY, CONTRACTOR TO MARK EX OR ANTICIPATED AND VERIFY LOCATION & ALIGNMENT OF EXISTING WATERLINES. NOTIFY ENGINEER AND CITY OF ANY DISCREPANCIES TO ALLOW FOR ALIGNMENT ADJUSTMENTS PRIOR TO SAWCUTTING ALONG STREET.

C. MARKER POSTS TO BE INSTALLED ALONG NEW WATERLINES PER NOTES ON DWG G-03.

D. FOR ANY TRENCHES WITHIN FARMED AREAS, THE TOP 14" TO 18" OF TOPSOIL SHALL BE REMOVED AND STOCKPILED SEPARATELY FROM THE REMAINDER OF THE TRENCH SPOILS. THE STOCKPILED TOPSOIL SHALL BE UTILIZED FOR THE TOP 12" MINIMUM OF THE BACKFILLED TRENCH. IF NATIVE TOPSOIL IS NOT STOCKPILED BY THE CONTRACTOR, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE IMPORTED TOPSOIL AT NO ADDITIONAL COST TO THE OWNER. ANY EXCESS TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR FROM THE FIELD AREAS.

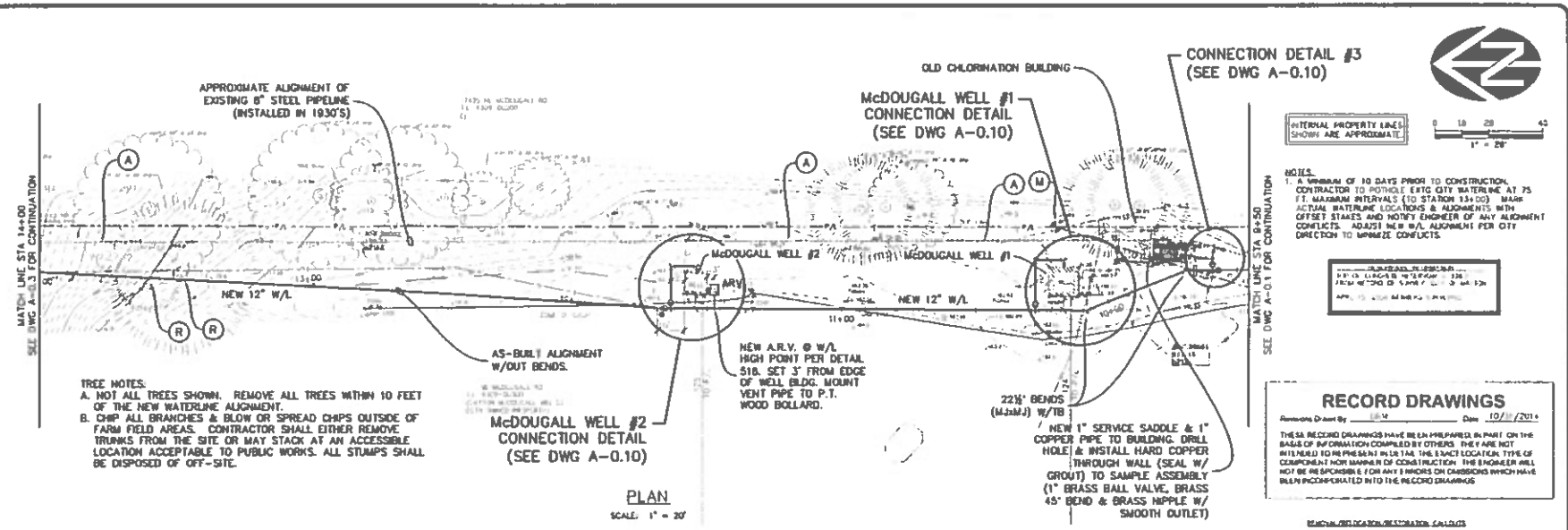
E. FARM FIELD BACKFILL AND SURFACE RESTORATION: THE CONTRACTOR SHALL STAGE MATERIALS AND RESILIENCE WORK AS REQUIRED TO ENSURE THAT NO CONSTRUCTION MATERIALS (LUMBER, ETC.) FARMING PRACTICES, OR FARMING EQUIPMENT REMAIN AFTER CONSTRUCTION IS COMPLETE. THIS SHALL INCLUDE (INCLUDING ALL LOOSE GRAVELS OR TRENCH MATERIALS ARE PUSHED INTO THE TRENCH BEFORE FINAL BACKFILL OCCURS AND ENSURING THAT NO LOOSE TURNING ORE, PIPE OR CONSTRUCTION MATERIALS IS ALLOWED IN THE TRENCH BACKFILL.

AS-CONSTRUCTED

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS
PLAN & PROFILE
STA: 6+50 – 9+50

DRAWING
A-0.1

JOB NUMBER
2609.4090.0

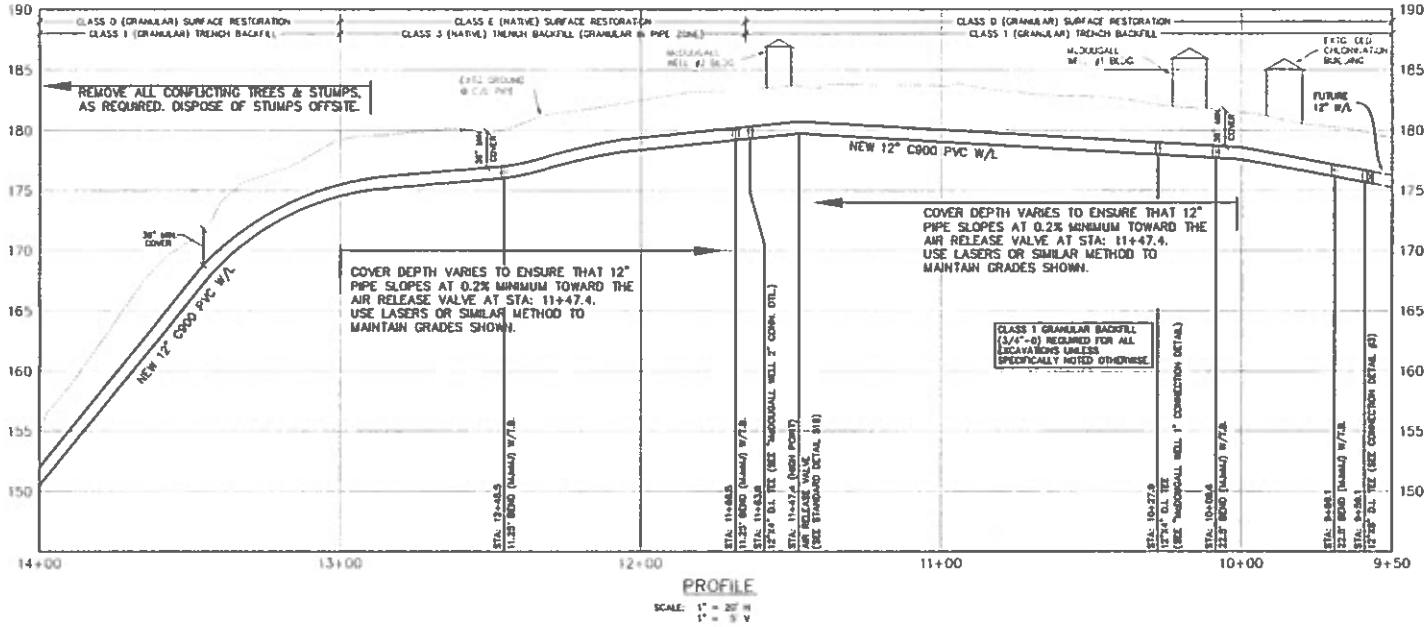



TREE NOTES.
A. NOT ALL TREES SHOWN. REMOVE ALL TREES WITHIN 10 FEET OF THE NEW WATERLINE ALIGNMENT.
B. CHIP ALL BRANCHES & BLOW OR SPREAD CHIPS OUTSIDE OF FARM FIELD AREAS. CONTRACTOR SHALL EITHER REMOVE TRUNKS FROM THE SITE OR MAY STACK AT AN ACCESSIBLE LOCATION ACCEPTABLE TO PUBLIC WORKS. ALL STUMPS SHALL BE DISPOSED OF OFF-SITE.

NOTES.
1. A MINIMUM OF 10 DAYS PRIOR TO CONSTRUCTION, CONTRACTOR TO POTHOLE EXIST'G CITY WATERLINE AT 75 FT. MAXIMUM INTERVALS (TO STATION 13+00). MARK ACTUAL WATERLINE LOCATIONS & ALIGNMENTS WITH OFFSET STAKES AND NOTIFY ENGINEER OF ANY ALIGNMENT CONFLICTS. ADJUST NEW W/L ALIGNMENT PER CITY DIRECTION TO MINIMIZE CONFLICTS.

**RECORD DRAWINGS**
Reviewed/Drawn By: EMM Date: 10/31/2014
THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO BE PRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS

PLAN
SCALE: 1" = 20'




PROFILE
SCALE: 1" = 20' H
1" = 5' V

REMOVAL AND LOCATION/RESTORATION CALLOUTS
(A) ABANDON EXISTING WATERLINE IN PLACE AFTER NEW WATERLINE IS TESTED, DISINFECTED AND PLACED IN SERVICE, AND ALL WATER SERVICES ARE RECONNECTED. REMOVE VALVE BOXES OR ABANDONED VALVES.
(M) CONTRACTOR TO PROTECT EXISTING SURVEY MONUMENTS, OR ARRANGE FOR REPLACEMENT IF DISTURBED. (ALL MONUMENTS MAY NOT BE SHOWN).
(P) CONTRACTOR TO PROTECT, REPLACE TO MATCH EXISTING IF DAMAGED.
(R) CONTRACTOR TO REMOVE AS REQUIRED.
(RL) CONTRACTOR TO RELOCATE TO LOCATION SHOWN.
(S) SAWCUT (NOT ALL SAWCUT LINES SHOWN). CONTRACTOR TO VERIFY WIDTH AND ALIGNMENT (SEE GENERAL NOTE 'B' BELOW)
(V) CONTRACTOR TO POTHOLE (OR VACUUM EXCAVATE) AND VERIFY EXISTING UTILITY LOCATION, ELEVATION, DIAMETER & DEPTH PRIOR TO CONSTRUCTION. REPORT LOCATION, COVER DEPTH AND ELEVATION TO ENGINEER, ALONG WITH ANY CONFLICTS.

WATERLINE CALLOUTS
(1) NEW WATER SERVICE LINE (SERVICE SIZE AS INDICATED ON DWGS) TO NEW METER BOX AND METER SET (INSTALL NEW SERVICE LINE ADJACENT TO EXISTING WATER SERVICE LINE) ABOVE EXISTING METER AND DISCONNECT & REMOVE EXISTING (OR NEW) SERVICE LINE PER DETAIL 515 OR 516 AS APPLICABLE.
(2) RESERVED
(3) RESERVED

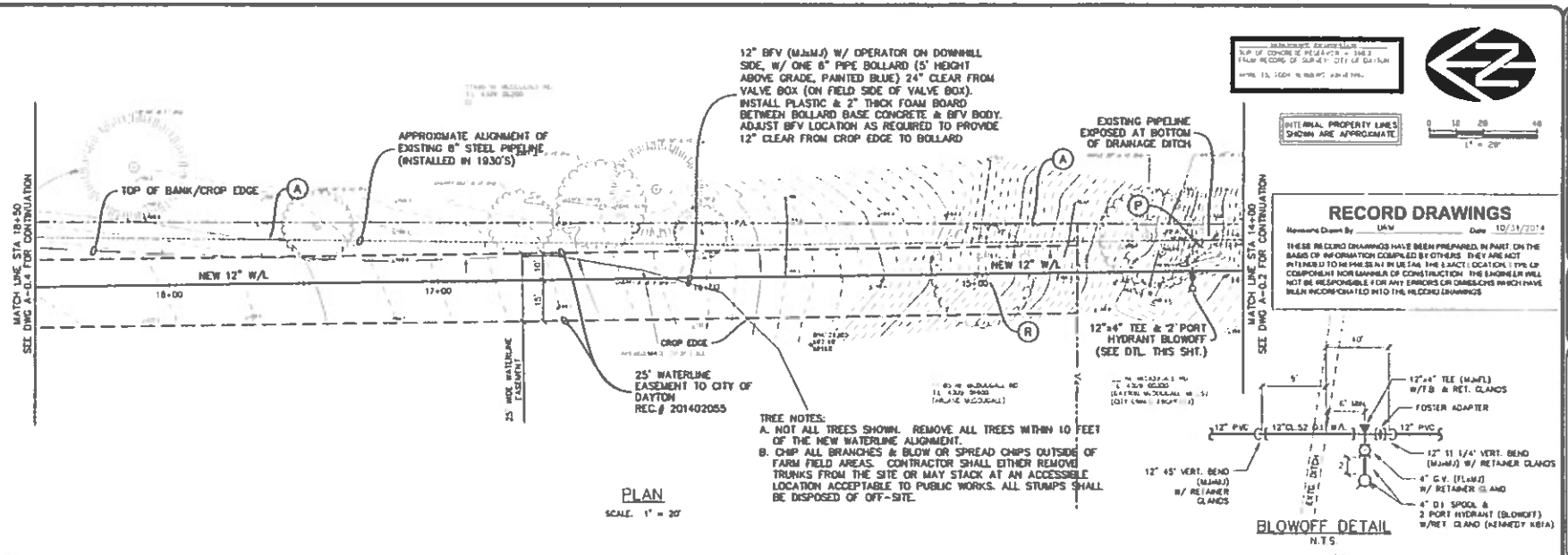
GENERAL NOTES
A. SURFACE RESTORATION SHOWN ON PROFILE ALSO APPLIES TO ADJACENT WATER SERVICE LINE OR HYDRANT LEAD TRENCHES AS APPLICABLE. RESTORE ALL SAWCUTS TO MATCH EXIST.
B. PRIOR TO SAWCUTTING ALONG NEW WATERLINE, BRANCH OR ORDERING CONNECTION FITTINGS, CONTRACTOR TO VAC-EX OR POTHOLE AND VERIFY LOCATION & ALIGNMENT OF EXISTING WATERLINES. NOTIFY ENGINEER AND CITY OF ANY DISCREPANCIES TO ALLOW FOR ALIGNMENT ADJUSTMENTS PRIOR TO SAWCUTTING ALONG STREET.
C. GUARD POSTS TO BE INSTALLED ALONG NEW WATERLINES PER NOTES ON DWG A-0.3.
D. FOR ANY TRENCHES WITHIN FARMED AREAS, THE TOP 14" TO 18" OF TOPSOIL SHALL BE REMOVED AND STOCKPILED SEPARATELY FROM THE REMAINDER OF THE TRENCH SPOILS. THE STOCKPILED TOPSOIL SHALL BE UTILIZED FOR THE TOP 12" MINIMUM OF THE BACKFILLED TRENCH. IF WATER TOPSOIL IS NOT STOCKPILED BY THE CONTRACTOR, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE IMPORTED TOPSOIL AT NO ADDITIONAL COST TO THE OWNER. ANY EXCESS TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR FROM THE FIELD AREAS.
E. FARM FIELD BACKFILL AND SURFACE RESTORATION: THE CONTRACTOR SHALL STAGE MATERIALS AND SEQUENCE WORK AS REQUIRED TO ENSURE THAT NO CONSTRUCTION MATERIALS DETRIMENTAL TO FARMING PRACTICES OR FARMING EQUIPMENT REMAIN AFTER CONSTRUCTION IS COMPLETE. THIS SHALL INCLUDE ENSURING ALL LOOSE GRANULAR TRENCH MATERIALS ARE PUSHED INTO THE TRENCH BEFORE NATIVE BACKFILL, BERMS AND EXCAVATING THAT NO LOOSE TOWING WIRE, PIPE OR CONSTRUCTION MATERIALS IS ALLOWED IN THE TRENCH BACKFILL.

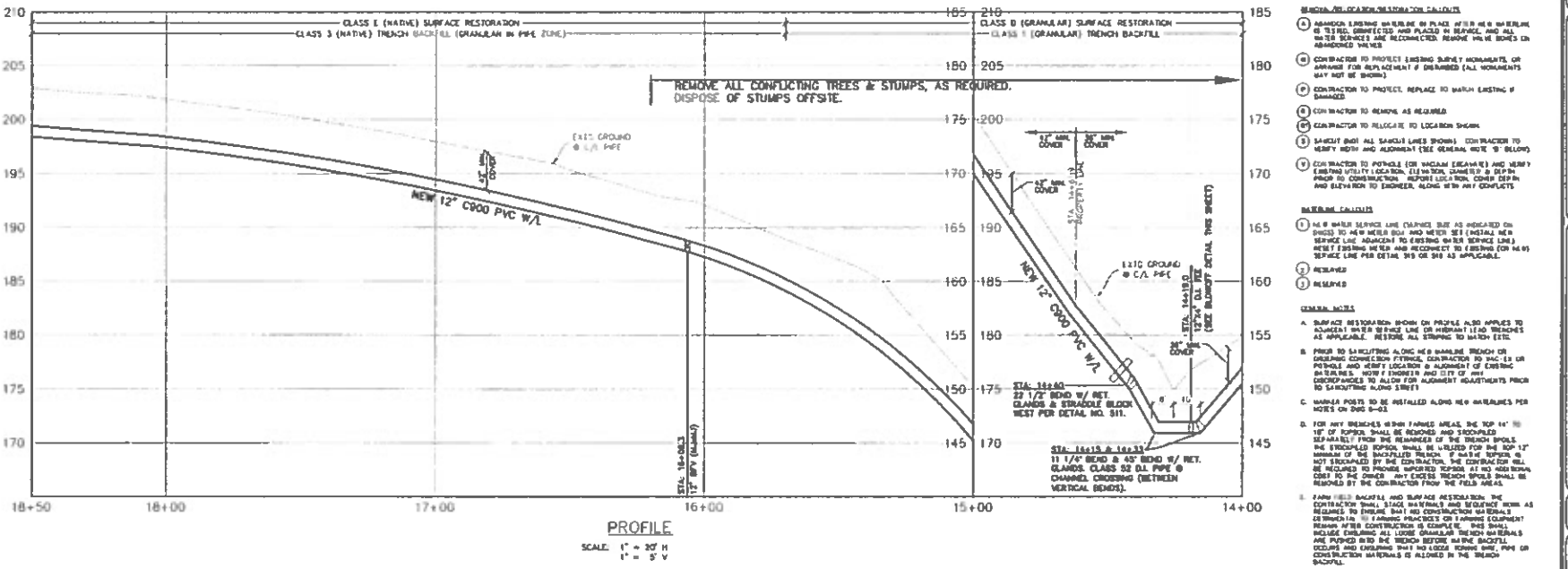
AS CONSTRUCTED

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS
ACCESS ROAD FROM McDOUGALL ROAD

DRAWING
A-0.2

JOB NUMBER
2609.4090.0




## RECORD DRAWINGS

Marked Drawn By: LMW Date: 10/31/2014

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO BE PRECISE IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS

### DEMOLITION/RESTORATION CALLOUTS

(A) ABANDON EXISTING WATERLINE IN PLACE AFTER NEW WATERLINE IS TESTED, DISINFECTED AND PLACED IN SERVICE, AND ALL WATER SERVICES ARE RECONNECTED. REMOVE VALVE BOXES ON ABANDONED VALVES

(B) CONTRACTOR TO PROTECT EXISTING SURVEY MONUMENTS, OR ARRANGE FOR REPLACEMENT IF DISTURBED (ALL MONUMENTS MAY NOT BE SHOWN)

(P) CONTRACTOR TO PROTECT, REPLACE TO MATCH EXISTING IF DAMAGED

(R) CONTRACTOR TO REMOVE AS REQUIRED

(RR) CONTRACTOR TO RELOCATE TO LOCATION SHOWN

(S) SAWCUT (NOT ALL SAWCUT LINES SHOWN) CONTRACTOR TO VERIFY WIDTH AND ALIGNMENT (SEE GENERAL NOTE 'B' BELOW)

(V) CONTRACTOR TO POTHOLE (OR VACUUM EXCAVATE) AND VERIFY EXISTING UTILITY LOCATION, ELEVATION, DIAMETER & DEPTH PRIOR TO CONSTRUCTION. REPORT LOCATION, COVER DEPTH AND ELEVATION TO ENGINEER, ALONG WITH ANY CONFLICTS

### WATERLINE CALLOUTS

(1) NEW WATER SERVICE LINE (SIZE/MAKE SIZE AS INDICATED ON DWGS) TO NEW METER BOX AND METER SET (INSTALL NEW SERVICE LINE ADJACENT TO EXISTING WATER SERVICE LINE) REMOVE EXISTING METER AND RECONNECT TO EXISTING (OR NEW) SERVICE LINE PER DETAIL 345 OR 340 AS APPLICABLE.

(2) RESERVED

(3) RESERVED

### GENERAL NOTES

A. SURFACE RESTORATION SHOWN ON PROFILE ALSO APPLIES TO ADJACENT WATER SERVICE LINE OR HYDRANT LEAD TRENCHES AS APPLICABLE. RESTORE ALL STRIPING TO MATCH EXIST.

B. PRIOR TO SAWCUTTING ALONG NEW WATERLINE TRENCH OR ORIENTING CONNECTION FITTINGS, CONTRACTOR TO PAC-ES OR POTHOLE AND VERIFY LOCATION & ALIGNMENT OF EXISTING WATERLINES. NOTIFY ENGINEER AND CITY OF ANY DISCREPANCIES TO ALLOW FOR ALIGNMENT ADJUSTMENTS PRIOR TO SAWCUTTING ALONG STREET

C. WARNING POSTS TO BE INSTALLED ALONG NEW WATERLINES PER NOTES ON DWG G-02

D. FOR ANY TRENCHES WITHIN FARMED AREAS, THE TOP 14" TO 18" OF TOPSOIL SHALL BE REMOVED AND STOCKPILED SEPARATELY FROM THE REMAINDER OF THE TRENCH SPOILS. THE STOCKPILED TOPSOIL SHALL BE UTILIZED FOR THE TOP 12" MINIMUM OF THE BACKFILLED TRENCH. IF NATIVE TOPSOIL IS NOT STOCKPILED BY THE CONTRACTOR, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE IMPORTED TOPSOIL AT NO ADDITIONAL COST TO THE OWNER. ANY EXCESS TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR FROM THE FIELD AREAS.

E. FARM FIELD BACKFILL AND SURFACE RESTORATION: THE CONTRACTOR SHALL STAGE TRENCHING AND SEQUENCE WORK AS REQUIRED TO ENSURE THAT NO CONSTRUCTION MATERIALS OR TRENCH SPOILS REMAIN OVERNIGHT IN FARMING PRACTICES OR FARMING EQUIPMENT REMAIN AFTER CONSTRUCTION IS COMPLETE. THIS SHALL INCLUDE ENSURING ALL LOOSE GRANULAR TRENCH MATERIALS ARE PUSHED BACK INTO THE TRENCH BEFORE MAINE BACKFILL OCCURS AND ENSURING THAT NO LOOSE ROCKS OVER 6" OR CONSTRUCTION MATERIALS IS ALLOWED IN THE TRENCH BACKFILL

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 4/24/2014 | Original Issue - Bid Set | DJH |
| 2 | 10/31/2014 | As-Constructed Markups | DJH |

VERIFY SCALE
BAR IS 1" ON ORIGINAL DRAWING
IF NOT 1" ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN DJH
DRN MH
CHK MH
DATE APR 2014

AS-CONSTRUCTED

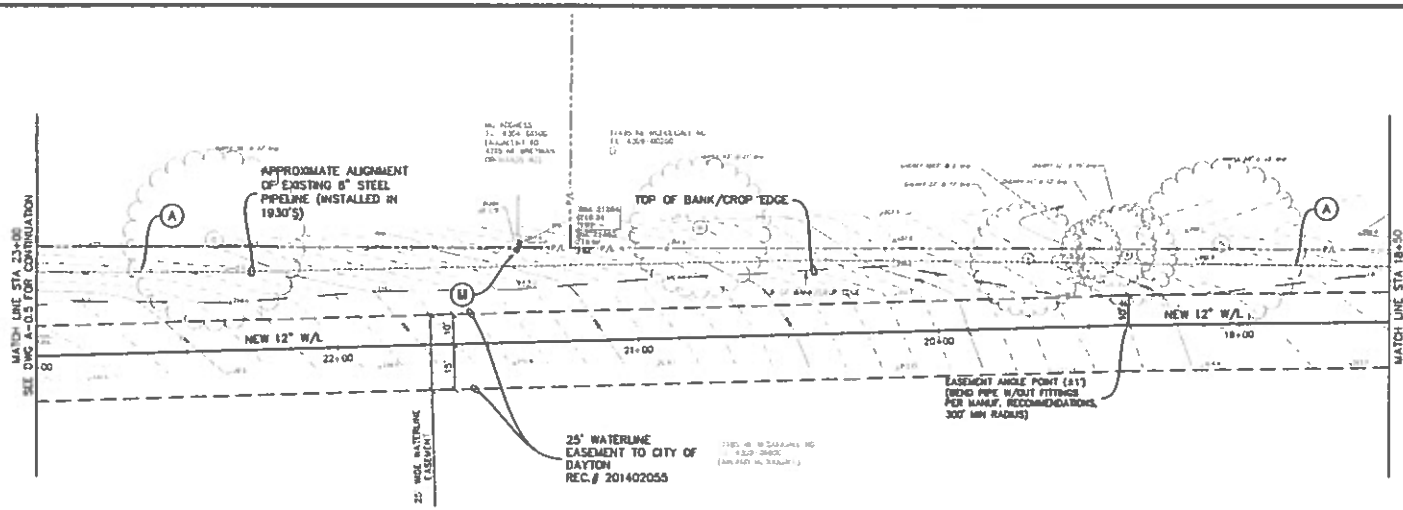
WESTECH ENGINEERING, INC.
CIVIL STRUCTURAL MECHANICAL AND PLUMBING ENGINEERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: mail@westech-eng.com

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS

PLAN & PROFILE
STA: 14+00 – 18+50

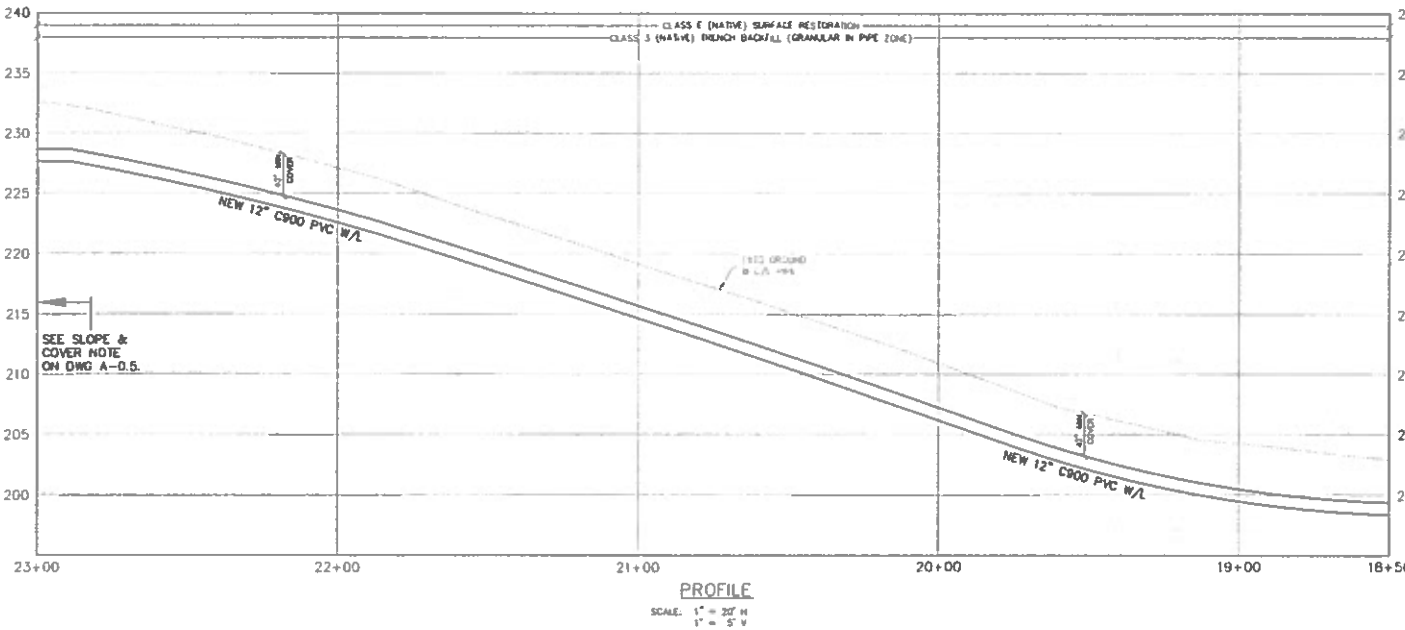
DRAWING
A-0.3

JOB NUMBER
2609.4090.0




PLAN

SCALE: 1" = 20'




PROFILE

SCALE: 1" = 20' H
1" = 5' V

## RECORD DRAWINGS

Revisions Drawn By: DRM Date: 10/31/2014

THESE RECORD DRAWINGS HAVE BEEN PREPARED IN PART ON THE BASIS OF INFORMATION FURNISHED BY OTHERS. THEY ARE NOT INTENDED TO INDICATE IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

REMOVAL/RELOCATION/RESTORATION CALLOUTS

- (A) REMOVE EXISTING WATERLINE AS PLACE AFTER NEW WATERLINE IS TESTED, DISINFECTED AND PLACED IN SERVICE, AND ALL WATER SERVICES ARE RECONNECTED. REMOVE VALVE BOXES ON ABANDONED VALVES.
- (B) CONTRACTOR TO PROTECT EXISTING SURVEY MONUMENTS, OR ARRANGE FOR REPLACEMENT IF DISTURBED (ALL MONUMENTS MAY NOT BE SHOWN).
- (P) CONTRACTOR TO PROTECT, REPLACE TO MATCH EXISTING IF DAMAGED.
- (R) CONTRACTOR TO REMOVE AS REQUIRED.
- (RR) CONTRACTOR TO RELOCATE TO LOCATION SHOWN.
- (S) SAWCUT (NOT ALL SAWCUT LINES SHOWN) CONTRACTOR TO VERIFY WIDTH AND ALIGNMENT (SEE GENERAL NOTE 'B' BELOW)
- (V) CONTRACTOR TO POTHOLE (OR VACUUM EXCAVATE) AND VERIFY EXISTING UTILITY LOCATION, ELEVATION, DIAMETER & DEPTH PRIOR TO CONSTRUCTION. REPORT LOCATION, COVER DEPTH AND ELEVATION TO ENGINEER, ALONG WITH ANY CONFLICTS.

BENDING CALLOUTS

- (1) NEW WATER SURFACE LINE (SURFACE SLED AS INDICATED ON DWGS) TO NEW METER BOX AND METER SET (INSTALL NEW SERVICE LINE ADJACENT TO EXISTING WATER SURFACE LINE). RESET EXISTING METER AND RECONNECT TO EXISTING (OR NEW) SERVICE LINE PER DETAIL SHS OR SHS AS APPLICABLE.
- (2) RESERVED
- (3) RESERVED

GENERAL NOTES

A. SURFACE RESTORATION SHOWN ON PROFILE ALSO APPLIES TO ABANDONED WATER SERVICE LINE OR HYDRANT LEAD TRENCHES AS APPLICABLE. RESTORE ALL STRIPING TO MATCH EXIST.

B. PRIOR TO SAWCUTTING ALONG NEW WATERLINE TRENCH FOR ENSURING CONNECTION FITTINGS, CONTRACTOR TO VAC-EX OR POTHOLE AND VERIFY LOCATION & ALIGNMENT OF EXISTING WATERLINES. NOTIFY ENGINEER AND CITY OF ANY DISCREPANCIES TO ALLOW FOR ALIGNMENT ADJUSTMENTS PRIOR TO SAWCUTTING ALONG STREET.

C. MARKER POSTS TO BE INSTALLED ALONG NEW WATERLINES PER NOTES ON DWG G-03.

D. FOR ANY TRENCHES WITHIN FARMED AREAS, THE TOP 12" TO 18" OF TOPSOIL SHALL BE REMOVED AND STOCKPILED SEPARATELY FROM THE REMAINDER OF THE TRENCH SPOILS. THE STOCKPILED TOPSOIL SHALL BE UTILIZED FOR THE TOP 12" MINIMUM OF THE BACKFILLED TRENCH. IF NATIVE TOPSOIL IS NOT STOCKPILED BY THE CONTRACTOR, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE IMPORTED TOPSOIL AT NO ADDITIONAL COST TO THE OWNER. ANY EXCESS TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR FROM THE FIELD AREAS.

E. FARM FIELD BACKFILL AND SURFACE RESTORATION: THE CONTRACTOR SHALL STAGE MATERIALS AND RESIDENCE WORK AS REQUIRED TO ENSURE THAT NO CONSTRUCTION MATERIALS OR TRENCH SPOILS TO FARMING PRACTICES OR FARMING EQUIPMENT REMAIN AFTER CONSTRUCTION IS COMPLETE. THIS SHALL INCLUDE ENSURING ALL LOOSE GRANULAR TRENCH MATERIALS ARE PUSHED INTO THE TRENCH BEFORE THE BACKFILL OCCURS AND ENSURING THAT NO LOOSE ROCKING ROCK, PIPE OR CONSTRUCTION MATERIALS IS ALLOWED IN THE TRENCH BACKFILL.

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 10/31/14 | Record As-Constructed Drawings | DRM |

VERIFY SCALE

DSN: DRM
DRN: DRM
CHD: DRM
DATE: JAN 2015

AS-CONSTRUCTED

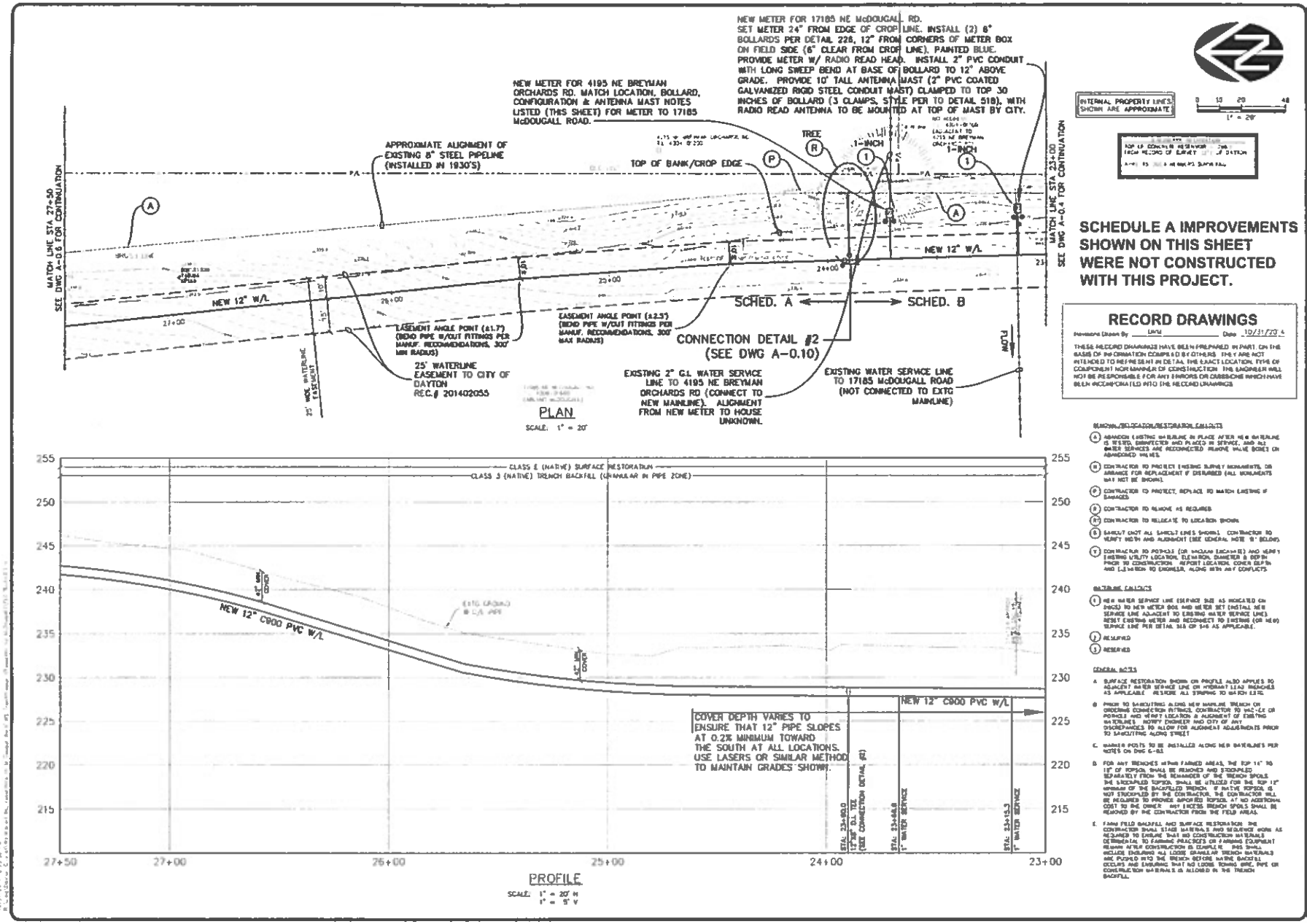
WESTECH ENGINEERING, INC.
CIVIL ENGINEERS & LAND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-3986
E-mail: mail@westech-eng.com

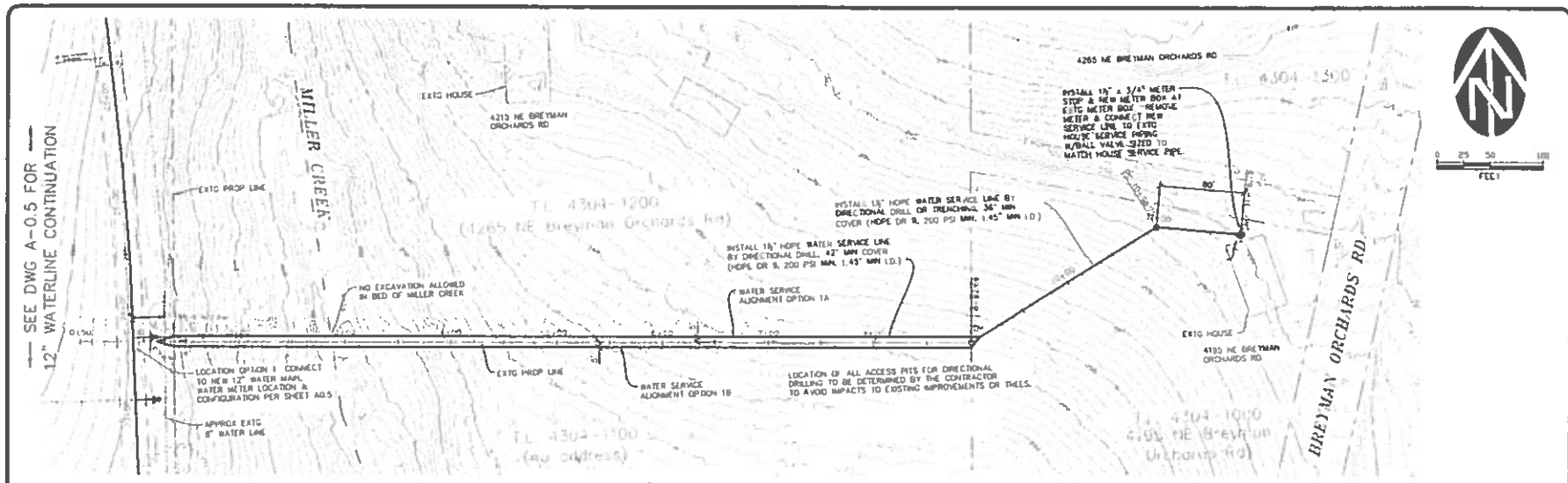
CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS

PLAN & PROFILE
STA: 18+50 - 23+00

DRAWING
A-0.4

JOB NUMBER
2609.4090.0


NEW METER FOR 17185 NE McDOUGALL RD. SET METER 24" FROM EDGE OF CROP LINE. INSTALL (2) 6" BOLLARDS PER DETAIL 226, 12" FROM CORNERS OF METER BOX ON FIELD SIDE (6" CLEAR FROM CROP LINE), PAINTED BLUE. PROVIDE METER W/ RADIO READ HEAD. INSTALL 2" PVC CONDUIT WITH LONG SWEEP BEND AT BASE OF BOLLARD TO 12" ABOVE GRADE. PROVIDE 10' TALL ANTENNA MAST (2" PVC COATED GALVANIZED RIGID STEEL CONDUIT MAST) CLAMPED TO TOP 30 INCHES OF BOLLARD (3 CLAMPS, STYLE PER TO DETAIL 518), WITH RADIO READ ANTENNA TO BE MOUNTED AT TOP OF MAST BY CITY.
NEW METER FOR 4195 NE BREYMAN ORCHARDS RD. MATCH LOCATION, BOLLARD, CONFIGURATION & ANTENNA MAST NOTES LISTED (THIS SHEET) FOR METER TO 17185 McDOUGALL ROAD.
APPROXIMATE ALIGNMENT OF EXISTING 8" STEEL PIPELINE (INSTALLED IN 1930'S)
TOP OF BANK/CROP EDGE
TREE
1-INCH
MATCH LINE STA 27+50 SEE DWG A-0.6 FOR CONTINUATION
MATCH LINE STA 23+00 SEE DWG A-0.4 FOR CONTINUATION
NEW 12" W/L
SCHED. A
SCHED. B
EASEMENT ANGLE POINT (61.7°) (BEND PIPE W/CUT FITTINGS PER MANUF. RECOMMENDATIONS, 300' MIN RADIUS)
EASEMENT ANGLE POINT (±2.5°) (BEND PIPE W/CUT FITTINGS PER MANUF. RECOMMENDATIONS, 300' MAX RADIUS)
25' WATERLINE EASEMENT TO CITY OF DAYTON REC.# 201402055
CONNECTION DETAIL #2 (SEE DWG A-0.10)
EXISTING 2" G.I. WATER SERVICE LINE TO 4195 NE BREYMAN ORCHARDS RD (CONNECT TO NEW MAINLINE). ALIGNMENT FROM NEW METER TO HOUSE UNKNOWN.
EXISTING WATER SERVICE LINE TO 17185 McDOUGALL ROAD (NOT CONNECTED TO EXTG MAINLINE)
FLOW
INTERNAL PROPERTY LINES SHOWN ARE APPROXIMATE
0 10 20 40
1" = 20'
SCHEDULE A IMPROVEMENTS SHOWN ON THIS SHEET WERE NOT CONSTRUCTED WITH THIS PROJECT.
RECORD DRAWINGS
Revisions Shown By: DMM Date: 10/31/2014
THESE RECORD DRAWINGS HAVE BEEN PREPARED IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF EQUIPMENT NOR MANNER OF CONSTRUCTION. THE UNDERSIGNED WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.
PLAN
SCALE: 1" = 20'
CLASS E (NATIVE) SURFACE RESTORATION
CLASS B (NATIVE) TRENCH BACKFILL (GRANULAR IN PIPE ZONE)
NEW 12" C900 PVC W/L
EXTG GROUND @ C/L PIPE
42" MIN COVER
COVER DEPTH VARIES TO ENSURE THAT 12" PIPE SLOPES AT 0.2% MINIMUM TOWARD THE SOUTH AT ALL LOCATIONS. USE LASERS OR SIMILAR METHOD TO MAINTAIN GRADES SHOWN.
STA: 23+80.0 12"x8" D.I. TEE (SEE CONNECTION DETAIL #2)
STA: 23+46.8 8" WATER SERVICE
STA: 23+15.3 8" WATER SERVICE
255
250
245
240
235
230
225
220
215
27+50
27+00
26+00
25+00
24+00
23+00
PROFILE
SCALE: 1" = 20' H
1" = 5' V
ALIGNMENT/RELOCATION/RESTORATION CALLOUTS
(A) ABANDON EXISTING WATERLINE IN PLACE AFTER NEW WATERLINE IS TESTED, DISINFECTED AND PLACED IN SERVICE, AND ALL WATER SERVICES ARE RECONNECTED. REMOVE VALVE BOXES OR ABANDONED VALVES.
(B) CONTRACTOR TO PROTECT EXISTING SURVEY MONUMENTS, OR ARRANGE FOR REPLACEMENT IF DISTURBED (ALL MONUMENTS MAY NOT BE SHOWN).
(P) CONTRACTOR TO PROTECT, REPLACE TO MATCH EXISTING IF DAMAGED.
(R) CONTRACTOR TO REMOVE AS REQUIRED.
(RR) CONTRACTOR TO RELOCATE TO LOCATION SHOWN.
(S) SAWCUT (NOT ALL SAWCUT LINES SHOWN). CONTRACTOR TO VERIFY WIDTH AND ALIGNMENT (SEE GENERAL NOTE 'B' BELOW).
(T) CONTRACTOR TO POTHOLE (OR VACUUM EXCAVATE) AND VERIFY EXISTING UTILITY LOCATION, ELEVATION, DIAMETER & DEPTH PRIOR TO CONSTRUCTION. REPORT LOCATION, COVER DEPTH AND LOCATION TO ENGINEER, ALONG WITH ANY CONFLICTS.
WATERLINE CALLOUTS
(1) NEW WATER SERVICE LINE ESTIMATE SHALL AS INDICATED ON PLANS TO NEW METER BOX AND METER SET (INSTALL NEW SERVICE LINE ADJACENT TO EXISTING WATER SERVICE LINE). REMOVE EXISTING METER AND RECONNECT TO EXISTING (OR NEW) SERVICE LINE PER DETAIL 345 OR 346 AS APPLICABLE.
(2) RESERVED
(3) RESERVED
GENERAL NOTES
A. SURFACE RESTORATION SHOWN ON PROFILE ALSO APPLIES TO ADJACENT WATER SERVICE LINE OR HYDRANT LEAD TRENCHES AS APPLICABLE. RESTORE ALL STRIPING TO MATCH EXISTING.
B. PRIOR TO SAWCUTTING ALONG NEW MAINLINE TRENCH OR ORDERING CONNECTION FITTINGS, CONTRACTOR TO VALIDATE OR PROVIDE AND VERIFY LOCATION & ALIGNMENT OF EXISTING WATERLINES. NOTIFY ENGINEER AND CITY OF ANY DISCREPANCIES TO ALLOW FOR ALIGNMENT ADJUSTMENTS PRIOR TO SAWCUTTING ALONG STREET.
C. MARKER POSTS TO BE INSTALLED ALONG NEW WATERLINES PER NOTES ON DWG G-03.
D. FOR ANY TRENCHES WITHIN PAVED AREAS, THE TOP 12" TO 18" OF TOPSOIL SHALL BE REMOVED AND STOCKPILED SEPARATELY FROM THE REMAINDER OF THE TRENCH SPOILS. THE STOCKPILED TOPSOIL SHALL BE UTILIZED FOR THE TOP 12" MINIMUM OF THE BACKFILLED TRENCH. IF NATIVE TOPSOIL IS NOT STOCKPILED BY THE CONTRACTOR, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE IMPORTED TOPSOIL AT NO ADDITIONAL COST TO THE OWNER. ANY EXCESS TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR FROM THE FIELD AREAS.
E. FARM FIELD BACKFILL AND SURFACE RESTORATION: THE CONTRACTOR SHALL STAGE MATERIALS AND SEQUENCE WORK AS NECESSARY TO ENSURE THAT NO CONSTRUCTION MATERIALS DETRIMENTAL TO FARMING PRACTICES OR FARMING EQUIPMENT REMAIN AFTER CONSTRUCTION IS COMPLETE. THIS SHALL INCLUDE ENSURING ALL LOOSE GRANULAR TRENCH MATERIALS ARE PUSHED INTO THE TRENCH BEFORE MAKING BACKFILL CUTOFFS AND ENSURING THAT NO LOOSE TOWING WIRE, PIPE OR CONSTRUCTION MATERIALS IS ALLOWED IN THE TRENCH BACKFILL.
CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS
PLAN & PROFILE
STA: 23+00 - 27+50
DRAWING A-0.5
JOB NUMBER 2609.4090.0
AS CONSTRUCTED
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-3986
DESIGN DRN. CHK. QA/QC APVD.
NO. DATE REVISIONS
VERIFY SCALE

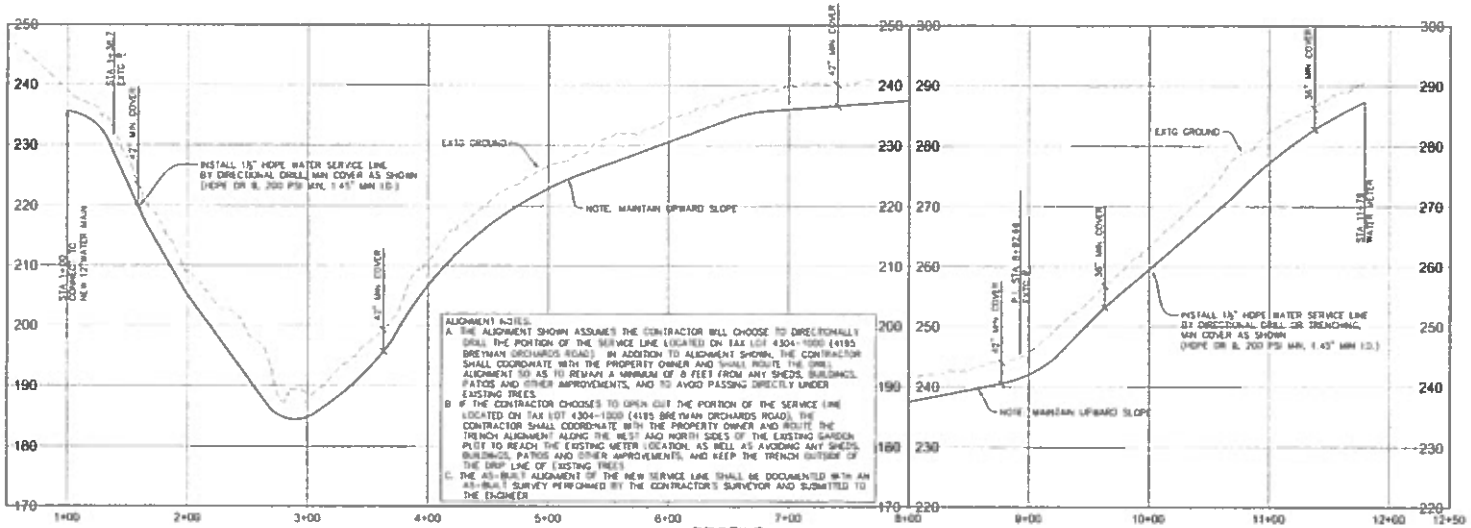



PLAN

SCALE: 1" = 50'

NOTE: TOPOGRAPHY SHOWN WAS CREATED FROM DOGAMI LIDAR DIGITAL TERRAIN DATA, MAY0 BE. CONFIRM ALL CONDITIONS IN THE FIELD.

**NEW WATER SERVICE LINE SHOWN ON THIS SHEET WAS NOT CONSTRUCTED WITH THIS PROJECT.**




PROFILE

SCALE: 1" = 50' H
1" = 10' V

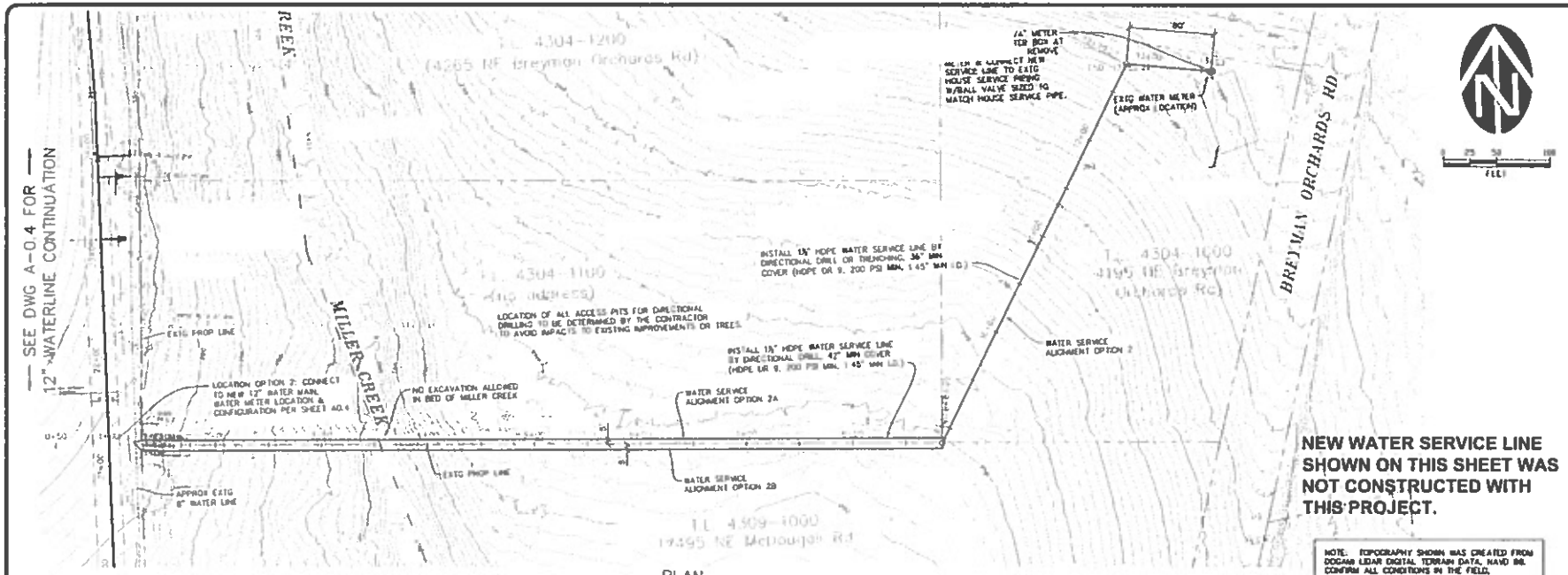
AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CIVIL | PLANNING | SURVEYING

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS
SERVICE ALIGNMENT OPTION 1
4195 NE BREYMAN ORCHARDS RD
PLAN-PROFILE

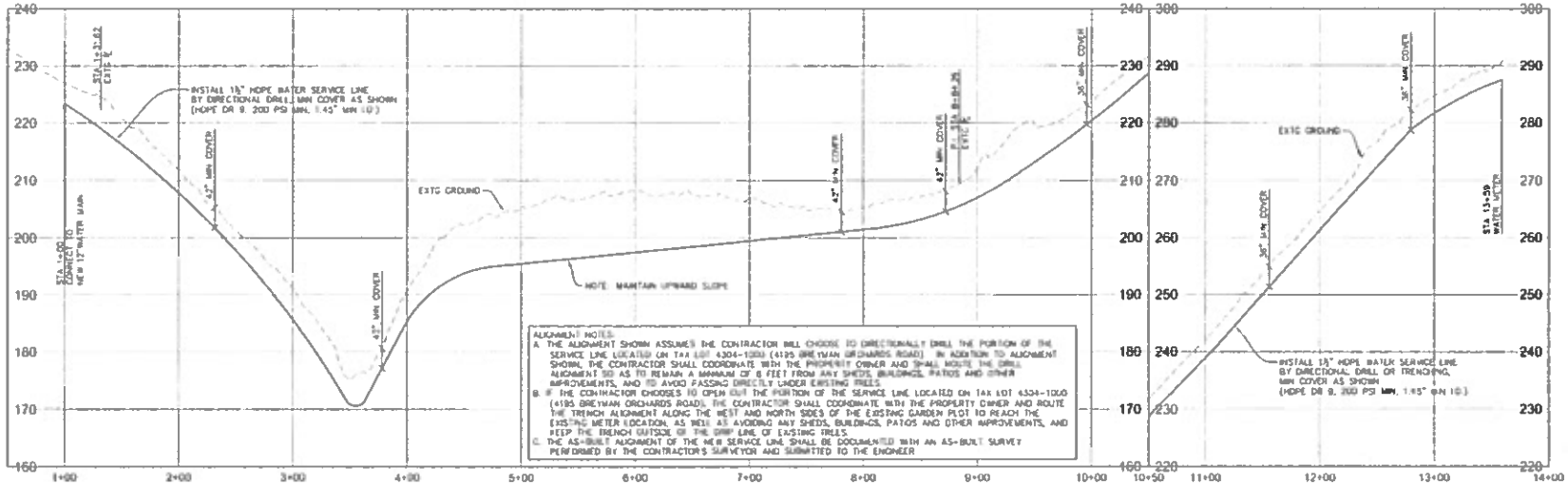
DRAWING
A-0.5.1(B)

JOB NUMBER
2609.4090.0




PLAN

SCALE: 1" = 50'




PROFILE

SCALE: 1" = 50' H
1" = 10' V

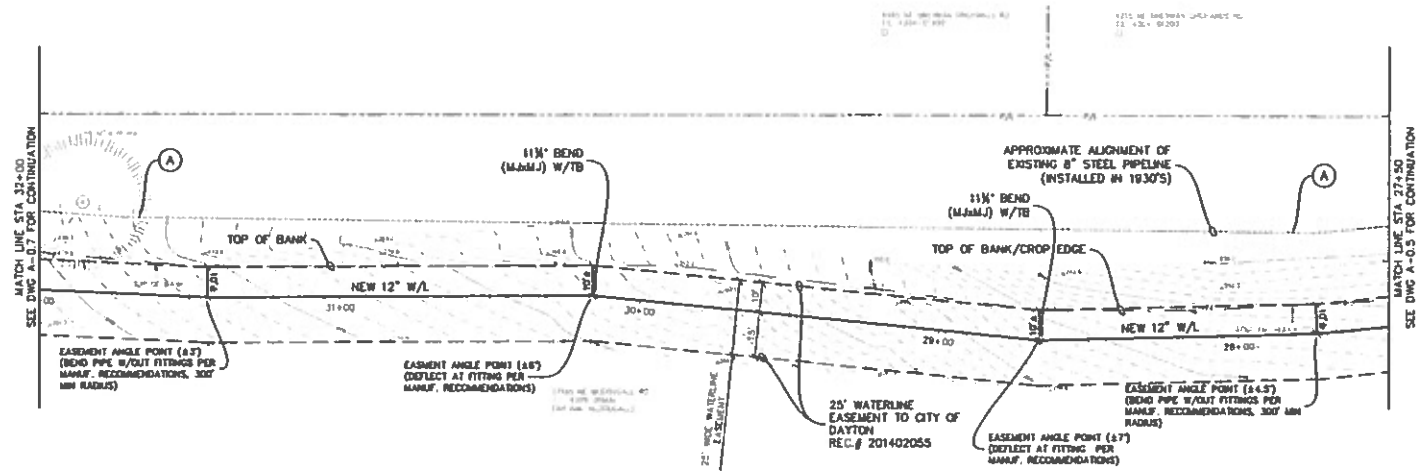
CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS
SERVICE ALIGNMENT OPTION 2
4195 NE BREYMAN ORCHARDS RD
PLAN-PROFILE

DRAWING
A-0.5.2

JOB NUMBER
2609.4090.0

AS-CONSTRUCTED

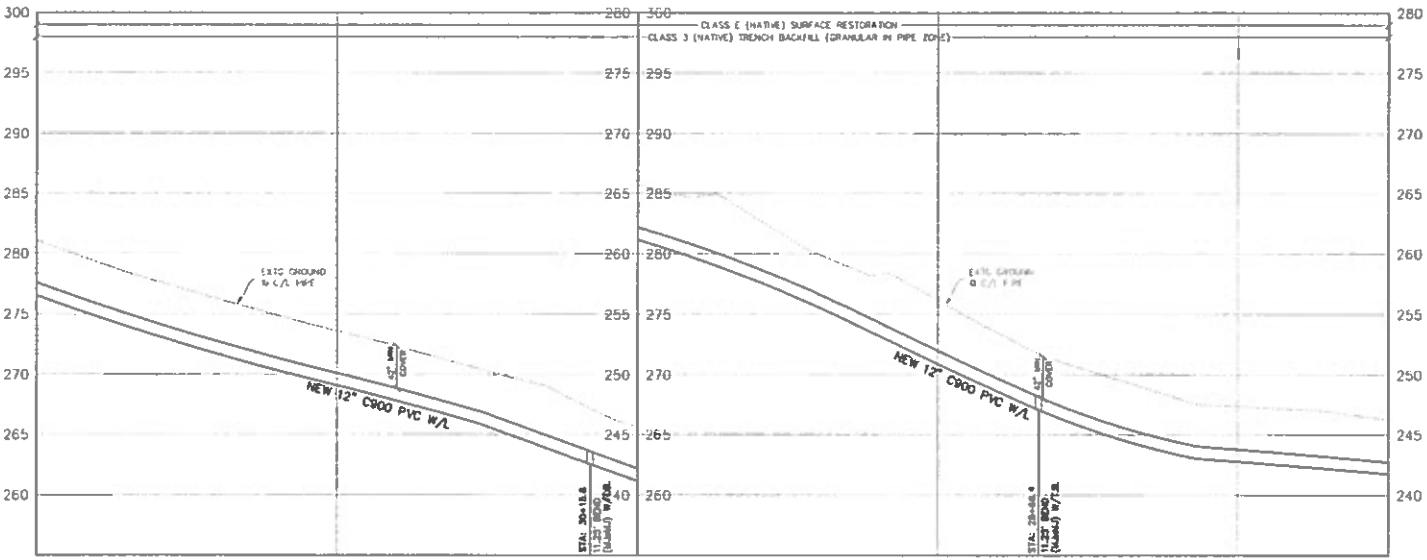
WESTECH ENGINEERING, INC.
CIVIL • STRUCTURAL • SURVEYING




PLAN

SCALE: 1" = 20'

**SCHEDULE A IMPROVEMENTS SHOWN ON THIS SHEET WERE NOT CONSTRUCTED WITH THIS PROJECT.**




PROFILE

SCALE: 1" = 20' H
1" = 5' V

REMOVAL AND LOCATION/RESTORATION (A) - (S)

(A) ABANDON EXISTING WATERLINE IN PLACE AFTER NEW WATERLINE IS TESTED, DISINFECTED AND PLACED IN SERVICE, AND ALL WATER SERVICES ARE RECONNECTED. REMOVE VALVE BOXES OR ABANDONED VALVES.

(B) CONTRACTOR TO PROTECT EXISTING SURVEY MONUMENTS, OR ARRANGE FOR REPLACEMENT IF DISTURBED (ALL MONUMENTS MAY NOT BE SHOWN).

(P) CONTRACTOR TO PROTECT, REPLACE TO MATCH EXISTING IF DAMAGED.

(R) CONTRACTOR TO REMOVE AS REQUIRED.

(RL) CONTRACTOR TO RELOCATE TO LOCATION SHOWN.

(S) SAWCUT (NOT ALL SAWCUT LINES SHOWN). CONTRACTOR TO VERIFY WIDTH AND ALIGNMENT (SEE GENERAL NOTE 19 BELOW).

(V) CONTRACTOR TO POTHOLE (OR VACUUM EXCAVATE) AND VERIFY EXISTING UTILITY LOCATION, ELEVATION, DIAMETER & DEPTH PRIOR TO CONSTRUCTION. REPORT LOCATION, COVER DEPTH AND ELEVATION TO ENGINEER, ALONG WITH ANY CONFLICTS.

SERVICE CONNECTIONS

(1) NEW WATER SERVICE LINE (SERVICE SIZE AS INDICATED ON PLANS) TO NEW WATER IRON AND METER SET (INSTALL NEW SERVICE LINE ADJACENT TO EXISTING WATER SERVICE LINE). REMOVE EXISTING METER AND RECONNECT TO EXISTING (OR NEW) SERVICE LINE PER DETAIL SHEET G-84 AS APPLICABLE.

(2) RESERVED

(3) RESERVED

GENERAL NOTES

A. SURFACE RESTORATION SHOWN ON PROFILE ALSO APPLIES TO ADJACENT WATER SERVICE LINE OR HYDRANT LEAD TRENCHES AS APPLICABLE. RESTORE ALL STRIPING TO MATCH EXIST.

B. PRIOR TO SAWCUTTING ALONG NEW MANLINE TRENCH OR ADJOINING CONNECTION FITTINGS, CONTRACTOR TO VAC-EX OR POTHOLE AND VERIFY LOCATION & ALIGNMENT OF EXISTING WATERLINES. NOTIFY ENGINEER AND CITY OF ANY CONFLICTS SO ALLOW FOR ALIGNMENT ADJUSTMENTS PRIOR TO SAWCUTTING ALONG STREET.

C. MARKER POSTS TO BE INSTALLED ALONG NEW WATERLINES PER NOTES ON DWG G-83.

D. FOR ANY TRENCHES WITHIN FARMED AREAS, THE TOP 18" TO 18" OF TOPSOIL SHALL BE REMOVED AND STOCKPILED SEPARATELY FROM THE REMAINDER OF THE TRENCH SPOILS. THE STOCKPILED TOPSOIL SHALL BE UTILIZED FOR THE TOP 12" MINIMUM OF THE BACKFILLED TRENCH. IF NATIVE TOPSOIL IS NOT STOCKPILED BY THE CONTRACTOR, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE IMPORTED TOPSOIL AT NO ADDITIONAL COST TO THE OWNER. ANY EXCESS TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR FROM THE FIELD AREAS.

E. FARM FIELD BACKFILL AND SURFACE RESTORATION: THE CONTRACTOR SHALL STAGE HIS WORKS AND SEQUENCE WORK AS REQUIRED TO ENSURE THAT NO CONSTRUCTION MATERIALS DETRIMENTAL TO FARMING PRACTICES OR FARMING EQUIPMENT REMAIN AFTER CONSTRUCTION IS COMPLETE. THIS SHALL INCLUDE ENSURING ALL LOOSE GRANULAR TRENCH MATERIALS ARE PUSHED INTO THE TRENCH BEFORE NATIVE BACKFILL OCCURS AND ENSURING THAT NO LOOSE TOWING WIRE, PIPE OR CONSTRUCTION MATERIALS IS ALLOWED IN THE TRENCH BACKFILL.

| NO | DATE | REVISIONS | BY |
|---|---|---|---|
| 1 | 10/2/2014 | Permit & Bid Issue | TW |
| 2 | 12/19/2014 | Bid Addendum #1 | TW |
| 3 | 1/9/2015 | Bid Addendum #2 | TW |

DSN: TW
DWN: AM
CHK: TW
DATE: JAN 2015

VERIFY SCALE
Bar is one inch on original drawing. If not one inch on this sheet adjust scales accordingly.

AS-CONSTRUCTED

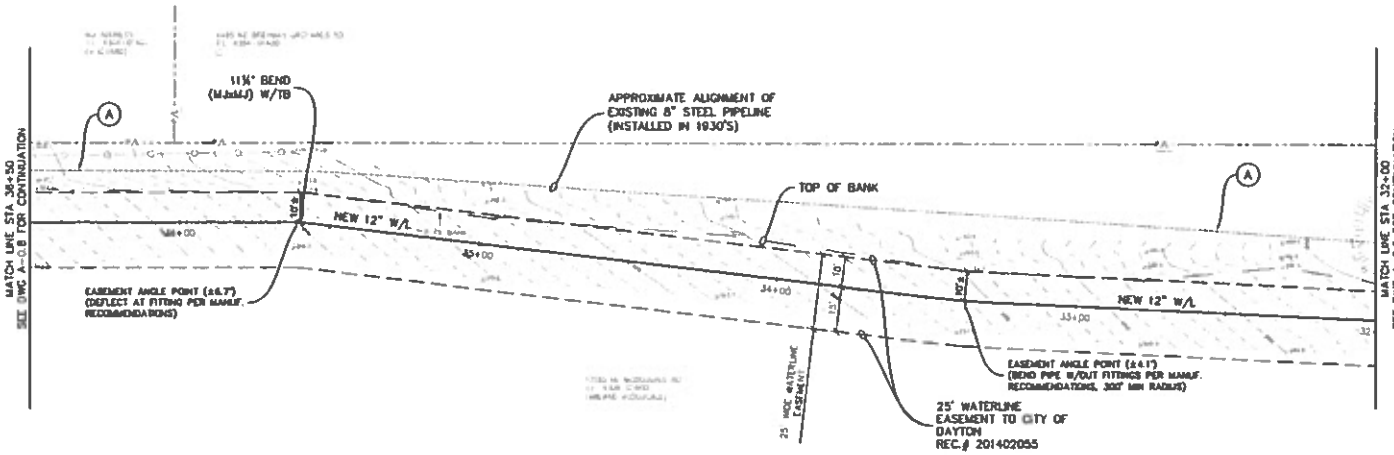
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-3986

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO MCDOUGALL WELLS

PLAN & PROFILE
STA: 27+50 - 32+00

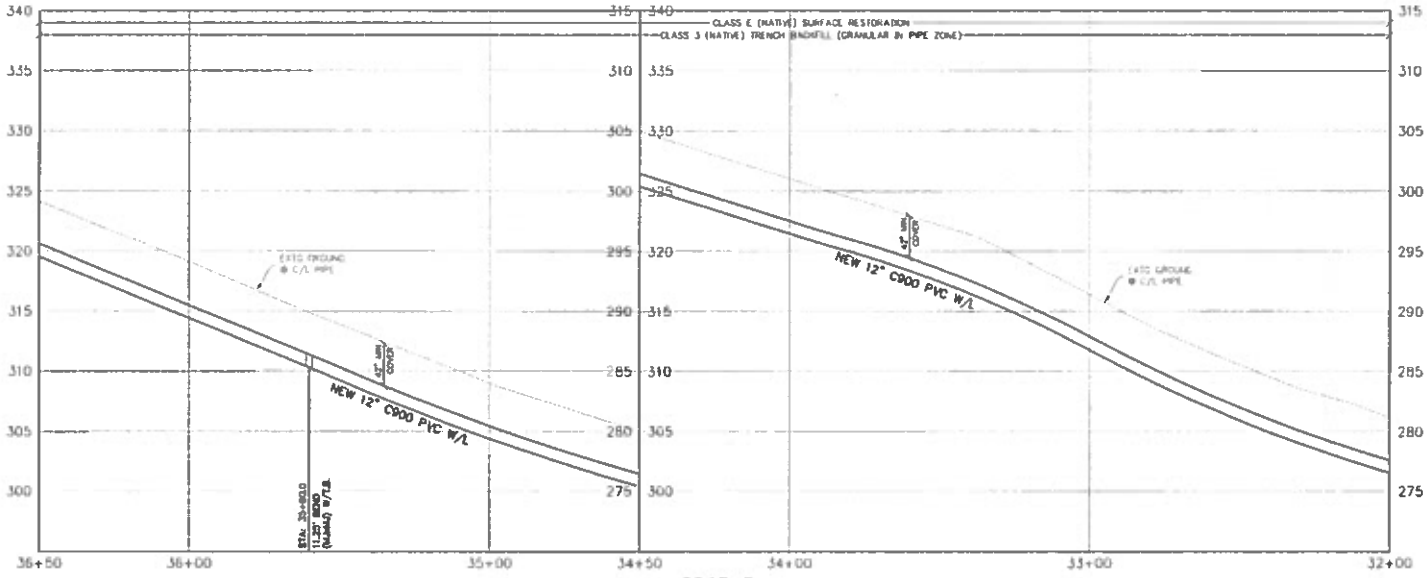
DRAWING
A-0.6

JOB NUMBER
2609.4090.0




PLAN

SCALE: 1" = 20'




PROFILE

SCALE: 1" = 20' H
1" = 5' V

**SCHEDULE A IMPROVEMENTS SHOWN ON THIS SHEET WERE NOT CONSTRUCTED WITH THIS PROJECT.**

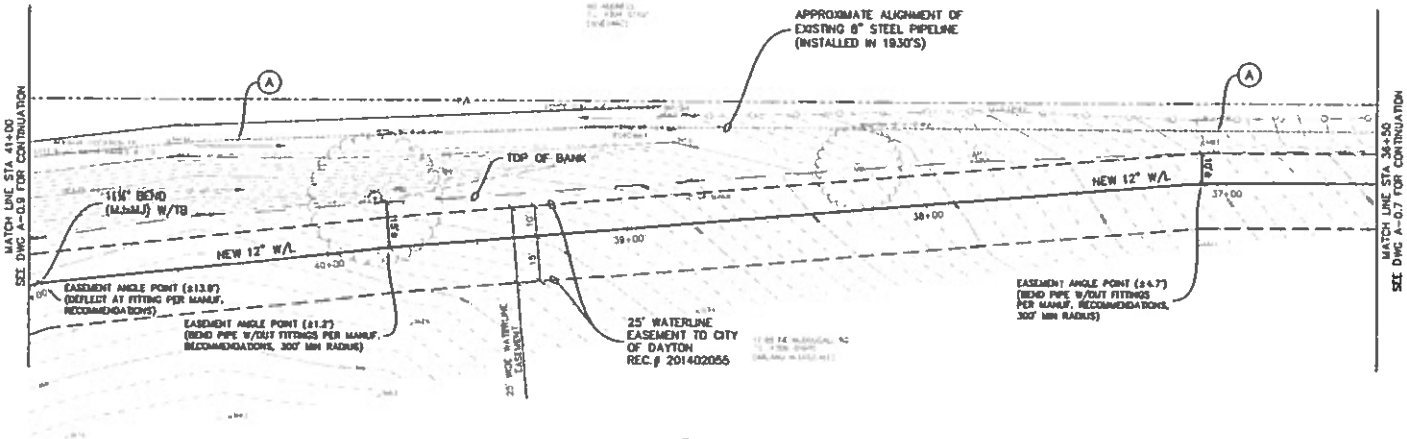
AS-CONSTRUCTED

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE,
RESERVOIRS TO McDOUGALL WELLS

PLAN & PROFILE
STA: 32+00 - 36+50

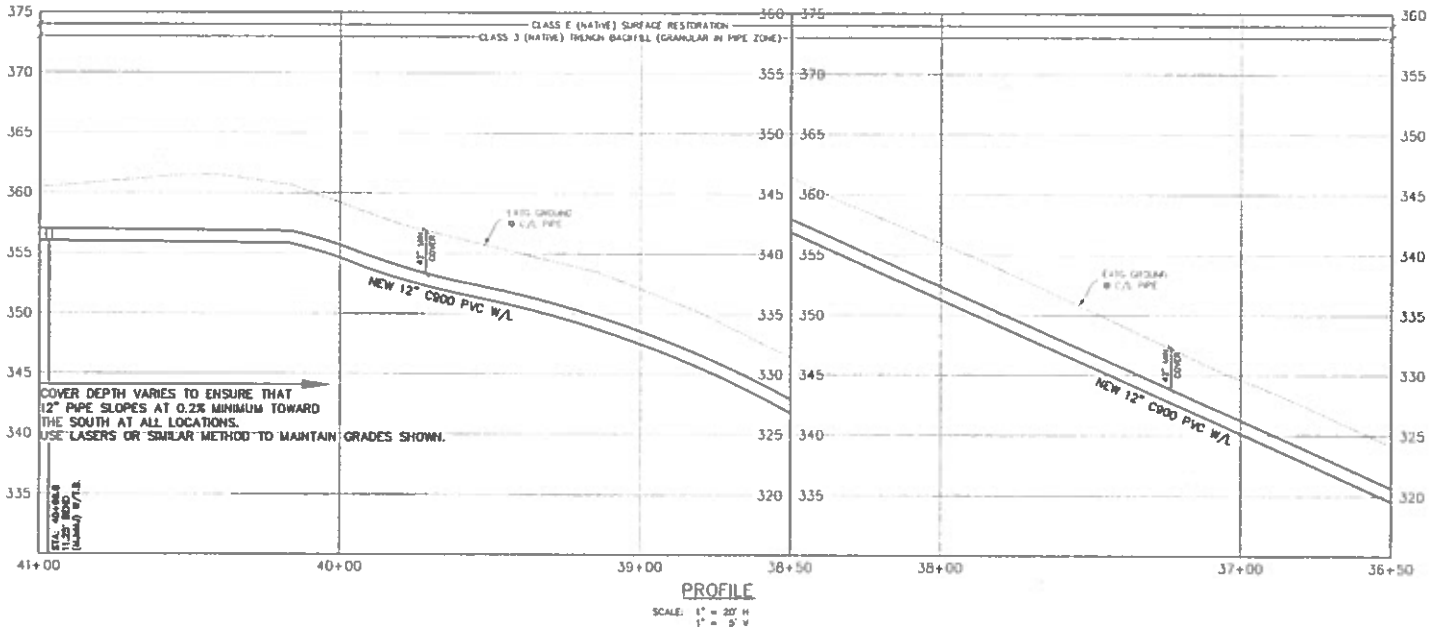
DRAWING
A-0.7

JOB NUMBER
2609.4090.0




PLAN

SCALE: 1" = 20'




PROFILE

SCALE: 1" = 20' H
1" = 5' V

**SCHEDULE A IMPROVEMENTS SHOWN ON THIS SHEET WERE NOT CONSTRUCTED WITH THIS PROJECT.**

REMOVAL/RELOCATION/RESTORATION DETAILS

- (A) ABANDON EXISTING WATERLINE IN PLACE AFTER NEW WATERLINE IS TESTED, DISINFECTED AND PLACED IN SERVICE, AND ALL WATER SERVICES ARE RECONNECTED. REMOVE ONE OF BOXES ON ABANDONED VALVES.
- (B) CONTRACTOR TO PROTECT EXISTING SURVEY MONUMENTS, OR ARRANGE FOR REPLACEMENT IF DISTURBED (ALL MONUMENTS MAY NOT BE SHOWN).
- (P) CONTRACTOR TO PROTECT, REPLACE TO MATCH EXISTING IF DAMAGED.
- (R) CONTRACTOR TO REMOVE AS REQUIRED.
- (RE) CONTRACTOR TO RELOCATE TO LOCATION SHOWN.
- (S) SAWCUT (NOT ALL SAWCUT LINES SHOWN). CONTRACTOR TO VERIFY WIDTH AND ALIGNMENT (SEE GENERAL NOTE 'B' BELOW).
- (T) CONTRACTOR TO POTHOLE (OR VACUUM EXCAVATE) AND VERIFY EXISTING UTILITY LOCATION, ELEVATION, DIAMETER & DEPTH PRIOR TO CONSTRUCTION. REPORT LOCATION, COVER DEPTH AND ELEVATION TO ENGINEER, ALONG WITH ANY CONFLICTS.

WATERLINE DETAILS

1. NEW WATER SERVICE LINE (SERVICE SIZE AS INDICATED ON DWGS) TO NEW METER BOX AND METER SET (INSTALL NEW SERVICE LINE ADJACENT TO EXISTING WATER SERVICE LINE) RESET EXISTING METER AND RECONNECT TO EXISTING (OR NEW) SERVICE LINE PER DETAIL S/5 OR S/6 AS APPLICABLE.
2. RESERVED
3. RESERVED

GENERAL NOTES

A. SURFACE RESTORATION SHOWN ON PROFILE ALSO APPLIES TO ADJACENT WATER SERVICE LINE OR HYDRANT LEAD TRENCHES AS APPLICABLE. RESTORE ALL SURFACES TO MATCH EXIST.

B. PRIOR TO SAWCUTTING ALONG NEW WATERLINE TRENCH OR ORDERING CONNECTION FITTINGS, CONTRACTOR TO VAC-EX OR POTHOLE AND VERIFY LOCATION & ALIGNMENT OF EXISTING WATERLINES. NOTIFY ENGINEER AND CITY OF ANY DISCREPANCIES TO ALLOW FOR ALIGNMENT ADJUSTMENTS PRIOR TO SAWCUTTING ALONG STREET.

C. MARKER POSTS TO BE INSTALLED ALONG NEW WATERLINES PER NOTES ON DWG C-03.

D. FOR ANY TRENCHES WITHIN FARMED AREAS, THE TOP 24" TO 48" OF TOPSOIL SHALL BE SALVAGED AND STOCKPILED SEPARATELY FROM THE REMAINDER OF THE TRENCH SPOILS. THE STOCKPILED TOPSOIL SHALL BE UTILIZED FOR THE TOP 12" MINIMUM OF THE BACKFILLED TRENCH. IF NATIVE TOPSOIL IS NOT STOCKPILED BY THE CONTRACTOR, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE IMPORTED TOPSOIL AT NO ADDITIONAL COST TO THE OWNER. ANY EXCESS TRENCH SPOILS SHALL BE REMOVED BY THE CONTRACTOR FROM THE FIELD AREAS.

E. FARM FIELD SAMPLING AND SURFACE RESTORATION: THE CONTRACTOR SHALL STAGE MATERIALS AND SEQUENCE WORK AS REQUIRED TO ENSURE THAT NO CONSTRUCTION MATERIALS BE STORED ON TO FARMING PRACTICES OR FARMING EQUIPMENT REMAIN AFTER CONSTRUCTION IS COMPLETE. THIS SHALL INCLUDE ENSURING ALL LOOSE GRANULAR TRENCH MATERIALS ARE PUSHED INTO THE TRENCH BEFORE NATIVE BACKFILL OCCURS AND ENSURING THAT NO LOOSE TOPSOIL, SOIL, PIPE OR CONSTRUCTION MATERIALS IS ALLOWED IN THE TRENCH BACKFILL.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | REVISIONS |

JEFFREY SCOTT — EXPIRES: JUNE 30, 2016

AS CONSTRUCTED

WESTECH ENGINEERING, INC.

CITY OF DAYTON, OREGON

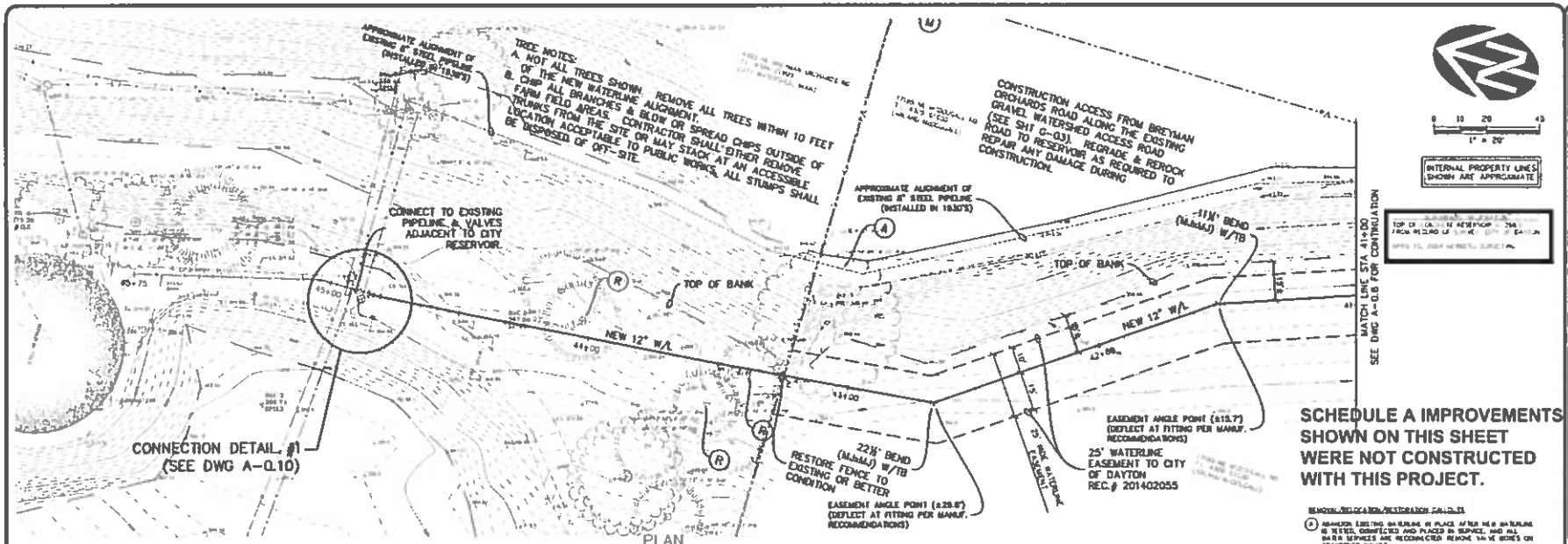
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS

PLAN & PROFILE

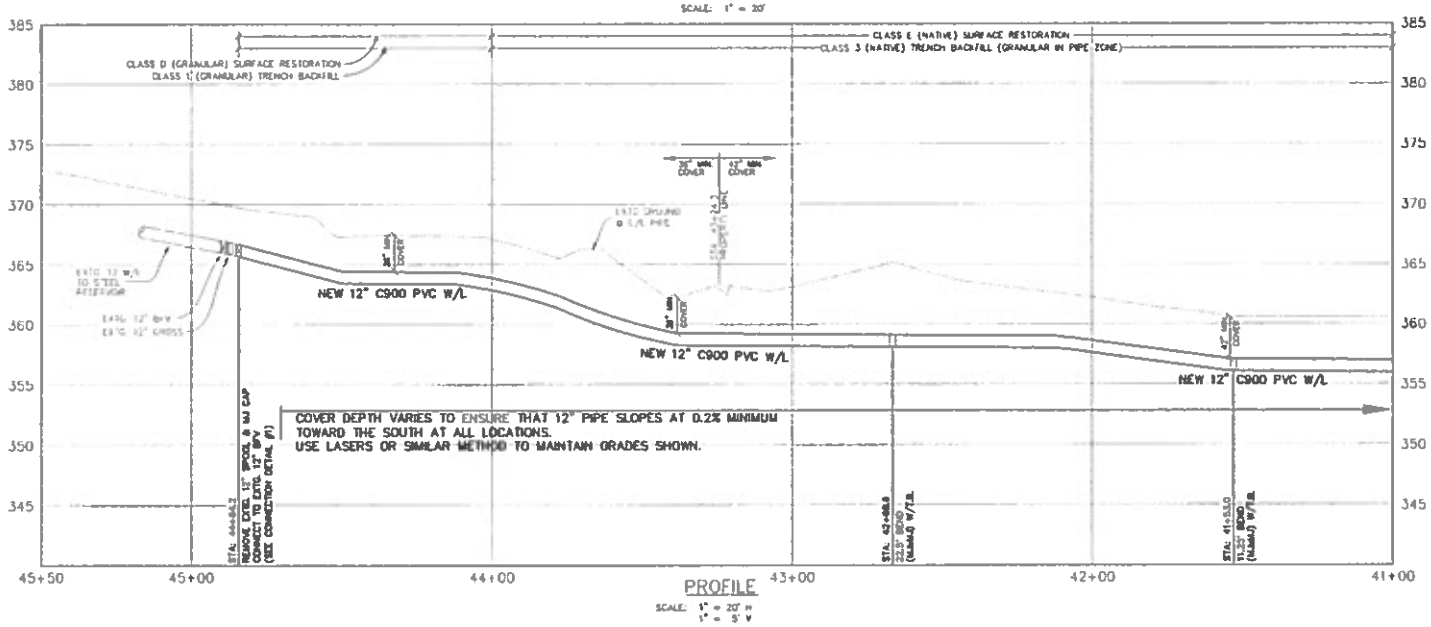
STA: 36+50 – 41+00

DRAWING A-0.8

JOB NUMBER 2609.4090.0



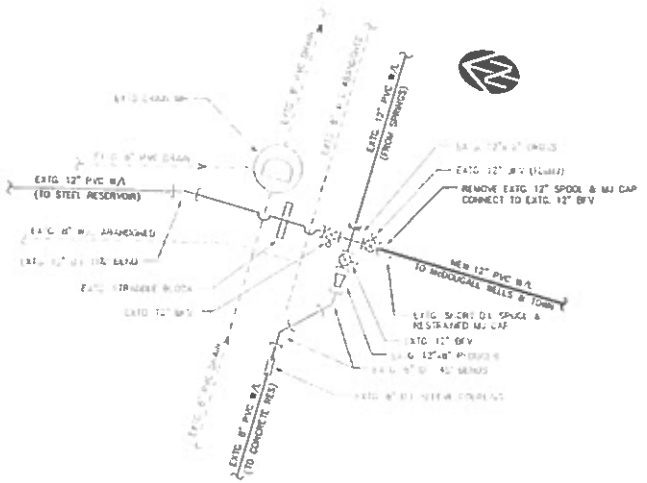

**SCHEDULE A IMPROVEMENTS SHOWN ON THIS SHEET WERE NOT CONSTRUCTED WITH THIS PROJECT.**




CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE: RESERVOIRS TO McDOUGALL WELLS
PLAN & PROFILE
STA: 41+00 – 45+50

DRAWING
A-0.9

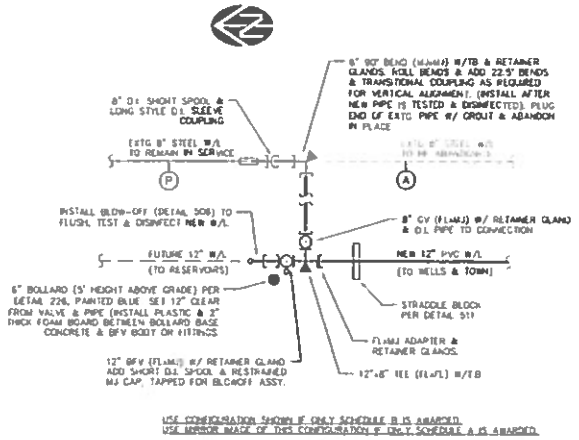
JOB NUMBER
2609.4090.0




## CONNECTION DETAIL #1

N.T.S.

(ADJACENT TO EXTG RESERVOIRS)



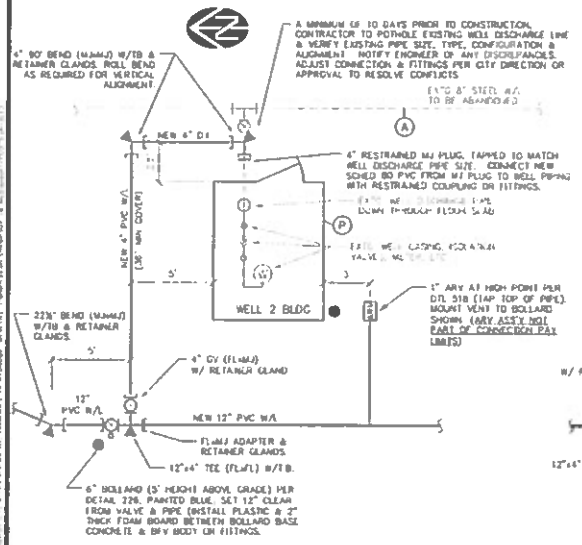

USE CONFIGURATION SHOWN IF ONLY SCHEDULE B IS ABANDONED
USE MIRROR IMAGE OF THIS CONFIGURATION IF ONLY SCHEDULE A IS ABANDONED

## CONNECTION DETAIL #2

N.T.S.

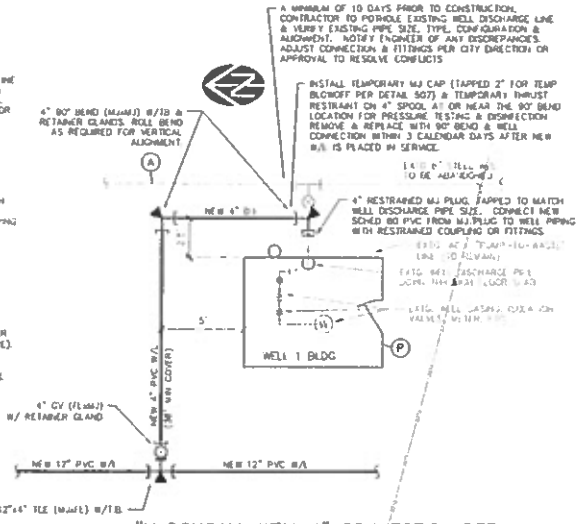
GENERAL WATERLINE CONNECTION SEQUENCING NOTES (DOES NOT INCLUDE ALL STEPS)

1. CONTRACTOR TO POTHOLE EXISTING WATERLINES & FITTINGS PRIOR TO ORDERING PARTS TO VERIFY EXISTING PIPE SIZE, TYPE, CONFIGURATION & ALIGNMENT. NOTIFY ENGINEER OF ANY DISCREPANCIES. ADJUST CONNECTION & FITTINGS PER CITY DIRECTION OR APPROVAL TO RESOLVE CONFLICTS.
2. CONNECTIONS SHALL BE SEQUENCED TO MINIMIZE SERVICE INTERRUPTION TIME. SERVICE INTERRUPTION SHALL NOT EXCEED 4 HOURS IN ANY ONE DAY, UNLESS A PRIOR EXCEPTION IS AUTHORIZED IN WRITING BY DAYTON PUBLIC WORKS.
3. NEW WATERLINES MUST BE TESTED, DISINFECTED, FLUSHED AND READY TO BE PLACED IN SERVICE PRIOR TO STARTING ON ANY CONNECTION (OTHER THAN CONNECTION #1)
4. CONNECTION #3 & CONNECTION #2 (IF INSTALLED) ARE TO BE COMPLETED ON THE SAME DAY (BEGINNING ON A MONDAY OR TUESDAY), AS WELL AS ANY WATER SERVICE RECONNECTIONS BETWEEN CONNECTION #2 & #3. THE WELL CONNECTIONS ARE TO BE COMPLETED DURING THE SAME WEEK (BUT NO LATER THAN THE END OF THURSDAY)
5. PRIOR TO ISOLATING THE RESERVOIRS OR WELLS AND STARTING THE CONNECTIONS, ALL EXISTING WATERLINES & VALVES MUST BE EXPOSED AND EXISTING PIPE TYPES & OUTSIDE DIAMETER VERIFIED, WITH ALL REQUIRED FITTINGS & GASKETS ON-SITE, AND FITTINGS FOR CONNECTIONS PRE-ASSEMBLED TO THE EXTENT FEASIBLE.



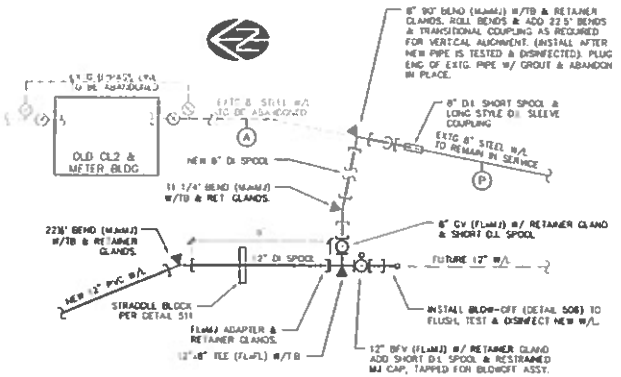

## "McDOUGALL WELL 2" CONNECTION DETAIL

N.T.S.




## "McDOUGALL WELL 1" CONNECTION DETAIL

N.T.S.




## CONNECTION DETAIL #3

N.T.S.

(ADJACENT TO McDOUGALL WELL 1 & OLD CL2 BLDG)

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.

CITY OF DAYTON, OREGON
WATERSHED TRANSMISSION LINE, RESERVOIRS TO McDOUGALL WELLS

CONNECTION DETAILS

DRAWING
A-0.10

JOB NUMBER
2609.4090.0

## 12.2.2 Prioritization Levels

In order to assist the City with their planning, scheduling and construction efforts each improvement project was assigned to one of three priority levels. The priority levels are:

### 12.2.2.1 Priority 1—Near Term Improvements

These projects are targeted to problem areas needing immediate attention. They are projects necessary to resolve existing or near term system deficiencies, resolve regulatory compliance issues or to serve known near term demand increases. It is recommended that Priority 1 improvements are undertaken as soon as practical (as quickly as financing can feasibly be arranged and construction/permitting/land or easement acquisition considerations can be addressed).

Since it is unlikely that the City can arrange financing for all of the necessary improvements at one time, the Priority 1 group has been further subdivided into 1A and 1B projects, with 1A being the more critical. It is anticipated that specific group 1B projects will be executed alongside the work of 1A on an as-needed basis.

### 12.2.2.2 Priority 2—Intermediate Improvements

These are projects that will be needed to provide adequate water service based on anticipated future growth and development. Although not critical at this time, they should be considered as improvement projects that will be upgraded to Priority 1 prior to the end of the planning period.

### 12.2.2.3 Priority 3—Long Term Improvements/Possible Future Need

These projects are needed to improve system reliability or to supply future demands if land develops to the zoned densities. While important, they are not considered to be critical at the present time. If possible, improvements in this category should be incorporated into on-going citywide development and improvement projects to capture the savings associated with concurrent construction. Some (but not all) projects to be constructed by developers with future developments were also assigned to this group.

## 12.2.3 Prioritized Capital Improvement Projects & Estimated Project Costs

To aid in the development of a water system capital improvement program (CIP), each improvement project was examined and assigned to one of the priority classes described above.

**Table 12-1** below summarizes the priority category totals presented in **Table 12-2.**

Table 12-1 Cost Summary, Capital Improvement Recommendations

| Priority Group | Total Estimated Project Cost |
|---|---|
| Priority 1A | $5,136,000 |
| Priority 1B | $4,198,000 |
| Priority 2 | $185,000 |
| Priority 3 | $2,718,000 |
| **TOTAL** | **$12,237,000** |

**Table 12-2** is a comprehensive listing of the recommended water system improvement projects. The general location of many of the prioritized improvements is shown on **Figure 12-1** and **Figure 12-2**

(following the table). It should be noted that the project listing within a priority class is also ranked in general order of recommended priority (although Public Works and the City Council will set the final project prioritization). The cost estimates are rounded to the nearest $1,000 increment. The reader is referred to previous chapters of this report for more detailed descriptions of the individual projects.

At a minimum, it is recommended that all of the Priority 1A, 1B, and Priority 2 improvements be included in the CIP. The Priority 3 improvements are largely growth driven. In general, it is envisioned that the Priority 3 improvements will be constructed as part of future development and that the developer will pay for the improvements (ie. without SDC credits).

SDC credits would be available for Priority 1 or 2 projects constructed by developers (assuming they are on the CIP upon which the SDC is based). If the City Council decides that they wish to promote development in certain areas, selected Priority 3 improvements can be included in the CIP (or added in the future).

To the extent feasible, it is recommended that the City implement as many of the Priority 1A improvements under a single funding package if possible, and under as few funding packages as possible otherwise. Work on the Priority 1A and 1B improvements should begin as soon as feasible after agency approval and City adoption of this master plan. It is anticipated that Priority 2 projects will be required within the planning period, however, these projects can begin as finances become available and as the need arises.

**Table 12-2** Recommended Capital Improvement Priorities (Dayton)

| Project Code[1] | Project | Priority | Total Estimated Project Cost[2] |
|---|---|---|---|
| S-16 | Wellfield Well 1, VFD control upgrades | 1A | $73,000 |
| R-3 | Hazardous tree removal at watershed reservoir site | 1A | $8,000 |
| S-10 | Hazardous tree removal at watershed springs/sand filter sites | 1A | $18,000 |
| T-1 | Watershed springs transmission main (springs to watershed reservoirs) (8") | 1A | $95,000 |
| T-5 | 4th Street transmission main (4th/Ferry to 4th/Mill) (10") | 1A | $139,000 |
| S-8, WT-4A | Watershed Spring improvements & chlorination to address potential GWUDI issues (Alternative 1B, Section 7.4.1), Lower Spring area | 1A | $450,000 |
| S-12 | Production testing and evaluation of all City wells by hydrogeologist to verify long term production estimates and determine recommended schedule for rehabilitation at each well (every 5 years) | 1A | $10,000 |
| D-12 | Palmer Creek crossing (Option 1: Palmer Ln to 1st Str, bore under creek) (8") | 1A | $273,000 |
| S-5 | Senior water rights purchase potential. Develop map of all property around City & wellfield with existing senior water rights, contact property owners to determine interest in selling water rights. Purchase property with senior water rights as it becomes available for sale. | 1A | $15,000 |
| S-9 | Watershed long-term lease, exclusive easements and/or property purchase/acquisition | 1A | TBD |
| S-11, R-2 | Install on-site auxiliary power generators & automatic transfer switches at all City wells (9 wells, excluding the Post Office Well) | 1A | $529,000 |

**Table 12-2** Recommended Capital Improvement Priorities (Dayton)

| Project Code[1] | Project | Priority | Total Estimated Project Cost[2] |
|---|---|---|---|
| S-17 | Wellfield Well 3, VFD control upgrades | 1A | $73,000 |
| S-8, WT-4B | Watershed Spring improvements & chlorination to address potential GWUDI issues (Alternative 1B, Section 7.4.1), Upper Spring area | 1A | $278,000 |
| WT-2 | Install clearwell and influent pump station at WTP to ensure adequate backwash flowrates | 1A | $435,000 |
| T-2 | Watershed transmission main (watershed reservoirs to McDougal Rd) (12") | 1A | $847,000 |
| T-4 | Watershed transmission main (PRV Station to 1st/Ferry). Install new main under Yamhill River by directional drilling (12") | 1A | $1,079,000 |
| D-19 | Over-length service modifications (Foster Rd, Watershed, McDougal Rd) | 1A | $20,000 |
| D-20 | Master meter on rural waterline (Fletcher Rd) | 1A | $7,000 |
| D-20 | Master meters on rural waterline (McDougal Rd) | 1A | $7,000 |
| D-6 | Main Street Replacement (2nd to 3rd) (8") | 1A | $104,000 |
| D-8 | 3rd Street (Church to Main) (10") | 1A | $110,000 |
| S-7 | Update City's emergency water restriction ordinances & resolutions. | 1A | TBD |
| D-1 | 9th Street (Ash to Church) (8") | 1A | $107,000 |
| D-2 | Church Street (9th toward Laurel) (8") | 1A | $92,000 |
| D-9 | 3rd Street (Main to Ferry) (8") | 1A | $101,000 |
| D-11 | Alder Street (4th to 3rd) (8") | 1A | $109,000 |
| D-20 | Master meters on rural waterline (Thompson) | 1A | $7,000 |
| D-3 | Main Street ( 8th to 7th) (8") | 1A | $92,000 |
| D-7 | Main Street Replacement (3rd to 4th) (8") | 1A | $58,000 |
| | **Subtotal Priority 1A** | | **$5,136,000** |
| T-3 | Watershed transmission main (McDougal Rd @ wells to PRV station) (12") | 1B | $1,538,000 |
| S-13 | McDougal Wells, replace any existing steel discharge lines between wells & watershed transmission main (±300') | 1B | $29,000 |
| S-14 | McDougal Wells, chlorination system upgrades (after completion of watershed spring improvements) | 1B | $29,000 |
| WT-3A | Add third Dayton distribution pump at WTP | 1B | $109,000 |
| WT-3B | WTP Fire Pump improvements | 1B | $73,000 |
| T-10 | WTP secondary transmission main (WTP to Church & Flower) (12") | 1B | $240,000 |
| T-9 | Ash Street transmission main (Flower/Church to Ash/9th) (10") | 1B | $384,000 |
| D-16 | Thompson Road rural waterline (8" & 2") | 1B | $231,000 |
| S-2 | Water Rights Permits (Wellfield Wells), investigation study for potential new well sites for water rights transfers | 1B | $12,000 |
| S-3 | Water Rights Certificates (In-Town & McDougal Wells), investigation study for | 1B | $10,000 |

**Table 12-2** Recommended Capital Improvement Priorities (Dayton)

| Project Code[1] | Project | Priority | Total Estimated Project Cost[2] |
|---|---|---|---|
| | potential new well sites for water rights transfers | | |
| T-6 | Mill Street transmission main (4th/Mill to 3rd/Mill) (10") | 1B | $135,000 |
| R-4 | Recoating existing 600,000 gallon steel watershed reservoir | 1B | $296,000 |
| D-21 | Commercial services at McDougal Corner | 1B | $8,000 |
| S-4 | If Watershed Springs cannot be upgraded to meet State standards, investigation study on potential for transfer of spring water rights to wells drilled at same site | 1B | $8,000 |
| S-19 | Contact McMinnville to initiate discussions regarding potential inter-tie to McMinnville water system to allow Dayton to purchase supplemental water during period of shortage. | 1B | TBD |
| T-7 | Hwy 221 Palmer Creek bridge transmission main (Mill Str to Neck Rd) (12") | 1B | $698,000 |
| D-15 | McDougal Road rural waterline (2") | 1B | $187,000 |
| D-17 | Fletcher Road rural waterline (interim repair till annexation) (2") | 1B | $211,000 |
| | **Subtotal Priority 1B** | | **$4,198,000** |
| S-18, WT-6 | Resolution of support for concept of further investigation of regional water source and/or treatment options | 2 | TBD |
| D-10 | Church Street (west of 2nd) (8") | 2 | $58,000 |
| S-6 | Water Management & Conservation Plan update when required by WRD. | 2 | $25,000 |
| G-1 | Water Master Plan Update (±2020) | 2 | $45,000 |
| D-5 | 5th Street (Oak to Church) (8") | 2 | $57,000 |
| R-5 | New finish water pump station at WTP site (anticipated at or after end of planning period), dead storage conversion | 2 | TBD |
| | **Subtotal Priority 2** | | **$185,000** |
| T-8 | Fletcher Road/Foster Road transmission main (10") | 3 | $1,590,000 |
| D-4 | Warmscombe Drive (8") | 3 | $34,000 |
| D-14 | Neck Road (Hwy 221 to Water Street) (10") | 3 | $243,000 |
| D-18 | East Dayton Industrial Area waterline (12") | 3 | $851,000 |
| | **Subtotal Priority 3** | | **$2,718,000** |
| | *Recurring Annual Programs* | | |
| S-15 | Wellfield wells, rotating rehabilitation program, one well per year (to address production losses due to iron bacteria bio-fouling) | 1A | $30,000 |
| | **Subtotal, Recurring Annual Programs** | | **$30,000** |

[1] Project Code Legend:
S = Water Source/Supply WT = Water Treatment
T = Transmission D = Distribution
R = Reservoir/Storage

[2] See Section 12.3 for basis of project cost estimates. October 2010 ENR 20 City Construction Cost Index of 8921

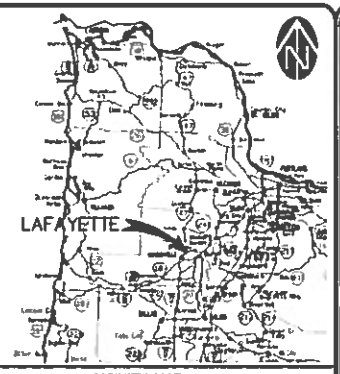
# DRAWINGS FOR:
# DAYTON WELLFIELD WELL DEVELOPMENT

## Schedule A - Well No. 2 Improvements (10401 SE Airport Road)
## Schedule B - Well No. 5 Improvements (8255 SE Airport Road)

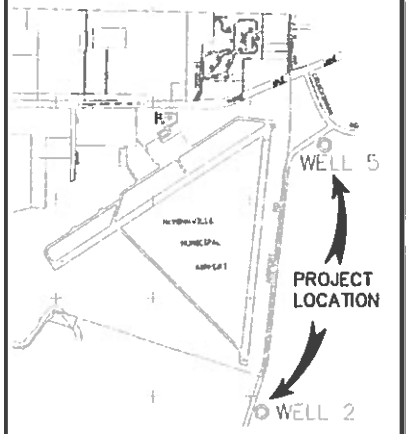
FOR: The City of Lafayette
P.O. Box 55
486 Third Street
Lafayette, Oregon 97127
503-864-2451

WELL 2 WILL BE OWNED & OPERATED BY THE CITY OF LAFAYETTE.

WELL 5 WILL BE JOINTLY OWNED & OPERATED BY THE CITY OF LAFAYETTE AND CITY OF DAYTON.




VICINITY MAP




PROJECT LOCATION MAP

SHEET INDEX


| Sheet | Dwg. | Title |
|---|---|---|
| **GENERAL (All Schedules)** | | |
| 1 | G001 | Cover Sheet, Vicinity & Location Maps, and Sheet Index |
| 2 | G002 | Well No. 2, Design Criteria, Generalized Equipment & Process Schematic (both wells) |
| 3 | G003 | Well No. 5, Design Criteria, Project Sequence of Operations |
| 4 | G004 | Construction Notes & Legend |
| 5 | G005 | Erosion Control Notes & Details |
| **COMMON CIVIL DETAILS (Schedules A & B)** | | |
| 6 | C001 | Civil Details |
| **CONTROL BUILDING STRUCTURAL (Schedules A & B)** | | |
| 7 | S001 | Control & Methane Stripper Building Floor Plan |
| 8 | S002 | Control & Methane Stripper Building Framing Plan & Elevations |
| **COMMON MECHANICAL PLANS (Schedules A & B)** | | |
| 9 | M001 | Well No 2 & Well No 5, Mechanical Piping Plan & Sections |
| **WELL NO. 2, WELL, PIPING, & METHANE STRIPPER IMPROVEMENTS (Schedule A)** | | |
| **Well No. 2, Sitework & Pipelines** | | |
| 10 | C101 | Well No. 2, Existing Conditions, Grading, Drainage & Erosion Control Plan |
| 11 | C102 | Well No. 2, Site Layout & Piping Plan |
| 12 | C103 | Well No. 2, Reference Map, Power Service Easements & Existing Vaults |
| **Well No. 2 Mechanical** | | |
| 13 | M101 | Well No. 2, Casing/Screen As-built, Wellhead & Casing/Pump Sections |
| **Well No. 2 Electrical** | | |
| 14 | E101 | Well No. 2, Electrical Site Plan & Legend |
| 15 | E102 | Well No. 2, Electrical Control Building Floor Plans |
| 16 | E103 | Well No. 2, Electrical One-Line Diagrams & Schedules |
| 17 | E104 | Well No. 2, Electrical Motor Control Schematic |
| 18 | E105 | Well No. 2, Electrical Details |
| **Well No. 2 Instrumentation & Control** | | |
| 19 | I100 | Instrument & Control, Legend & Schedules |
| 20 | I101 | Instrument & Control, Panel 02FP1 Layout |
| 21 | I102 | Instrument & Control, Panel 02FP1 Power Distribution |
| 22 | I103 | Instrument & Control, Panel 02FP1 Discrete Inputs |
| 24 | I105 | Instrument & Control, Panel 02FP1 Analog Inputs |
| 25 | I106 | Instrument & Control, Panel 02FP1 Analog Outputs |
| **WELL NO. 5, WELL, PIPING, & METHANE STRIPPER IMPROVEMENTS (Schedule B)** | | |
| **Well No. 5, Sitework & Pipelines** | | |
| 26 | C201 | Well No. 5, Existing Conditions, Grading, Drainage & Erosion Control Plan |
| 27 | C202 | Well No. 5, Site Layout & Piping Plan |
| **Well No. 5 Mechanical** | | |
| 28 | M201 | Well No. 5, Casing/Screen As-built, Wellhead & Casing/Pump Sections |
| **Well No. 5 Electrical** | | |
| 29 | E201 | Well No. 5, Electrical Site Plan & Legend |
| 30 | E202 | Well No. 5, Electrical Control Building Floor Plans |
| 31 | E203 | Well No. 5, Electrical One-Line Diagrams & Schedules |
| **Well No. 5 Instrumentation & Control** | | |
| 32 | I200 | Instrument & Control, Legend & Schedules |
| 33 | I201 | Instrument & Control, Panel 05FP1 Layout |
| 34 | I202 | Instrument & Control, Panel 05FP1 Power Distribution |
| 35 | I203 | Instrument & Control, Panel 05FP1 Discrete Inputs |
| 36 | I204 | Instrument & Control, Panel 05FP1 Discrete Outputs |
| 37 | I205 | Instrument & Control, Panel 05FP1 Analog Inputs |


MEMORANDUM OF INFORMATION
CITY WORKS AND BOARD ON
DAYTON'S WELL 5 SYSTEM IMPROVEMENT

**RECORD DRAWINGS**

Reviewed Drawn By: TMT Date: 11/23/2009

THESE RECORD DRAWINGS HAVE BEEN PREPARED IN PART ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

This project was funded in part with a financial award from the Safe Drinking Water Revolving Loan Fund, funded by the Environmental Protection Agency and the State of Oregon, Economic and Community Development Department (City of Dayton portion of Bid 5).

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development
COVER SHEET
VICINITY & LOCATION MAPS, and SHEET INDEX

DRAWING NO. G001
SHEET 1 OF 38
JOB NUMBER 1897.4041.0

GENERAL DESIGN CRITERIA (Well No 2)

1. Well
   - Date drilled 11/07
   - Well Log # Yamh 55101
   - Ground elevation @ casing after drilling ±157 ft
   - Well depth: 247 ft bgs (elev -89')
   - Well diameter
   - 14" borehole
   - 10" casing grouted to 110' bgs
   - Filter pack below 120' bgs
   - Screen: 0 06" slot, 10" ID
   - Screen intervals: See drawings
   - 193-218' bgs
   - 238-243' bgs
   - Static Water Level 52' bgs (12/11/07)

2. Design Discharge Conditions
   - Summer (assumes 90 day continuous pumping)
   - Pump rate: 120 gpm
   - Drawdown: 110 ft
   - Max. pump lift: ±185 ft (ie. pump shutoff level bgs)
   - Winter (assumes 90 day continuous pumping)
   - Pump rate: 160 gpm
   - Drawdown: 148 ft
   - Max. pump lift: ±185 ft bgs (ie. pump shutoff level)

3. Well Pump
   - Type: Submersible Vertical Turbine (Grundfos 150S150-6)
   - Pump design point: 160 gpm @185' TDH
   - Pump diameter: 6"
   - Pump motor fully shrouded for cooling
   - Motor size: 15 hp
   - Motor speed: 3450 rpm full speed
   - Pump setting: ±220 ft bgs (intake)
   - Column pipe: 4" dia
   - Column check valves: top of pump & ±100' above pump
   - Well Discharge: Pitless adapter w/3' bury, 6" flanged outlet, torque arrestor

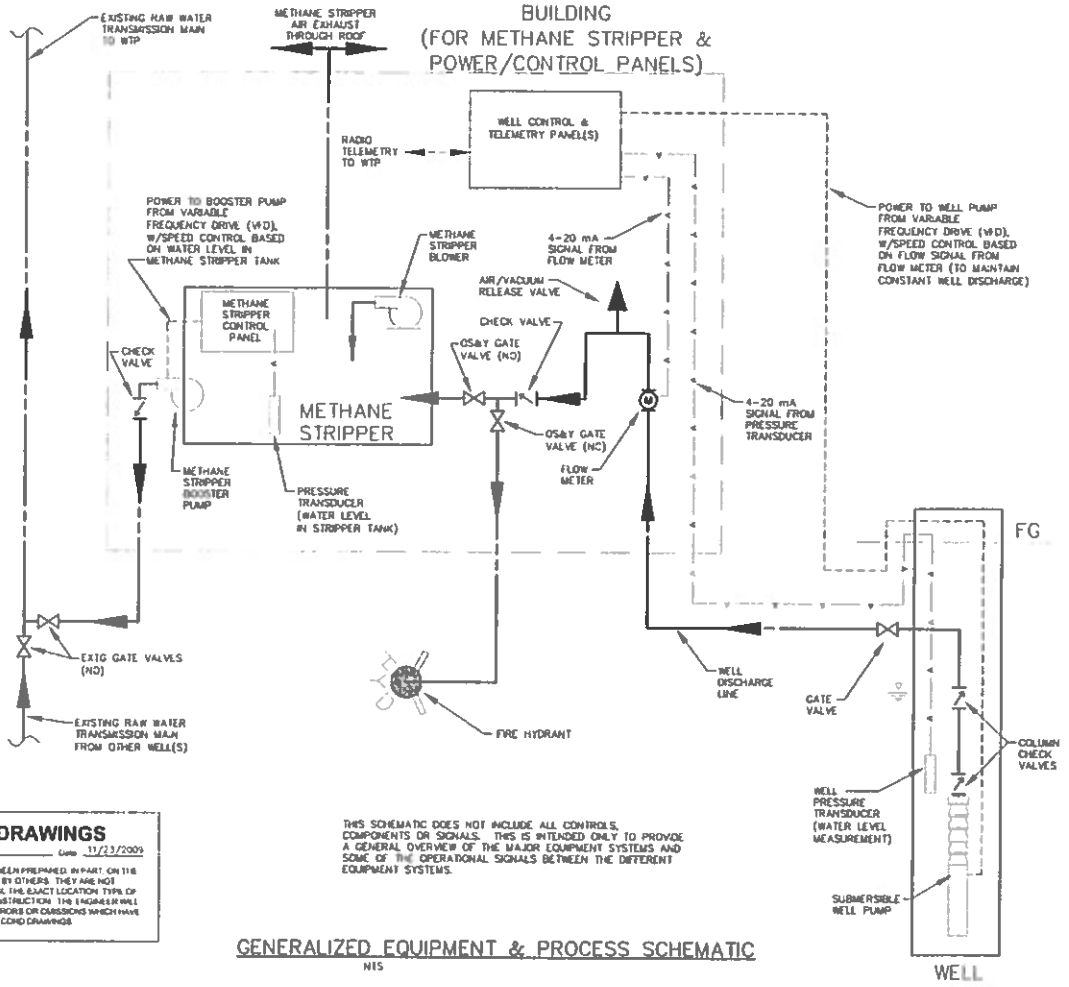
4. Well Pump Operational & Hydraulic Control
   - On/Off telemetry signal from WTP, local manual over-ride
   - Well Pump Speed Control: Variable Frequency Drive (VFD)
   - Magnetic flow meter on well discharge, 4-20 mA signal for VFD control
   - Pressure transducer in well for low level pump protection
   - Isolation valves to allow well to be pumped to waste

5. Methane Stripper
   - Multistage aeration stripper w/booster pump & controls (Lowrey D863P)
   - Design flow rate: 160 gpm
   - Blower: (3E 7.5 hp) regenerative blower
   - Design air flow rate: 300 scfm
   - Design methane removal: 91.5%
   - Booster pump: vertical multi-stage (X5.15 hp)
   - Booster pump control: VFD based on level in stripper tank

6. Flow monitoring
   - Flow meter inside well building (direct reading and totalizer)

7. Standby Power System
   - None, manual transfer switch

8. Telemetry
   - Radio to WTP




GENERALIZED EQUIPMENT & PROCESS SCHEMATIC
NTS

THIS SCHEMATIC DOES NOT INCLUDE ALL CONTROLS, COMPONENTS OR SIGNALS. THIS IS INTENDED ONLY TO PROVIDE A GENERAL OVERVIEW OF THE MAJOR EQUIPMENT SYSTEMS AND SOME OF THE OPERATIONAL SIGNALS BETWEEN THE DIFFERENT EQUIPMENT SYSTEMS.

**RECORD DRAWINGS**

Horizontal Datum By: ____ Date: 11/23/2009

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development
WELL 2 DESIGN CRITERIA, GENERALIZED EQUIPMENT & PROCESS SCHEMATIC

DRAWING NO. G002
SHEET 2 OF 38
JOB NUMBER 1897.4041.0

## GENERAL DESIGN CRITERIA (Well No. 5)

1. Well
   - Date drilled: 11/07
   - Well Log #: Yamh 55102
   - Ground elevation @ casing after drilling: ±154 ft
   - Well depth: 196 ft bgs (elev -42')
   - Well diameter
   - 14" borehole
   - 10" casing grouted to 110' bgs
   - Filter pack below 120' bgs
   - Screen: 0.06" slot, 10" ID
   - Screen intervals: See drawings
   - 158-188' bgs
   - Static Water Level 48' bgs (12/5/07)

2. Design Discharge Conditions
   - Summer (assumes 90 day continuous pumping)
   - Pump rate: 145 gpm
   - Drawdown: 80 ft
   - Max. pump lift: ±150 ft (w. pump shutoff level bgs)
   - Winter (assumes 90 day continuous pumping)
   - Pump rate: 190 gpm
   - Drawdown: 105 ft
   - Max. pump lift: ±185 ft bgs (w. pump shutoff level)

3. Well Pump
   - Type: Submersible Vertical Turbine (Grundos 230S150-4)
   - Pump design point: 190 gpm @169' TDH
   - Pump diameter: 6"
   - Pump motor fully shrouded for cooling
   - Motor size: 15 hp
   - Motor speed: 3450 rpm full speed
   - Pump setting: ±188 ft bgs (intake)
   - Column pipe: 4" dia.
   - Column check valves: top of pump & ±100' above pump
   - Well Discharge: Pitless adapter w/3' bury, 6" flanged outlet, torque arrestor

4. Well Pump Operational & Hydraulic Control
   - On/Off telemetry signal from WTP, local manual over-ride
   - Well Pump Speed Control: Variable Frequency Drive (VFD)
   - Magnetic flow meter on well discharge, 4-20 mA signal for VFD control
   - Pressure transducer in well for low level pump protection
   - Isolation valves to allow well to be pumped to waste

5. Methane Stripper
   - Multistage aeration stripper w/booster pump & controls (Lowrey D863P)
   - Design flow rate: 160 gpm
   - Blower: 10 hp regenerative blower
   - Design air flow rate: 300 scfm
   - Design methane removal: 91.5%
   - Booster pump: vertical multi-stage, 15 hp
   - Booster pump control: VFD based on level in stripper tank

6. Flow monitoring
   - Flow meter inside well building (direct reading and totalizer)

7. Standby Power System
   - None, manual transfer switch

8. Telemetry
   - Radio to WTP

## GENERAL SEQUENCE OF OPERATIONS (Well 2 & Well 5)

1. The following sequence of operations does not include all steps and is intended only to outline a general framework of construction that meets the project sequencing requirements and maintains sewer service during the course of the work. In addition to the issues outlined herein, the Contractor shall conform to all City, County, and State conditions and directives concerning the work wherein each has jurisdiction. The Contractor can propose alternate construction sequencing, but such alternate sequencing must address the issues noted below.

2. The work will likely be completed in phases. Some of the work under these phases may simultaneously. The phases are:
   a. Phase I - Coordination and Equipment Procurement
   b. Phase II - Site Improvements, Wellhead, Methane Stripper/Control Building
   c. Phase III - New Well System Performance Testing & Startup
   d. Phase IV - Place Well in Operation, Final Sitework

3. Phase I - Coordination, Submittals, Equipment Procurement, Site Preparation
   a. Submit schedule, equipment and material submittals, shop drawings and sequence of operations (if different than contained herein) to City and Engineer for review and approval.
   b. Coordinate procurement of materials and equipment.
   c. Notify utilities and coordinate activities as required.
   d. Obtain needed building and construction permits.
   e. Install erosion control measures.
   f. Pothole existing utilities, existing force main at connection point, etc. Notify Engineer of any conflicts or discrepancies.

4. Phase II - Site Improvements, Wellhead, Methane Stripper/Control Building
   a. Construct new rock fills.
   b. Construct new site waterlines.
   c. Install pitless adapter on existing well casing, extend waterline to new building location.
   d. Construct new building, including electrical & controls.
   e. Install methane stripper & process piping in new building.
   f. Install new pump and downhole appurtenances, disinfect per DHS standards.
   g. Submit draft equipment O&M manuals.

5. Phase III - New Well System Performance Testing & Startup
   a. Startup up and test new well, methane stripper, booster pump, control panels, radio telemetry system, and other system components prior to placing system in operation. Contractor shall provide all equipment required for testing.
   b. Submit final O&M manuals. Final O&M manuals must be submitted and approved by the City prior to placing the new well in operation.

6. Phase IV - Place Well in Operation, Final Sitework
   a. Place new well system in operation, provide final operator training.
   b. Complete remaining site grading & surface restoration.
   c. Clean up and demobilize from the site.

**RECORD DRAWINGS**

Revisions Drawn By: TMT Date: 11/23/2009

THIS AS RECORD DRAWINGS HAVE BEEN PREPARED IN PART ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

VERIFY SCALE

| | | | | | |
|---|---|---|---|---|---|
| DSN: | JW/AM | | | | |
| DWN: | MDF/BF | | | | |
| CKD: | CMF | | | | |
| QA/C: | CMF | 11/07 | DESIGN PER AS-BUILTS | | BY |

CONSTRUCTED

CITY OF LAFAYETTE, OREGON
Dayton, Hoffbeck, Well 2 & Well 5 Development

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-2566
E-mail: mail@westech-eng.com

WELL NO. 5
DESIGN CRITERIA & SEQUENCE OF OPERATIONS

DRAWING NO.
G003

SHEET
3 OF 38

JOB NUMBER
1897.4041.0

## GENERAL NOTES:

1. Contractor shall procure and conform to all construction permits required by the City of Lafayette and Yamhill County.

2. Contractor shall provide all bonds and insurance required by public and/or private agencies having jurisdiction.

3. All materials and workmanship for facilities in street right-of-way or easements shall conform to approving agencies' construction specifications wherein each has jurisdiction, including but not limited to the City, County, Oregon Health Division (OHD) and the Oregon Department of Environmental Quality (DEQ).

4. Unless otherwise approved by the Public Works Director, construction of all public facilities shall be done between 7:00 a.m. and 6:00 p.m., Monday through Friday, and between 8:00 a.m. and 6:00 p.m. Saturday.

5. The Contractor shall perform all work necessary to complete the project in accordance with the approved construction drawings including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.

6. Contractor to notify City, County, ODOT and all utility companies a minimum of 48 business hours (2 business days) prior to start of construction, and comply with all other requirements of ORS 757.541 to 757.571.

7. Any inspection by the City, County or other agencies shall not, in any way, relieve the Contractor from any obligation to perform the work in strict compliance with the applicable codes and agency requirements.

8. Contractor shall erect and maintain barricades, warning signs, traffic cones per City, County and ODOT requirements in accordance with the MUTCD (including Oregon amendments). Access to driveways shall be maintained at all times. All traffic control measures shall be approved and in place prior to any construction activity.

9. Record Drawings: The Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record any approved deviations in construction from the approved drawings, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the City upon request.

10. Upon completion of construction of public facilities, Contractor shall submit a clean set of field record drawings containing all as-built information to the Design Engineer for use in the preparation of As Built drawings for submittal to the City.

11. Address Numbers: Per OFC 505.1, all new and existing buildings shall have approved address numbers (4" minimum number height) placed in a position that is plainly legible and visible from the fronting street. Temporary address signs shall be mounted in a visible location prior to and during any construction, and the permanent numbers mounted prior to occupancy.

## EXISTING UTILITIES & FACILITIES:

12. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

13. The location and descriptions of existing utilities shown on the drawings are compiled from available records and/or field surveys. The engineer or utility companies do not guarantee the accuracy or the completeness of such records. Contractor shall field verify sizes and locations of all existing utilities prior to construction.

14. The Contractor shall locate and mark all existing property and street monuments prior to construction. Any monuments disturbed during construction of the project shall be replaced by a Registered Land Surveyor at the Contractor's expense. The monuments shall be replaced within a maximum of 90 days, and the County Surveyor shall be notified in writing as required by ORS 209.150.

15. Contractor shall field verify location and depth of all existing utilities where new facilities cross. All utility crossings marked or shown on the drawings shall be potholed using hand tools or other non-invasive methods prior to excavating or boring. Contractor shall be responsible for exposing potential utility conflicts far enough ahead of construction to make necessary grade modifications without delaying the work. If grade modification is necessary, Contractor shall notify the Design Engineer, and the Design Engineer shall obtain approval from the City Engineer prior to construction. All utility crossings shall be potholed as necessary prior to excavating or boring to allow the Contractor to prevent grade or alignment conflicts.

16. All existing facilities shall be maintained in place by the Contractor unless otherwise shown or directed. Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. Contractor to leave existing facilities in an equal or better than original condition and to the satisfaction of the City Engineer.

17. Utilities, or interfering portions of utilities, that are abandoned in place shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug the remaining exposed ends of abandoned utilities.

18. Contractor shall remove all existing signs, mailboxes, fences, landscaping, etc. As required to avoid damage during construction and replace them to existing or better condition.

## GRADING, PAVING & DRAINAGE:

19. The Contractor shall be responsible for managing construction activities to insure that public streets and right-of-ways are kept clean of mud, dust or debris. Dust abatement shall be maintained by adequate watering of the site by the Contractor.

20. Unless otherwise noted, all grading, rocking and paving to conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

21. Clear and grub within work limits all surface vegetation, trees, stumps, brush, roots, etc. Do not damage or remove trees except as approved by the engineer or as shown on the drawings. Protect all roots two inches in diameter or larger.

22. Strip work limits, removing all organic matter which cannot be compacted into a stable mass. All trees, brush and debris associated with clearing, stripping or grading shall be removed and disposed of off site.

23. Immediately following fine grading operations, compact subgrade to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Subgrade must be inspected and approved by the City prior to placing embankments or base rock.

24. Unless otherwise shown on the drawings, straight grades shall be run between all finish grade elevations and/or finish contour lines shown.

25. Crushed rock shall conform to the requirements of OSSC (ODOT/APWA) 02630.10 (Dense Graded Base Aggregate). Compact to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Prior to placing AC pavement, written compaction test results for base rock and trench backfill must be received by the City, and a proof-roll (witnessed by the City) must be performed.

26. Paving of streets shall not be allowed until after completion of all required testing and inspection of new water, sewer and storm drain lines under paved areas, and review and approval of the private (franchise) utility plans by the City Engineer.

27. A.C. Pavement shall conform to section 00745 (Asphalt Concrete Pavement) OSHD Standard Specifications for standard duty mix. A.C. Pavement shall be compacted to a minimum of 91% of maximum density (at all locations) as determined by the Rice standard method.

28. All existing or constructed manholes, cleanouts, monuments, water valves and similar structures shall be adjusted to match finish grade of the area wherein they lie.

29. Unless otherwise shown on the drawings, no cut or fill slopes shall be constructed steeper than 3H:1V.

## PIPED UTILITIES:

30. Contractor shall coordinate and pay all costs associated with connecting to existing water, sanitary sewer and storm sewer facilities.

31. Unless otherwise noted, materials and workmanship for water, sanitary sewer and storm sewer shall conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

32. Bedding and Backfill: All pipes shall be bedded with minimum 6-inches of 3/4"-minus crushed rock bedding and backfilled with compacted 3/4"-minus crushed rock in the pipe zone (crushed rock shall extend a minimum of 12-inches over the top of the pipe in all cases). Crushed rock trench backfill shall be used under all improved areas, including sidewalks. Granular trench backfill shall be compacted to 92% of the maximum dry density per AASHTO T-180 test method (Modified Proctor).

33. The Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade. The bottom of the trench excavation shall be shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.

34. Contractor shall provide all materials, equipment and facilities required for testing all utility piping in accordance with City construction specifications.

35. **Tracer Wire:** All water piping located outside of the public right-of-way or not laid in straight lines between structures shall have an electrically conductive insulated 12 gauge copper tracer wire the full length of the installed pipe using blue wire for water. Tracer wire shall be extended up into all valve boxes.

36. Warning Tape: Detectable or non-detectable acid and alkali resistant safety warning tape shall be provided along the full length of all water mainline segments not located under paved portions of public streets.

37. No trenches in roads or driveways shall be left in an open condition overnight. All such trenches shall be closed before the end of each work day and normal traffic flows restored.

- Water

38. City forces to operate all valves, including fire hydrants, on existing public mains.

39. All water mains shall be C-900 PVC (DR 18) or Class 52 ductile iron as shown. All fittings 4-inches through 24-inches in diameter shall be ductile iron fittings in conformance with AWWA C-153 or AWWA C-110. The maximum working pressure for all MJ cast iron or ductile iron fittings 4-inches through 24-inch in diameter shall be 350 psi for MJ fittings and 250 psi for flanged fittings.

40. All water mains to be installed with a minimum 36 inch cover to finish grade unless otherwise noted or directed. Service lines to be installed with a minimum 30 inches cover within the right-of-way. Deeper depths may be required as shown on the drawings or to avoid obstructions.

41. Thrust restrain shall be provided on all bends, tees and other direction changes per local jurisdiction requirements and as specified or shown on the drawings. Unless otherwise approved by the City Engineer, all valves shall be flange connected to adjacent tees or crosses.

42. Water service pipe on the public side of the meter shall be Type K soft copper tubing conforming to ASTM B-88.

43. Unless otherwise noted, water service pipe on the private side of the meter shall be Schedule 40 PVC.

44. Domestic and fire backflow prevention devices and vaults shall conform to requirements of public and/or private agencies having jurisdiction.

45. Contractor shall install temporary plug and blowoff as required at the end of waterline for flushing, testing and chlorination.

46. The work shall be performed in a manner designated to maintain water service in existing waterlines. In no case shall service to any main line be interrupted for more than four (4) hours in any one day. Contractor shall notify the City a minimum of 48 hours (2 business days) prior to any interruption of service.

## FRANCHISE UTILITIES

47. Unless otherwise shown on the drawings and approved in writing by all jurisdictions having authority, new and relocated private utilities shall be installed underground.

48. Contractor shall coordinate with power or telephone company for location of conduits in common trenches, as well as location of vaults, pedestals, etc. Installation of private utilities in a common trench with or within 3 feet horizontally of paralleling watermains is prohibited.

49. Power & telephone trenching and conduits shall be installed per utility company requirements with pull wire. Contractor shall verify with utility company for size, location and type of conduit prior to construction, and shall ensure that trenches are adequately prepared for installation per utility company requirements. All changes in direction of utility conduit runs shall have long radius steel bends.

## TESTING AND INSPECTION

50. The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems arising from uninspected work. Inspections shall include inspection and/or special inspection as required by any building permit.

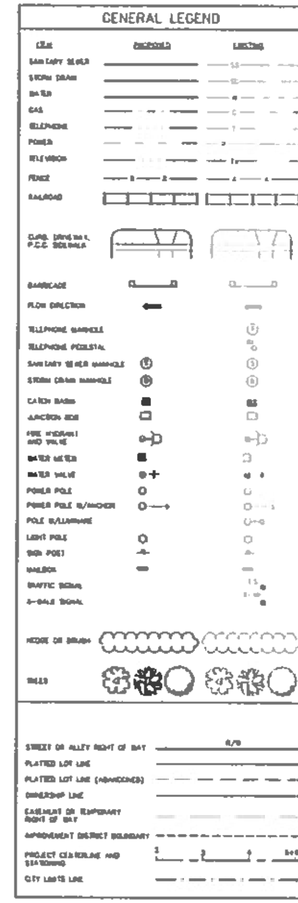
51. Unless otherwise specified, the attached "Required Testing and Frequency" table outlines the minimum testing schedule for the project. The testing schedule is not complete, and does not relieve the Contractor of the responsibility of obtaining all necessary inspections or observations for all work performed, regardless of who is responsible for payment. Cost for retesting shall be borne by the Contractor.

| REQUIRED TESTING AND FREQUENCY TABLE | | Party Responsible for payment: Contractor | | Others (see note 1) |
|---|---|---|---|---|
| **Streets, Parking Lots, Pads, Fills, etc.** | | | | |
| Subgrade | 1 Test/4000 S.F./Lift (4 min) | ✓ | See note 2 | |
| Baserock | 1 Test/4000 S.F./Lift (4 min) | ✓ | See note 2 | |
| **Piped Utilities, All** | | | | |
| Trench Backfill | 1 Test/200 Feet Trench/Lift (4 min) | ✓ | See note 2 | |
| **Water** | | | | |
| Pressure Test | (to be witnessed by Owner's Representative or approving agency) | ✓ | See note 3 | |
| Bacterial Water Test | Per Oregon Health Division | ✓ | See note 2 | |
| Chlorine Residual Test | Per City Requirements | ✓ | | |

Note 1: "Others" refers to Owner's Authorized Representative or Approving Agency as applicable. Contractor responsible for scheduling testing. All testing must be completed prior to performing subsequent work.

Note 2: Testing must be performed by an approved independent testing laboratory.

Note 3: To be witnessed by the Owner's Representative or approving agency. The Contractor shall perform pretests prior to scheduling witnessed waterline or sanitary sewer pressure tests, or pipeline mandrel test.




**RECORD DRAWINGS**

Revisions Drawn By TMT Date 11/23/2009

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| NO. | DATE | REVISIONS DESCRIPTION | BY |
|---|---|---|---|
| | | | |

VERIFY SCALE

DSN JW/DM
DRN MDP/BP
CKD DM
DATE SEPT 09

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.

CITY OF LAFAYETTE, OREGON

Dayton Wellfield, Well 2 & Well 5 Development

# CONSTRUCTION NOTES & LEGEND

DRAWING NO. G004

SHEET 4 OF 38

JOB NUMBER 1897.4041.0

### EROSION CONTROL NOTES:

1. Clearing and grading erosion control measures shall be in place prior to site disturbance. All other necessary erosion control measures shall be implemented prior to starting work on the portion/phase of the project to which the measures are related. Erosion control measures shall be maintained in such a manner as to ensure that sediment and sediment-laden water does not enter the drainage system, roadways, or violate applicable water quality standards.

2. The erosion control construction, maintenance, replacement and upgrading of the erosion control facilities is the responsibility of the Contractor until all construction is completed and approved, and permanent erosion control (i.e. vegetation/landscaping) is established on all disturbed areas.

3. All recommended erosion control procedures are dependent on construction methods, staging, site conditions, weather and scheduling. During the construction period, erosion control facilities shall be upgraded as necessary due to unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.

4. The Contractor is responsible for control of sediment transport within project limits. If an installed erosion control system does not adequately contain sediment on site, then the erosion control measures shall be adjusted or supplemented by the Contractor as necessary to ensure that sediment laden water does not leave the site. Additional measures shall be provided as required to ensure that all paved areas are kept clean for the duration of the project. Additional interim measures will include, at a minimum, installation of hay bale sediment barriers or silt fences in accordance with the details shown on the drawings. These measures shall be installed along all exposed embankments and cut slopes to prevent sediment transport.

5. All existing and newly constructed storm inlets and drains shall be protected until pavement surfaces are completed and/or vegetation is established.

6. Erosion control facilities and sediment fences on active sites shall be inspected by the Contractor at least daily during any period with measurable precipitation. Any required repairs or maintenance shall be completed immediately. The erosion control facilities on inactive sites shall be inspected and maintained by the Contractor a minimum of once a month or within 24 hours following the start of a storm event.

7. At no time shall sediment accumulation within a trapped catch basin exceed 50% of the sediment capacity. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system. The Contractor shall remove all accumulated sediment from all impacted catch basins and storm pipes prior to acceptance by the Owner.

8. The Contractor is solely responsible for protection of all adjacent property and downstream facilities from erosion and siltation during project construction. Any damage resulting from such erosion and siltation shall be corrected at the sole expense of the Contractor.

9. The Contractor shall provide site watering as necessary to prevent wind erosion of fine-grained soils.

10. Unless otherwise indicated on the drawings, all temporary erosion control facilities, including sediment fences, hay bales, silt sacks, bio-bags, etc. shall be removed by the Contractor within 30 days after permanent landscaping/vegetation is established.

11. Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to a post.

12. Sediment fence shall be installed per drawing details. Sediment fences shall have adequate support to contain all silt and sediment captured.

13. The standard strength filter fabric shall be fastened securely to stitched loops installed on the upslope side of the posts, and 6 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

14. Straw bales shall be standard 40 to 80-pound rectangular bales of cereal grain or seed straw. Straw bales shall be keyed into the ground a minimum of 4 to 6 inches, and be held in place by 1-inch x 2-inch x 36-inch wood stakes driven through the bales and into the ground a minimum of 12-inches.

15. Bio-filter bags shall be clean 100 percent wood product waste. Bags shall be 18-inch x 18-inch x 30-inch, weigh approximately 45 lbs., and be contained in a bag made of 1/2-inch plastic mesh.

16. Sediment barriers shall be maintained until the up-slope area has been permanently stabilized. At no time shall more than 10-inches of sediment be allowed to accumulate behind sediment fences and straw bales. No more than 2 inches of sediment shall be allowed to accumulate behind bio-filter bags. Sediment shall be removed prior to reaching the above stated depths. New sediment barriers shall be installed uphill as required to control sediment transport.

17. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

18. The Contractor shall verify that all trucks are well sealed when transporting saturated soils from the site. Water drippage from trucks transporting saturated soils must be reduced to less than 1 gallon per hour prior to leaving the site.

19. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto the public right-of-way or approved access point. The entrance may require periodic top dressing as conditions demand, and repair and/or cleanout of any structures used to trap sediment.

20. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately, and the Contractor shall provide protection of downstream inlets and catch basins to ensure sediment laden water does not enter the storm drain system.

21. Temporary grass cover measures must be fully established by Nov 1st, or other cover measures (ie. erosion control blankets with anchors, 3-inches minimum of straw mulch, 6 mil HDPE plastic sheet, etc.) shall be in place over all disturbed soil areas until April 30th. To establish an adequate grass stand for controlling erosion by Nov 1st, it is recommended that seeding and mulching occur by September 1st. Straw mulch, if used, shall not leave any bare ground visible through the straw.

22. Minimum soil seeded slope protection. For 3H:1V or steeper slopes use Bon Terra Type C2 or North American Green Type C125 erosion control blanket. Use a minimum of 2-inches straw mulch or North American Green Type S150 for slopes flatter than 3H:1V. Slope protection shall be placed on all disturbed areas immediately after completion of each section of construction activity, until the erosion control seeding has been established. As an option during temporary or seasonal work stoppages, a 6-mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be provided with an anchor trench at the top and bottom of the slope, and shall be sandbagged on the slopes as required to prevent damage or displacement by wind.

23. Permanent erosion control vegetation on all embankments and disturbed areas shall be re-established as soon as construction is completed.

24. Soil preparation. Topsoil should be prepared according to landscape plans, if available, or recommendations of grass seed supplier. It is recommended that slopes be textured before seeding by track walking (ie driving a crawling tractor up and down the slopes to leave a pattern of cleat imprints parallel to slope contours) or other method to provide stable areas for seeds to rest.

25. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10, or between September 1 and October 1. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.

26. When used in lieu of hydromulch, dry, loose, weed free straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.) Mulch shall be spread uniformly immediately following seeding.

27. When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover.

28. Seeding. Recommended erosion control grass seed mix is as follows. Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80% by weight), creeping red fescue (20% by weight). Application rate shall be 100 lbs. per acre minimum.

29. Grass seed shall be fertilized at a rate of 10 lbs. per 1000 S.F. with 16-16-16 slow release type fertilizer. Development areas within 50 feet of water bodies and wetlands must use a non-phosphorus fertilizer.

**RECORD DRAWINGS**

Revisions Drawn By: TMT Date: 11/23/2009

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| NO | DATE | REVISIONS DESCRIPTION | BY |
|---|---|---|---|
| 1 | | | |

DSN: JW/DM
DWN: MDP/BP
CKD: DM
DATE: SEPT 08

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

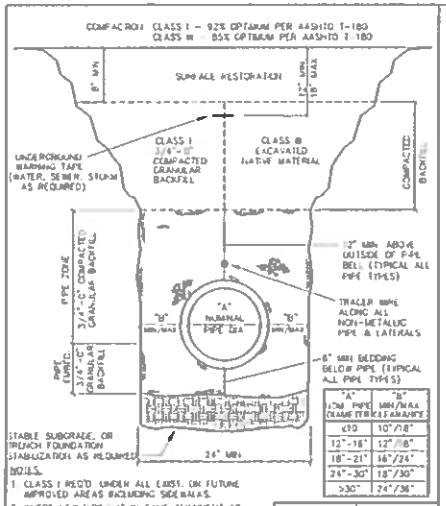
CITY OF LAFAYETTE, OREGON
Doyton Wellfield, Well 2 & Well 5 Development

# EROSION CONTROL NOTES & DETAILS

DRAWING NO. G005

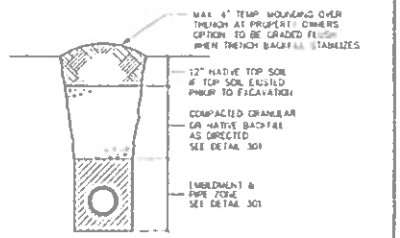
SHEET 5 OF 38

JOB NUMBER 1897.4041.0




NOTES:
1. CLASS I MUST UNDER ALL EXIST. OR FUTURE IMPROVED AREAS INCLUDING SIDEWALKS.
2. WHERE NEW PIPING IS IN SAME ALIGNMENT AS EXISTING PIPING, THE PIPE EMBEDMENT SHALL EXTEND TO A MIN OF 6" BELOW THE NEW PIPING OR 6" BELOW EXISTING PIPING WHICHEVER IS DEEPER
3. FOR FLEXIBLE PIPE, BOTTOM OF TRENCH SHAPING SHALL BE ABOVE PIPE SPRINGLINE PRIOR TO COMPACTING BACKFILL BELOW THE PIPE SPRINGLINE AND UNDER THE PIPE HAUNCHES.

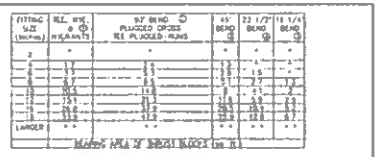
TRENCH BACKFILL, BEDDING, AND PIPE ZONE
LAFAYETTE, OR — STD. NO. 303




CLASS 'E'
UNIMPROVED & OPEN AREAS

NOTES:
1. COMPACTION STANDARD WILL BE AASHTO T-180

NATIVE SURFACE RESTORATION
LAFAYETTE, OR — STD. NO. 304

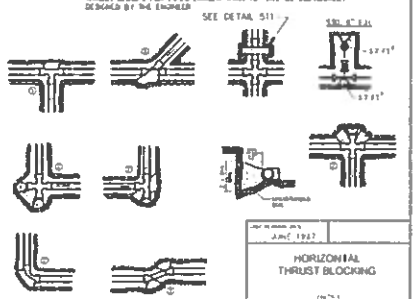



MINIMUM AREA OF THRUST BLOCKS (sq. ft.)

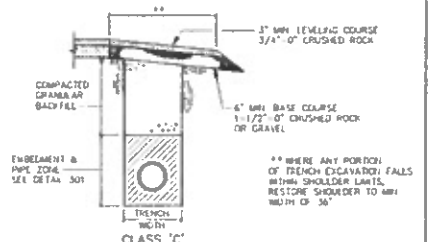
1. ALL VALUES ARE BASED ON THE FOLLOWING ASSUMPTIONS: PIPE PRESSURE = 100 PSI + 2 (water hammer) 1500 PSF SOIL BEARING CAPACITY, MINIMUM DESIGNATION DESIGN VELOCITY NOT TO EXCEED 5 FPS.
2. **ALL FITTINGS SHALL BE WRAPPED IN PLASTIC PRIOR TO PLACEMENT OF CONCRETE.**
3. BEARING SURFACE OF THRUST BLOCKING SHALL BE AGAINST UNDISTURBED SOIL.
4. ALL CONCRETE MIX SHALL HAVE A MIN 28 DAY STRENGTH OF 3300 PSI
5. ALL PIPE JOINTS SHALL BE BACKFILLED WITH GRANULAR BACKFILL AND COMPACTED
6. THRUST BLOCKS FOR PLUGGED CROSS AND PLUGGED TEE SHALL HAVE #4 REBAR @ 18" O.C. LEGS INSTALLED AS SHOWN
7. VERTICAL THRUST DETAILS - SEE DWG. 512
8. STRADDLE BLOCK DETAILS - SEE DWG. 511

* BLOCK TO UNDISTURBED TRENCH WALLS

** THRUST BLOCKS FOR PIPES LARGER THAN 18" DIA TO BE INDIVIDUALLY DESIGNED BY THE ENGINEER

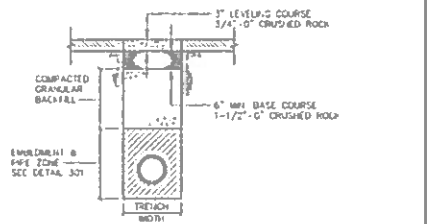



HORIZONTAL THRUST BLOCKING
LAFAYETTE, OR — STD. NO. 510




** WHERE ANY PORTION OF TRENCH EXCAVATION FALLS WITHIN SHOULDER LIMITS, RESTORE SHOULDER TO MIN WIDTH OF 36"

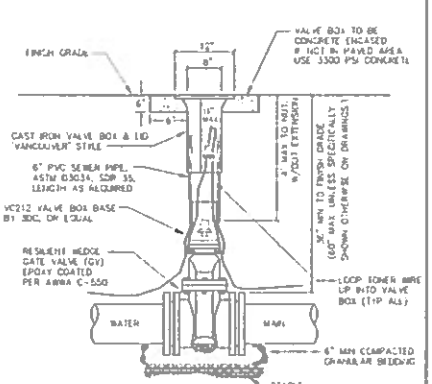
CLASS 'C'
GRAVEL SHOULDER



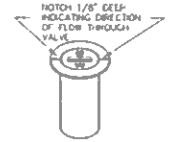

CLASS 'D'
GRAVEL STREET

NOTES:
1. COMPACTION STANDARD WILL BE 92% OPTIMUM PER AASHTO T-180

GRAVEL SURFACE RESTORATION
LAFAYETTE, OR — STD. NO. 303

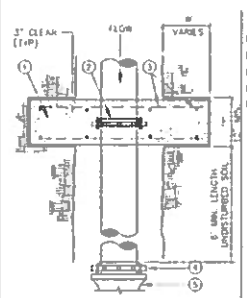



NOTES:
1. GV SHALL CONFORM TO AWWA C-509
2. VALVE BOXES SHALL BE PLUMB AND CENTERED DIRECTLY OVER THE VALVE NUT
3. VALVE BOX TOP SHALL BE ADJUSTED TO MEET FINISHED GRADE.
4. PVC SHALL BE ONE CONTINUOUS PIECE, NO BELLS OR COUPLERS.

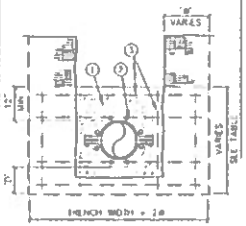



"VANCOUVER"
18" TALL VALVE BOX

GATE VALVE AND VALVE BOX DETAIL
LAFAYETTE, OR — STD. NO. 501




TOP VIEW




FRONT VIEW

MATERIALS
1. CONCRETE STRADDLE BLOCK
2. MJ FLANGE, SERIES 1600, CL 125
3. #4 REBAR EA WAY, 12" O.C.
4. RETAINER GLAND
5. MJ FITTING, VALVE OR BLOWOFF

| PIPE SIZE | 'A' | 'D' | 'T' |
|---|---|---|---|
| 6" | 12" | 8" | 12" |
| 8" | 16" | 10" | 12" |
| 10" | 20" | 12" | 12" |
| 12" | 24" | 18" | 18" |
| >12" | By ENGINEER | | |

NOTES:
1. STRADDLE BLOCKS FOR >12" PIPE SHALL BE DESIGNED INDIVIDUALLY BY THE ENGINEER AND SHALL BE BASED ON THE FOLLOWING:
   a.) 200 PSI WATER PRESSURE
   b.) SOIL BRG. CAPACITY, STEEL SIZE & SPACING BY THE ENGINEER
2. BEARING AREA OF BLOCK SHALL BE AGAINST UNDISTURBED SOIL.
3. STRADDLE BLOCK SHALL HAVE A MINIMUM OF 18" COVER
4. CONCRETE SHALL HAVE A MIN 28 DAY STRENGTH OF 3300 PSI.

STRADDLE BLOCK FOR 12" AND SMALLER PIPE
LAFAYETTE, OR — STD. NO. 511

**RECORD DRAWINGS**

Revisions Drawn By: TMT Date: 11/23/2009

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AS CONSTRUCTED


WESTECH ENGINEERING, INC.
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986


CITY OF LAFAYETTE, OREGON
Dayton Heights, Unit 2 & Unit 3 Development
CIVIL DETAIL

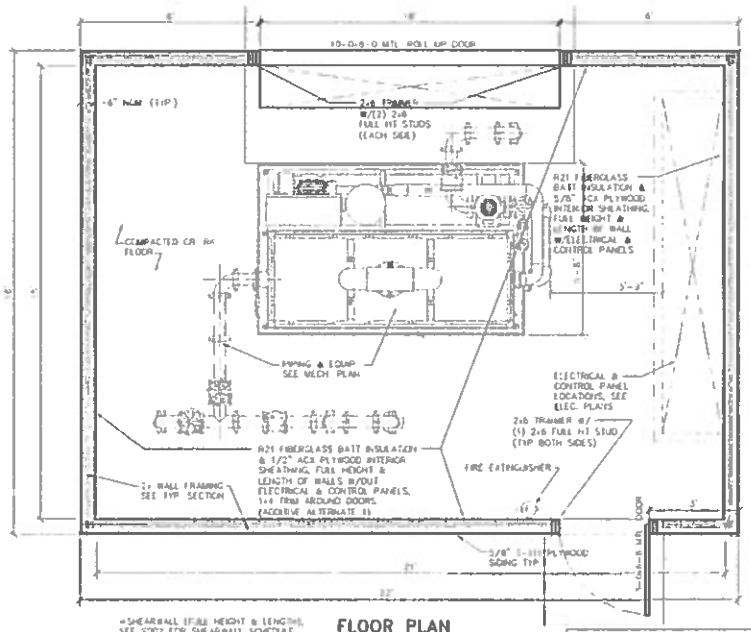
DRAWING NO. C001
SHEET 6 OF 38
JOB NUMBER 1897.4041.0

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 9-14-09 | PER CITY COMMENTS |

DES. JW/JM
DRN. MDP/BSP
CHK. DM
DATE SEPT 09

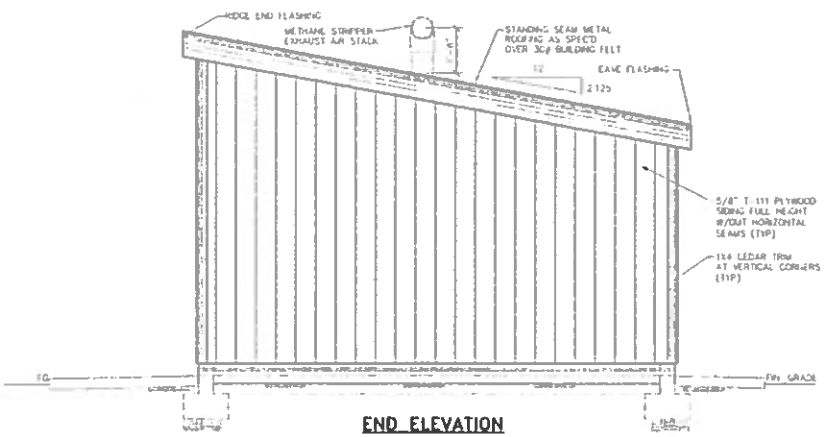
VERIFY SCALE
IF BAR MEASURES 1" THEN DRAWING IS ORIGINAL SIZE. IF NOT, ADJUST SCALE ACCORDINGLY

Dec 18 2009 - 10:46am
R:\Projects\1897.4041.0 Dayton Heights Unit 2 & 3 Development\CADD\Civil\Dwg\C001.dwg, Layout: 11" x 17"



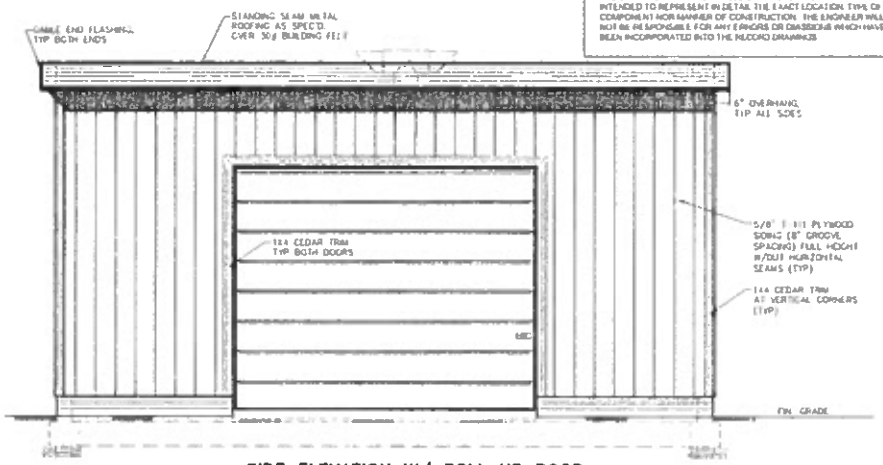

## FLOOR PLAN

SCALE: 1/2" = 1'-0"




## END ELEVATION

SCALE: 1/2"=1'-0"




## SIDE ELEVATION W/ ROLL UP DOOR

SCALE: 1/2"=1'-0"

## RECORD DRAWINGS

Revisions Drawn By: DMF Date: 11/23/2009

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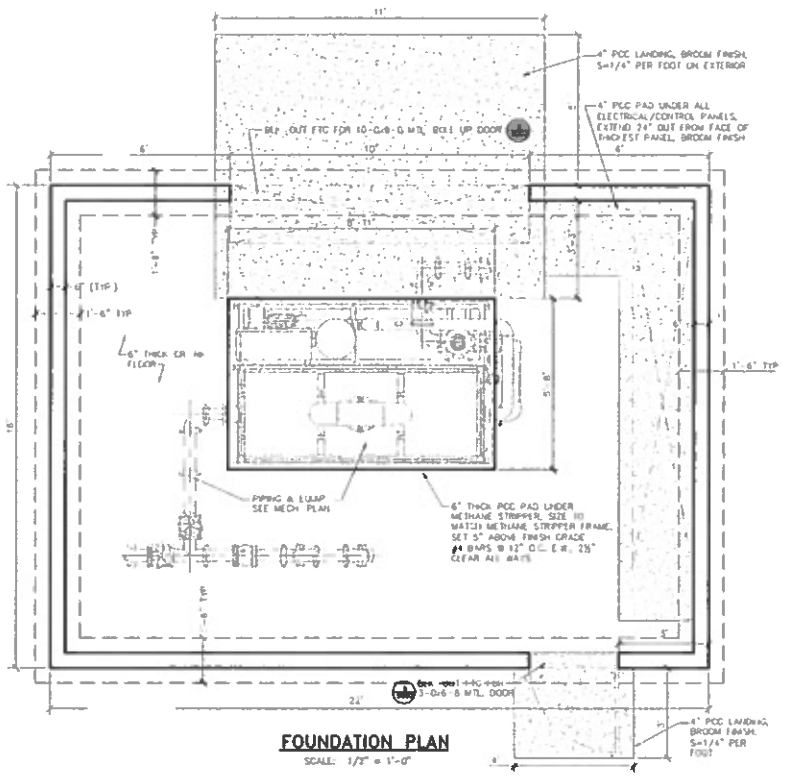



## FOUNDATION PLAN

SCALE: 1/2" = 1'-0"

CITY OF LAFAYETTE, OREGON

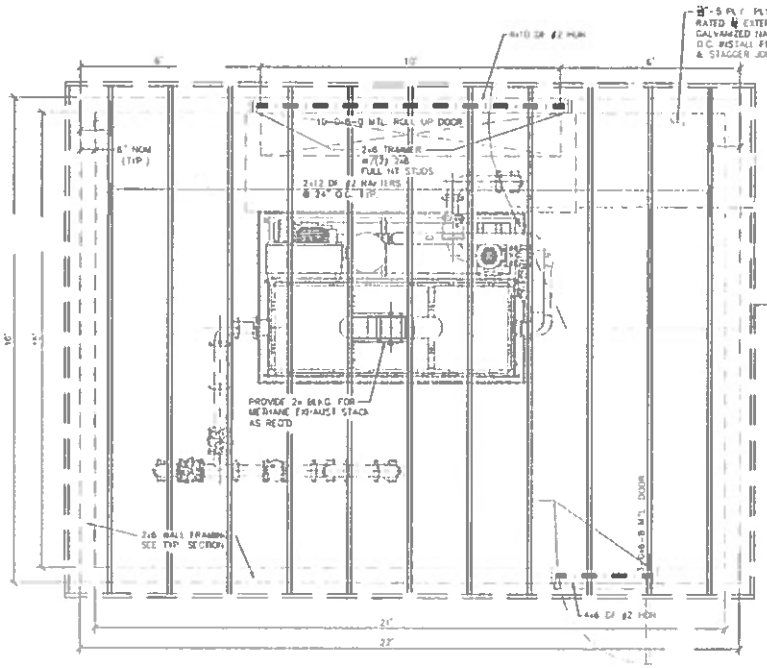
Dayton Wellfield, Well 2 & Well 3 Development

METHANE STRIPPER/CONTROL BLDG, FLOOR/FOUNDATION PLAN & ELEVATIONS

DRAWING NO. S001

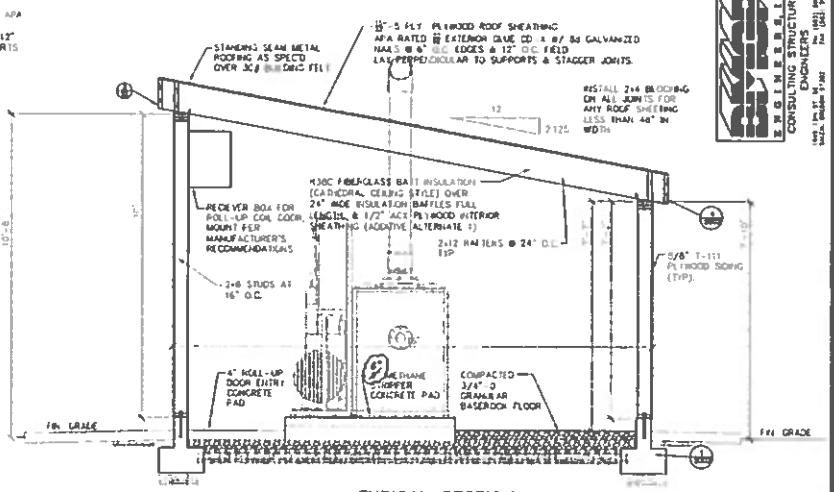
SHEET 7 OF 38

JOB NUMBER 1897.4041.0




## ROOF FRAMING PLAN

SCALE: 1/2" = 1'-0"




## TYPICAL SECTION

SCALE: 1/2"=1'-0"

### SHEAR WALL SCHEDULE

(SEE ALL SHEAR TYPES SHOWN ON PLANS ON THIS PROJECT)

| WALL TYPE | STRUCTURAL PANEL SHEATHING | EDGE NAILING | FIELD NAILING | REMARKS | A35 CLIP DOUBLE TOP PLATE CONN.[4] | SILL PLATE CONN. (A.B.) ½"ø x10" LONG | SILL PLATE CONN. (A.B.) ½"ø x10" LONG | SOLE PLATE CONNECTION | SHEAR VALUE (plf) OF | SHEAR VALUE (plf) HF |
|---|---|---|---|---|---|---|---|---|---|---|
| A | ⅜" OSB or ⅜" PLYWOOD | 0.131"ø x 2.5" NAILS @ 6" O.C. | 0.131"ø x 2.5" NAILS @ 12" O.C. | | 20" O.C. | 3'-0" O.C.[10] | 4'-0" O.C.[10] | 0.162"ø x 3½" NAILS @ 6" O.C. | 280 | 244 |

NOTES:
1. BLOCK ALL EDGES OF SHEATHING.
2. DO NOT BREAK SHEATHING SKIN BY OVER DRIVING NAILS.
3. PRE-DRILL AS REQUIRED TO AVOID SPLITTING SILLS, ETC.
4. NAILS SHOULD BE LOCATED ⅜" CLEAR OF PANEL EDGES.
5. USE SIMPSON A35 CLIPS TO ATTACH BLOCKING TO TOP PLATE AT FLOOR LINE. AT ROOF LINE USE SIMPSON H1 CLIPS AT EACH TRUSS (U.O.N.)
6. VALUES OF OTHER STANDARD CONSTRUCTION FASTENERS WILL REQUIRE SPACING ADJUSTMENTS AND MUST BE APPROVED BY THE ENGINEER-OF-RECORD.
7. USE HOT DIPPED GALVANIZED NAILS AT ALL EXTERIOR APPLICATIONS.
8. C-D, C-C SHEATHING, PLYWOOD PANEL SIDING, AND OTHER GRADES COVERED IN APA PLYWOOD DESIGN SPECIFICATION.
9. SHEARING FACE GRAIN CAN BE APPLIED PERPENDICULAR OR PARALLEL TO WALL STUDS, PROVIDED STUDS ARE SPACED A MAXIMUM OF 16" OC.
10. 3"x3"x5/16" WASHER REQUIRED ON A.B. WITH 2x SILL PLATES.

### RECORD DRAWINGS

Revisions Drawn By: TMT Date: 01/23/2009

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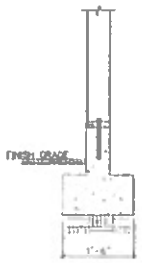
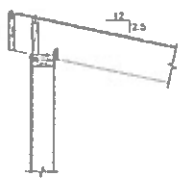



1 S002

TYPICAL EXTERIOR ROOF JOIST CONN.

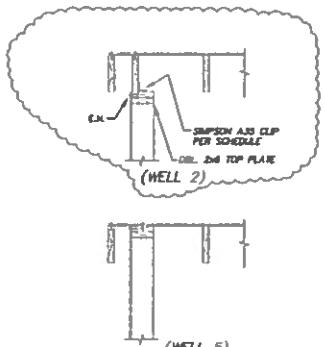
NTS




2 S002

TYPICAL EXTERIOR ROOF JOIST CONN.

NTS




3 S002

TYPICAL EXTERIOR ROOF JOIST CONN.

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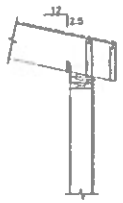
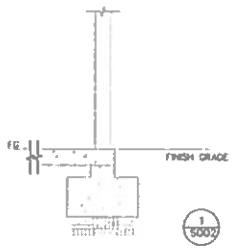



4 S002

TYPICAL EXTERIOR ROOF JOIST CONN.

NTS




1 S002

5 S002

WESTECH ENGINEERING, INC.
CONSULTING STRUCTURAL ENGINEERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-2486
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CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

CONTROL BUILDING
ROOF FRAMING PLAN,
STRUCT. SECTION & DTLS

DRAWING NO. S002

SHEET 8 OF 38

JOB NUMBER 1897.4041.0

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 01/23/09 | RECORD DRAWINGS |

DSGN: JWF/TMT
DRN: DMJ/TMT
CHD: DMJ
DATE: OCT '08

VERIFY SCALE

1" IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

PROFESSIONAL ENGINEER
OREGON
JULY 12, 1994
WILLIAM E. PLANT
RENEWAL: 12/31/2009

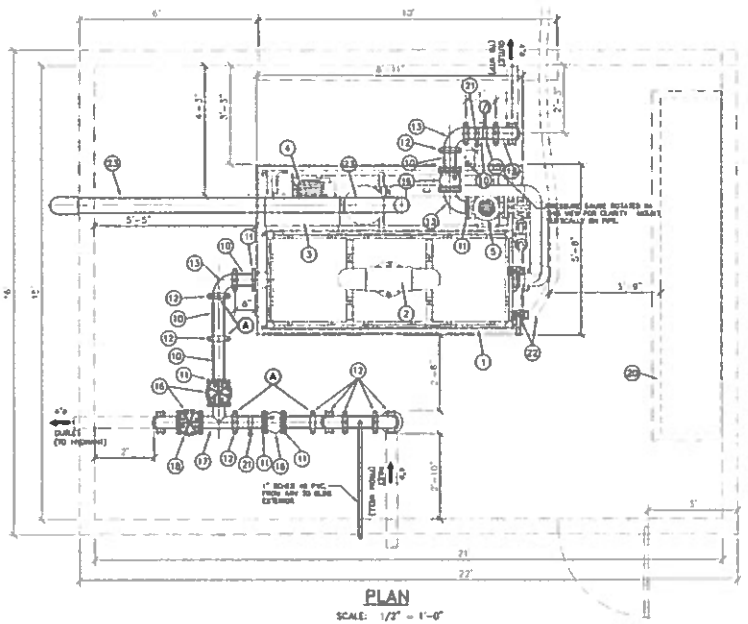
AS CONSTRUCTED

AS CONSTRUCTED

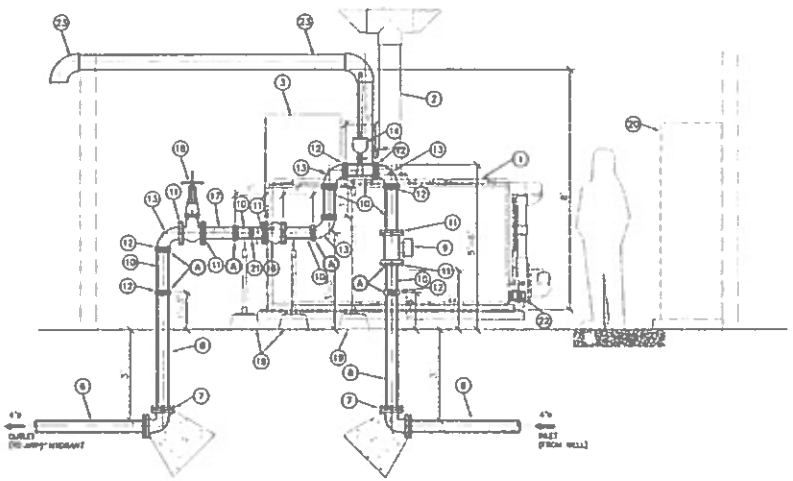
Jan 16, 2009 - 12:47pm
S:\Jobs\1897.4041 Dayton Wellfield - 2 & 5 Development - WELL 2 & 5\Drawings\Control Building\S002.dwg (Control Bldg)

## KEY CALLOUTS - WELL BUILDING PIPING

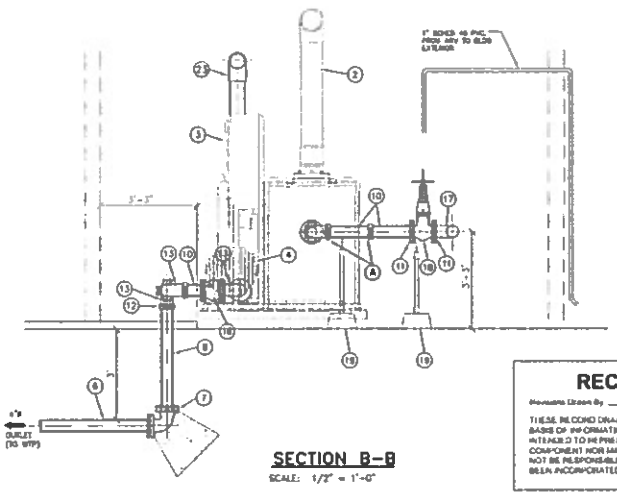
1. METHANE STRIPPER AS SPEC'D, LOWRY SYSTEMS DBS3P MULTI-STAGE AERATION SYSTEM.
2. METHANE STRIPPER AIR EXHAUST STACK (PVC), LENGTH AS REQ'D TO TERMINATE 18" ABOVE ROOF
3. METHANE STRIPPER CONTROL PANEL
4. METHANE STRIPPER BLOWER
5. METHANE STRIPPER DISCHARGE BOOSTER PUMP, 6" DISCHARGE, VFD SPEED CONTROL.
6. 6" CLASS 52 DI PIPE
7. 6" DI 90° BEND (MJ x MJ) W/ (2) RETAINER GLANDS & THRUST BLOCK
8. 6" DI PIPE (PE x CRV), CL 53 MIN
9. 6" MAG FLOW METER W/FLOW TRANSMITTER AS SPEC'D, ~~ONMAG~~ ___ W/4411b TRANSMITTER (FL X FL)
10. 6" DI PIPE (GRV x GRV), CL 53 MIN
11. 6" VICTAULIC 341 DI FLANGE ADAPTER
12. 6" VICTAULIC 31 DI COUPLING
13. 6" VICTAULIC 10-C 90° BEND (GRV x GRV)
14. 1" AIR/VACUUM VALVE, ~~APCO MAT-RGS-2021~~ VALMATIC 20VC OR EQUAL. PROVIDE VALVE WITH STAINLESS STEEL ISOLATION BALL VALVE & HANDLE MOUNTED TO EPOXY COATED DI SERVICE SADDLE AS SPEC'D.
15. STAINLESS STEEL LIQUID FILLED PRESSURE GAUGE W/SHUTOFF VALVE, 3½" DIAL FACE, ~~0-80 PSI~~ CAUSE RANGE TO BE 125% OF PUMP SHUTOFF HEAD (ASHCROFT 1009 OR EQUAL). MOUNT TO EPOXY COATED DI SERVICE SADDLE. MOUNT VERTICAL (SHOWN ROTATED FOR CLARITY).
16. 6" FLANGED D.I. BODY SILENT CHECK VALVE, VAL-MATIC 1804 OR EQUAL.
17. 6" VICTAULIC 20-C TEE (GRV x GRV)
18. 6" RESILIENT SEAT WEDGE GATE VALVE AS SPEC'D, OS&Y STEM W/HANDWHEEL.
19. ADJUSTABLE PIPE SUPPORT (FLANGE OR SADDLE STYLE AS SHOWN), STANDON OR EQUAL. SEE DETAIL 7380. MOUNT ON 12" x 12" CONCRETE PIER BLOCK.
20. WELL BUILDING POWER & CONTROL PANELS, SEE ELECTRICAL DRAWINGS
21. 3/4" SAMPLING PORT, BRASS VALVE W/HOSE BIB OUTLET & VACUUM BREAKER. MOUNT TO EPOXY COATED DI SERVICE SADDLE.
22. 3" BALL VALVE (M/FEMALE CAMLOCK FITTING) ON STRIPPER TANK DRAIN PORT. PROVIDE 16 FEET OF 3" RUBBER FLEX HOSE W/MATCHING END (LAY FLAT HOSE NOT ACCEPTABLE) FOR USE IN DRAINING STRIPPER TANK THROUGH ROLL-UP DOOR.
23. 8" SCHEDULUE 40 PVC AIR INTAKE PIPING. INSTALL 90° SCREENED BEND (BY METHANE STRIPPER MANUFACTURER) ON EXTERIOR OF BUILDING WALL. INSTALL 8"-LINE AIR FILTER WITH SILENCER (BY METHANE STRIPPER MANUFACTURER) PER MANUFACTURER'S RECOMMENDATIONS, WITH WITH UNIONS BOTH WAYS AS REQUIRED FOR MAINTENANCE & FILTER REPLACEMENT. PROVIDE GALVANIZED PIPE HANGERS AT 24" O.C. ANCHORED TO ROOF JOISTS.
- (A) DESIGNATES JOINTS TO BE PROVIDED WITH FLEXIBLE CUT RADIUS GROOVES. WHERE DESIGNATION IS A CONNECTION BETWEEN PIPE AND DI GROOVED FITTINGS, THE FLEXIBLE CUT RADIUS DESIGNATION APPLIES ONLY TO THE PIPE (FITTINGS TO BE PROVIDED WITH GROOVE STANDARD TO FITTINGS)



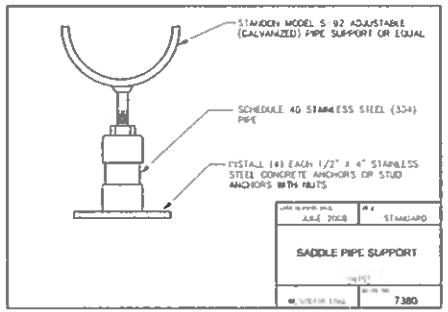

PLAN
SCALE: 1/2" = 1'-0"




SECTION A-A
SCALE: 1/2" = 1'-0"




SECTION B-B
SCALE: 1/2" = 1'-0"




**RECORD DRAWINGS**

Information Given By: ENT Date: 11/23/2009 [12/22/10]

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

WELL NO 2 & WELL NO 5
MECHANICAL PIPING
PLAN & SECTIONS

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
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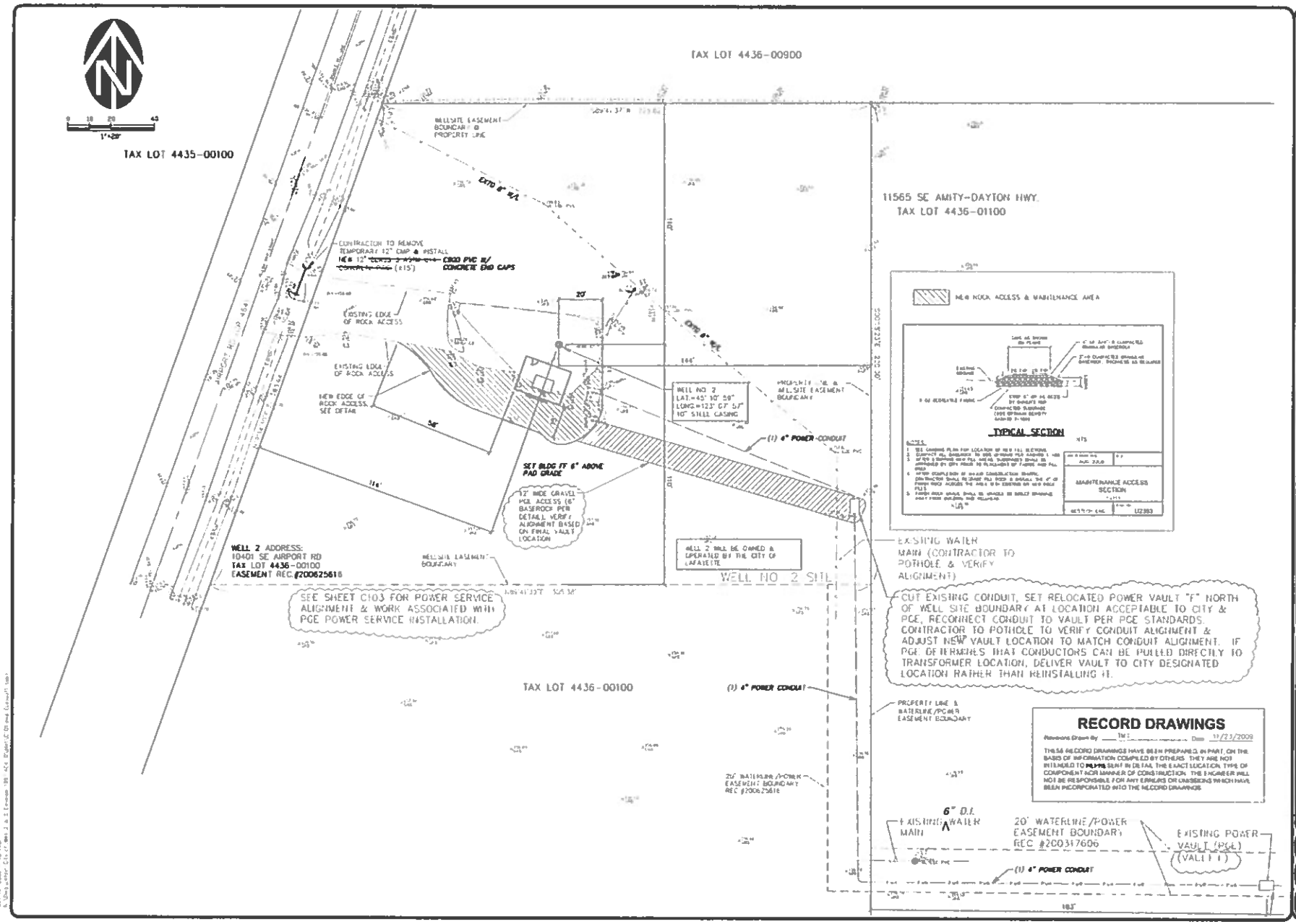
E-mail: mail@westech-eng.com

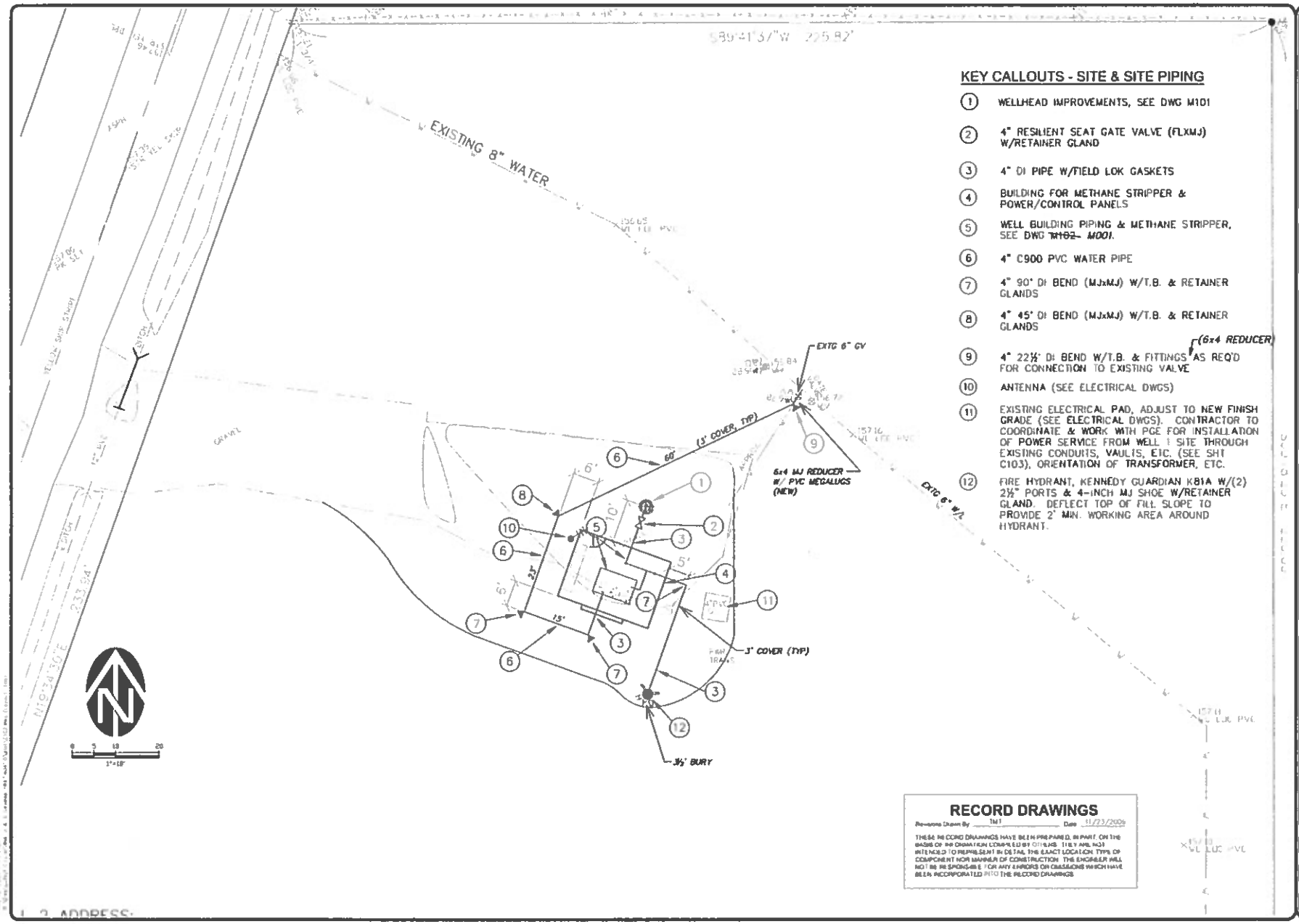
DRAWING NO. M001
SHEET 9 OF 38
JOB NUMBER 1897.4041.0




CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

# WELL 2, EXTG COND'S, GRADING, DRAINAGE & EROSION CONTROL PLAN

DRAWING NO. C101
SHEET 10 OF 38
JOB NUMBER 1897.4041.0




## KEY CALLOUTS - SITE & SITE PIPING

1. WELLHEAD IMPROVEMENTS, SEE DWG M101
2. 4" RESILIENT SEAT GATE VALVE (FLXMJ) W/RETAINER GLAND
3. 4" DI PIPE W/FIELD LOK GASKETS
4. BUILDING FOR METHANE STRIPPER & POWER/CONTROL PANELS
5. WELL BUILDING PIPING & METHANE STRIPPER, SEE DWG ~~M102~~ *M001*.
6. 4" C900 PVC WATER PIPE
7. 4" 90° DI BEND (MJxMJ) W/T.B. & RETAINER GLANDS
8. 4" 45° DI BEND (MJxMJ) W/T.B. & RETAINER GLANDS
9. 4" 22½° DI BEND W/T.B. & FITTINGS AS REQ'D FOR CONNECTION TO EXISTING VALVE *(6x4 REDUCER)*
10. ANTENNA (SEE ELECTRICAL DWGS)
11. EXISTING ELECTRICAL PAD, ADJUST TO NEW FINISH GRADE (SEE ELECTRICAL DWGS). CONTRACTOR TO COORDINATE & WORK WITH PGE FOR INSTALLATION OF POWER SERVICE FROM WELL 1 SITE THROUGH EXISTING CONDUITS, VAULTS, ETC. (SEE SHT C103), ORIENTATION OF TRANSFORMER, ETC.
12. FIRE HYDRANT, KENNEDY GUARDIAN K81A W/(2) 2½" PORTS & 4-INCH MJ SHOE W/RETAINER GLAND. DEFLECT TOP OF FILL SLOPE TO PROVIDE 2' MIN. WORKING AREA AROUND HYDRANT.

**RECORD DRAWINGS**

Revisions Drawn By: TM1 Date: 11/23/2009

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 3 Development

WELL NO. 2
SITE LAYOUT & PIPING PLAN

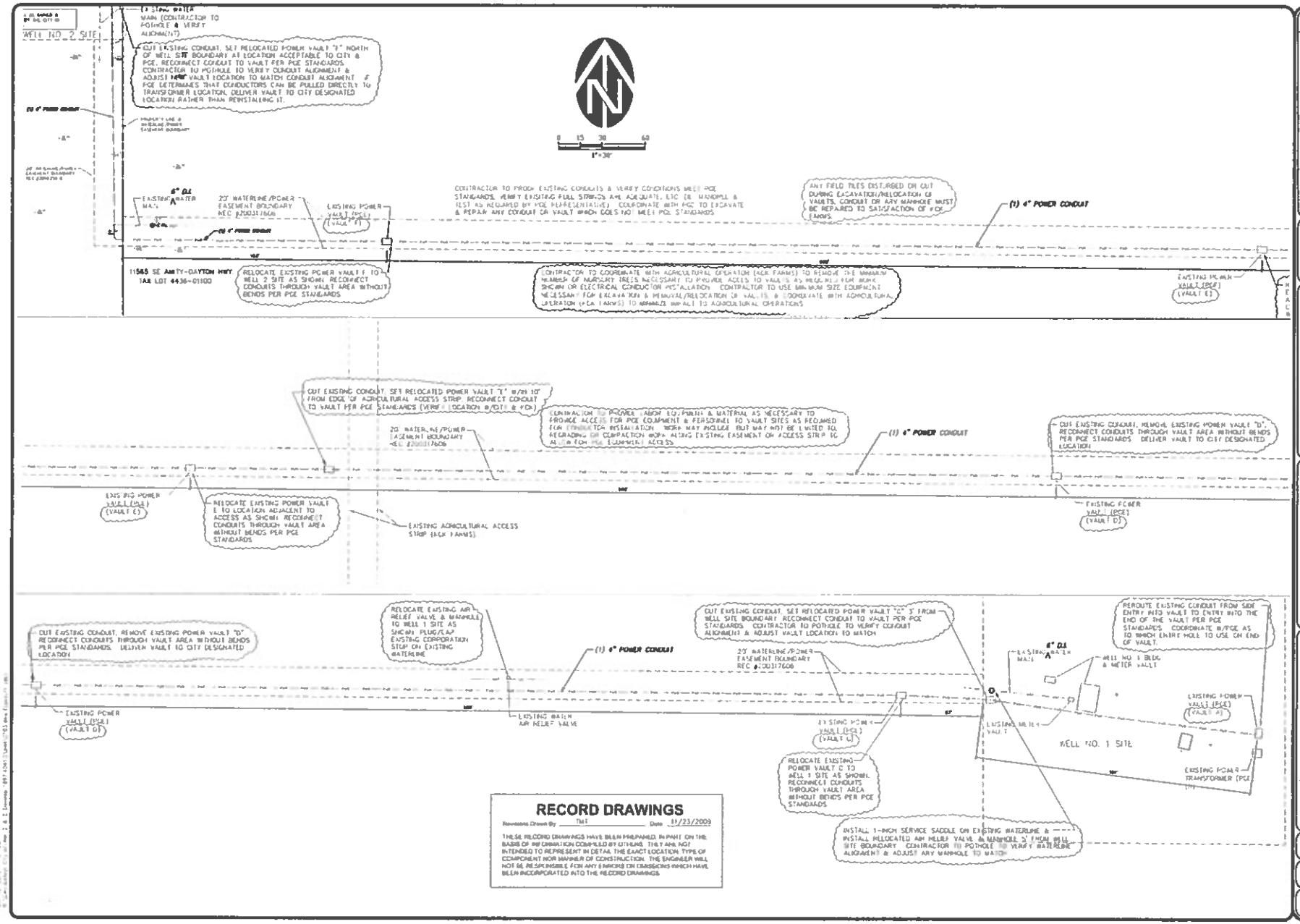
DRAWING NO. C102
SHEET 11 OF 38
JOB NUMBER 1897.4041.0

DESIGNED JW/AM
DRAWN MDP/BF
CHECKED DM
APPROVED SCOTT DSV
DATE
NO. DATE DESCRIPTION BY
REVISIONS

VERIFY SCALE

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.




| NO. | DATE | REVISION |
|---|---|---|
| 1 | 10/29/09 | Land Use Refinement Note |
| 2 | 11/23/09 | Relocate Vault A & Add Vault E |
| 3 | 12/2/09 | Relocate Vault C & Add Vault D |

DSN. JMP/TMT
DRN. JMP/TMT
CHK. DM
DATE SEPT 2009

CONSTRUCTED

WESTECH ENGINEERING, INC.
CIVIL ENGINEERS AND PLANNERS
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Phone (503) 585-2474 Fax (503) 585-3986
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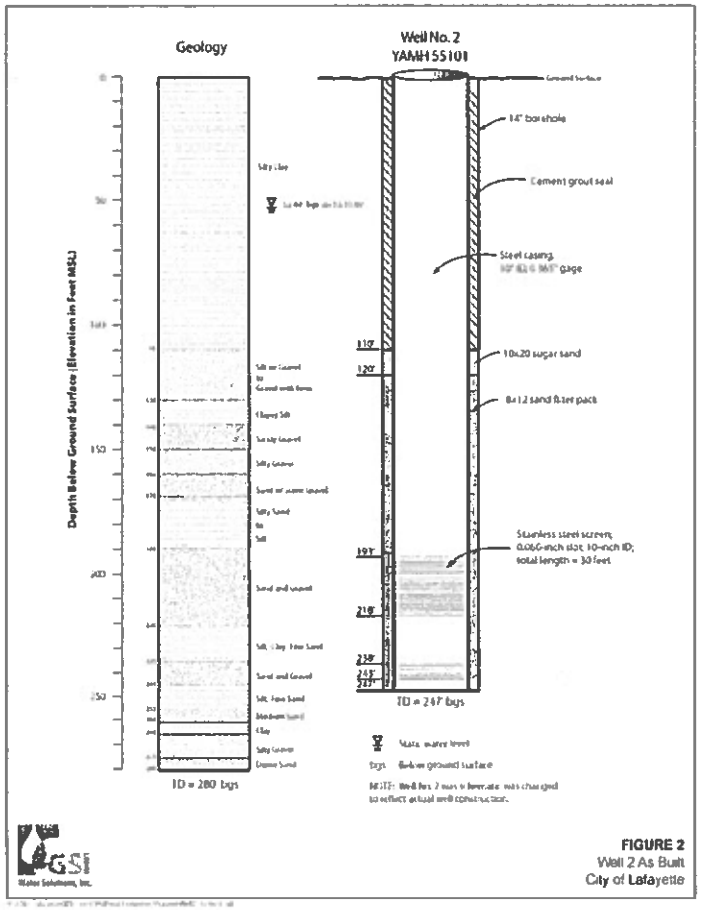
CITY OF LAFAYETTE, OREGON
Dayton Westfield, Well 2 & Well 3 Development

# WELL 2, REFERENCE MAP POWER SERVICE EASEMENT & EXISTING VAULTS

DRAWING NO. C103
SHEET 12 OF 38
JOB NUMBER 1897.4041.0

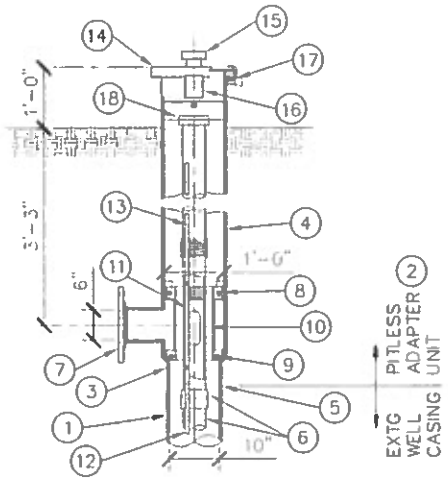



GSI Water Solutions, Inc.

**FIGURE 2**
Well 2 As Built
City of Lafayette

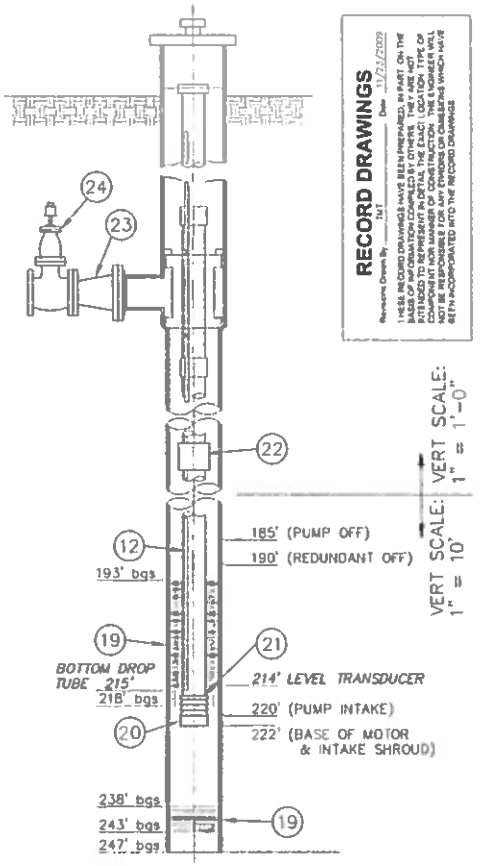
## KEY CALLOUTS - WELLHEAD/CASING/PUMP

1. EXISTING 10" STEEL WELL CASING, CONTRACTOR TO CLEANLY CUT AS REQUIRED.
2. PITLESS WELL ADAPTER UNIT, MAASS MIDWEST MODEL MB, FEATURES & OPTIONS AS SHOWN & SPECIFIED.
3. LOWER BARREL, 10" DIA. STEEL
4. UPPER BARREL, 12" DIA. STEEL
5. WELD LOWER BARREL OF PITLESS ADAPTER TO EXISTING WELL CASING PER MANUFACTURER'S RECOMMENDATIONS.
6. THREADED COUPLING & 4" COLUMN PIPE AS SPECIFIED (NOT PART OF PITLESS UNIT).
7. 6" FLANGED DISHARGE CONNECTION (CL 150)




## WELL NO. 2
## WELLHEAD SECTION
## (PITLESS ADAPTER)
SCALE: 1" = 1'-0"

8. STAINLESS STEEL O-RING SEATS, TYP 2 PLACES
9. BUNA N O-RING SEALS, TYP 2 PLACES
10. ACCESS CHANNELS (2) FOR PUMP WIRES, ETC.
11. 1" STAINLESS STEEL (MxM) DROP TUBE CONNECTOR (EXTENDS THROUGH SEAL SECTION OF PITLESS ADAPTER), TYP OF 2. ONE TUBE FOR LEVEL TRANSDUCER/PROBE, ONE SPARE TO ALLOW INDEPENDENT WATER LEVEL VERIFICATION.
12. 1" THREADED & PERFORATED PVC DROP TUBE AS SPECIFIED (2 EACH) FOR LEVEL TRANSDUCER & SPARE. EXTEND TO POINT ~~3' ABOVE BOWLS.~~ *5' ABOVE INTAKE.*
13. THREADED PVC TUBE AS SPECIFIED (2 EACH) FOR LEVEL TRANSDUCER & SPARE. CONNECT TRANSDUCER TUBE TO JUNCTION BOX, CAP SPARE 6" BELOW WELL CAP.
14. WATERTIGHT WELL CAP W/NEOPRENE GASKET
15. 2" WELL SCREEN WITH STAINLESS STEEL SCREEN
16. EXTRA LARGE JUNCTION BOX 1" & 2" NPT COUPLINGS (FOR WELL POWER CABLE & TRANSDUCER WIRE).
17. LOCKING BOLT
18. TORQUE ARRESTOR (PREVENTS ROTATION OF COLUMN PIPE & INTERIOR ADAPTER SPOOL DUE TO PUMP MOTOR TORQUE)
19. WELL SCREEN INTERVAL




## WELL NO. 2
## WELL SECTION
HORIZ. SCALE: 1" = 1'-0"
VERT SCALE AS SHOWN

20. SUBMERSIBLE WELL PUMP & MOTOR. PROVIDE WITH FLOW INDUCER SLEEVE. PVC FLOW INDUCER SLEEVE TO HAVE CENTERING STANDOFFS TO KEEP MOTOR CENTERED IN SLEEVE (STANDOFFS TO BE AT MOTOR CASTING LEVEL. DO NOT LOCATE ON STATOR SHELL)
21. PUMP COLUMN CHECK VALVE (EPOXY COATED DUCTILE IRON) MOUNT @ ~~TOP OF PUMP.~~ *1ST JOINT ABOVE PUMP*
22. INTERMEDIATE PUMP COLUMN CHECK VALVE (EPOXY COATED DUCTILE IRON)
23. 6x4 REDUCER (FLxFL)
24. 4 RESILIENT WEDGE GATE VALVE (FLxMJ)

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

# WELL 2, CASING/SCREEN AS-BUILT, WELLHEAD & CASING/PUMP SECTIONS

DRAWING NO. M101
SHEET 13 OF 38
JOB NUMBER 1897.4041.0

## ELECTRICAL LEGEND

- ELECTRICAL EQUIPMENT
- WALL SWITCH
- GFI — DUPLEX RECEPTACLE - NORMAL, GROUND FAULT INTERRUPTING
- CONNECTION TO SPECIAL EQUIPMENT OR OUTLET AS SHOWN
- P4 — HOME RUN, ELECTRICAL PANEL DESTINATION SHOWN
- • CONDUIT CONCEALED UNDERFLOOR OR UNDERGROUND.
- • CONDUIT CONCEALED IN WALL OR ABOVE CEILING IN FINISHED AREAS, EXPOSED IN PROCESS AND EQUIPMENT AREAS.
  - NOTE:
    ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO.12 CONDUCTORS IN CONDUIT. RUNS MARKED WITH CROSS-HATCHES INDICATE NUMBER OF NO.12 WIRE. LARGER GAUGES ARE SHOWN. REVERSE SLANT INDICATES GREEN GROUND WIRE. SIZE CONDUIT ACCORDING TO ELECTRICAL SPECIFICATIONS AND APPLICABLE CODE. LONG CROSS HATCH INDICATES NEUTRAL.
- JUNCTION BOX
- GROUND CONNECTION PER NEC ARTICLE 250
- TRANSFORMER
- 400AF — THERMAL MAGNETIC CIRCUIT BREAKER, FRAME SIZE AND TRIP SETTING SHOWN
- MOTOR, HORSEPOWER SHOWN
- CURRENT TRANSFORMER
- MOTOR THERMAL OVERLOAD RELAY
- OR — MOTOR STARTER CONTACTOR, NEMA OR IEC SIZE RATING SHOWN
- IEC 110a
- THERMAL MAGNETIC CIRCUIT BREAKER
- 15AC — MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUITS ONLY) CONTINUOUS CURRENT RATING AND TRIP SETTINGS SHOWN
- 400AT — FUSE
- DRAWING NOTE
- ELECTRICAL CIRCUIT IDENTIFICATION
- MULTIPLE ELECTRICAL CIRCUITS, SEPARATE CONDUITS
- 1"C — MULTIPLE ELECTRICAL CIRCUITS, COMMON CONDUIT (SIZE SHOWN)

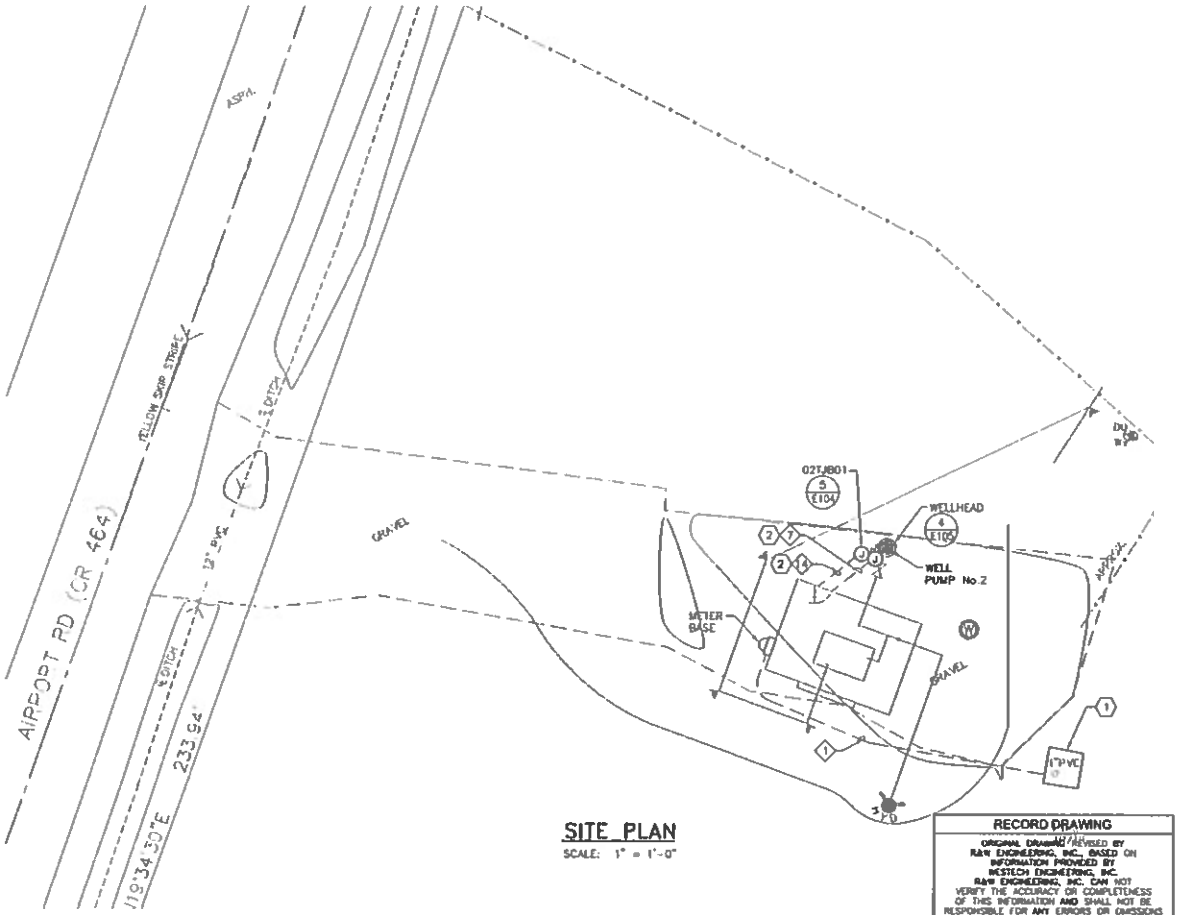
WESTECH ENGINEERING, INC. RECEIVED DEC 21 2009

## ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| ASD | ADJUSTABLE SPEED DRIVE (VFD) |
| ATS | AUTOMATIC TRANSFER SWITCH |
| CB | CIRCUIT BREAKER |
| CU | COPPER |
| GND | GROUND |
| HH | HANDHOLE |
| kW | KILOWATT |
| LP | LIGHTING PANEL |
| MCB | MAIN CIRCUIT BREAKER |
| MTS | MANUAL TRANSFER SWITCH |
| PGE | PORTLAND GENERAL ELECTRIC |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |
| RGS | RIGID GALVANIZED STEEL |
| SSTL | STAINLESS STEEL |
| VFD | VARIABLE FREQUENCY DRIVE |
| WP | WEATHERPROOF |
| XDCR | TRANSDUCER |
| XFMR | TRANSFORMER |

## KEYED NOTES

1. EXISTING TRANSFORMER PAD AND 4" PVC STUB-UP AND PULL CORD FROM EXISTING PRIMARY DUCTBANK. REFERENCE DRAWING E103 FOR EXISTING DUCTBANK ALIGNMENT AND PULL-VAULT LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE EXISTING DUCTBANK CONDUITS, PULL-CORDS, AND VAULTS IN THE PRESENCE OF A POWER COMPANY REPRESENTATIVE. SUBMIT INSPECTION REPORT STATUS OF THE DUCTBANK TO THE ENGINEER WITHIN TWO WEEKS COMPLETION OF INSPECTION. THE REPORT SHALL INCLUDE DETAILED DESCRIPTION OF DAMAGE FOUND AND COST ESTIMATE OF REPAIRS.
2. MAINTAIN SEPARATION OF CONTROL CONDUIT FROM POWER (VFD) CONDUIT (24" HORIZONTALLY AND VERTICALLY) CONDUITS SHALL BE PVC-RGS. VFD POWER CONDUCTORS SHALL BE SHIELDED CABLES SPECIFICALLY RATED FOR VFD USE.




SITE PLAN
SCALE: 1" = 1'-0"

**RECORD DRAWING**
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| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | REVISIONS | |

DSN: WRD
DWN: CAS
CHK: MDV
DATE: 12/09
PROJ. MGR: DAS

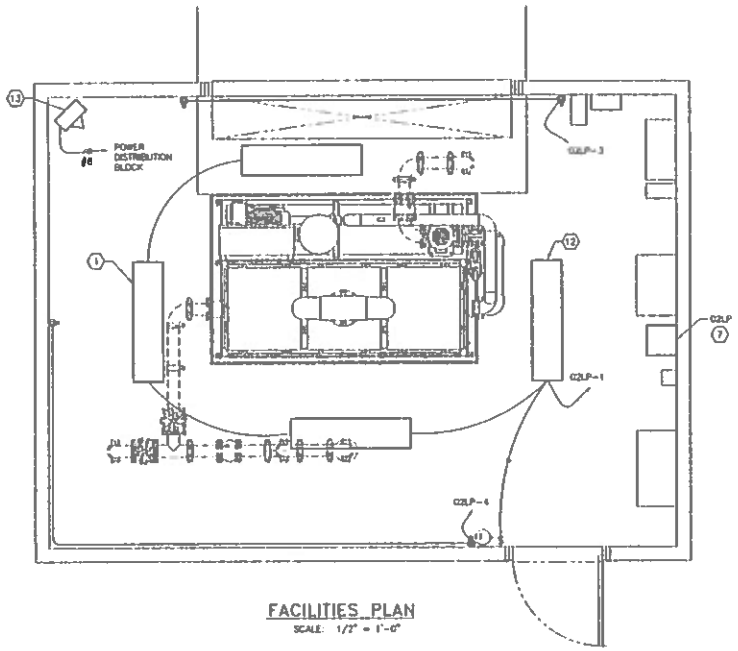
R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS

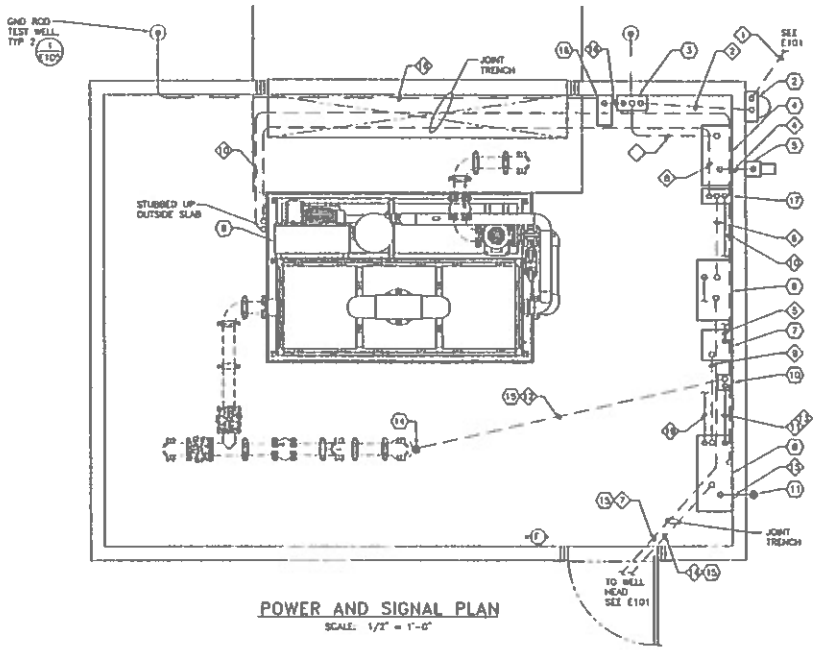
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

WELL 2, ELECTRICAL
SITE PLAN AND LEGEND

DRAWING NO. E101
SHEET 14 OF 38
JOB NUMBER 1897.4041.0




FACILITIES PLAN
SCALE: 1/2" = 1'-0"




POWER AND SIGNAL PLAN
SCALE: 1/2" = 1'-0"

## KEYED NOTES

1. 1'X4' LINEAR FLUORESCENT FIXTURE. LITHONIA #DWH-2-32-120-GEB10IS OR EQUAL, TYPICAL OF 4.
2. NEMA 3R METER BASE, COORDINATE WITH POWER COMPANY FOR REQUIREMENTS.
3. MAIN SERVICE DISCONNECT IN NEMA 12 ENCLOSURE.
4. MANUAL TRANSFER SWITCH, DOUBLE THROW SAFETY SWITCH, 3-POLE, 600V, 200 AMP (30HP RATED), NEMA 12 ENCLOSURE GE TYPE TC, OR EQUAL.
5. SPECIAL PURPOSE RECEPTACLE, 100A, 600V, 4-WIRE, 4-POLE CROUSE-HINDS ARKTITE WITH BACK BOX AND ANGLE ADAPTER. NUMBER "AREA"
6. 02ASD01, WELL PUMP ADJUSTABLE SPEED DRIVE.
7. POWER DISTRIBUTION PANELBOARD 02LP, SQUARE D "MIN POWER-ZONE", 480V-120/240V, 1-PHASE, 5KVA IN NEMA 12 ENCLOSURE.
8. TELEMETRY PANEL 02TP1.
9. 02TP08 METHANE STRIPPER PACKAGE CONTROL PANEL.
10. FLOW METER 02FIT08
11. RADIO ANTENNA, SEE DETAIL 2/E105.
12. PROVIDE FIXTURE WITH EMERGENCY, BATTERY-BACKED BALLAST.
13. 3KW CEILING MOUNTED UNIT HEATER WITH INTEGRAL T-STAT AND DISCONNECT. UNIT HEATER SHALL BE QMARK (HUM0341) OR EQUAL.
14. 02FE08, FLOW METER TUBE.
15. MAINTAIN SEPARATION OF CONTROL CONDUIT FROM POWER (VFD) CONDUIT (24" HORIZONTALLY AND VERTICALLY). CONDUIT SHALL BE PVC-RGS. VFD POWER CONDUCTORS SHALL BE SHIELDED CABLES SPECIFICALLY RATED FOR VFD USE.
16. TVSS.
17. 100A POWER DISTRIBUTION BLOCK IN NEMA 12 ENCLOSURE.

**RECORD DRAWING**

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| NO | DATE | DESCRIPTION |
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| | | RE-WORKS |

DSN MKD
DRN CDS
CHD CMS
DATE NOV 08

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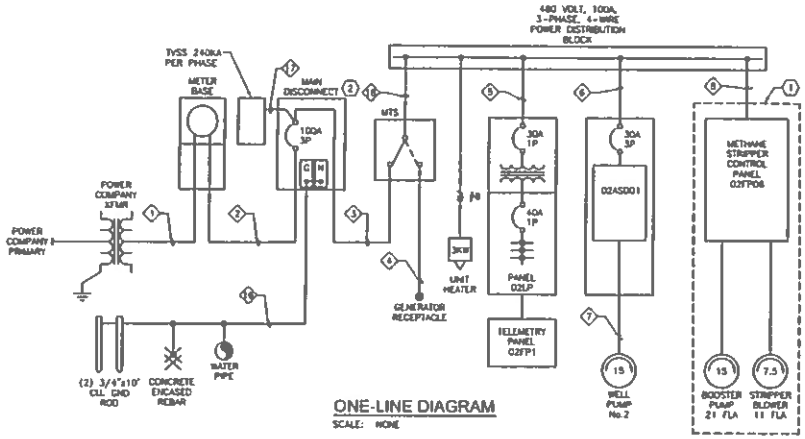
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

WELL 2, ELECTRICAL
CONTROL BUILDING
FLOOR PLANS

DRAWING NO.
E102

SHEET
15 OF 38

JOB NUMBER
1897.4041.0




## ONE-LINE DIAGRAM

SCALE: NONE

## LOAD SUMMARY

| | | FLA | AMPS | KVA |
|---|---|---|---|---|
| LARGEST MOTOR LOAD | | | | |
| Well Pump | 15.0 HP | 21.0 x 1.25 | 26.3 | 21.8 |
| OTHER MOTOR LOADS | | | | |
| Booster Pump | 15 HP | 21.0 x 1.00 | 21.0 | 17.5 |
| Stripper Blower | 7.5 HP | 11.0 x 1.00 | 11.0 | 9.1 |
| TOTAL MOTOR LOAD | 37.5 HP | 58 A | 58 A | 48 |
| NON-MOTOR CONTINUOUS LOADS | | | | |
| Transformer | 5 KVA | 10.4 x 1.25 | 13.0 | 10.8 |
| Unit Heater | 3 KW | 3.6 x 1.25 | 4.5 | 3.8 |
| Subtotal Cont. Load | 8 KVA | 14 A | 18 A | 15 |
| TOTAL CONNECTED LOAD: | | 97 A | 98 A | 68 |

## RACEWAY SCHEDULE

ALL CIRCUITS ARE IDENTIFIED ON THE PLANS WITH THE DIAMOND SYMBOL. CONDUCTOR SIZES ARE BASED ON COPPER CONDUCTORS. CONDUIT SIZES ARE SHOWN FOR CASES WHEN CIRCUIT CONDUCTORS ARE RUN WITHOUT OTHER CIRCUITS. MULTIPLE CIRCUITS RUN IN COMMON CONDUITS ARE SHOWN ON PLANS AND SUPERSEDE THE BASIC CONDUIT SIZE SHOWN.

RACEWAY SIZES ARE IN INCHES WITH QUANTITIES IN EXCESS OF (1) SHOWN IN ADJACENT PARENTHESIS. CONDUCTOR CONFIGURATIONS ARE CODED AS FOLLOWS: P - FOR POWER CONDUCTORS, G - FOR GROUND CONDUCTORS, N - FOR NEUTRAL CONDUCTORS, C - FOR CONTROL CONDUCTORS, TSP - TWISTED SHIELDED PAIR, AND SP - FOR SPARE CONDUCTORS.

CIRCUITS REVISED SINCE LAST ISSUE ARE INDICATED BY AN ASTERISK(*).

| CIRCUIT NUMBER | FROM | TO | CONDUCTORS | RACEWAY | NOTES |
|---|---|---|---|---|---|
| 1 | XFMR PAD | METER BASE | | 3" | COORDINATE AND VERIFY WITH POWER COMPANY PRIOR TO INSTALLATION. PROVIDE PULL CORD. |
| 2 | METER BASE | MAIN DISCONNECT | (3) #3 P<br>(1) #3 N<br>(1) #8 G | 1.25" | |
| 3 | MAIN DISCONNECT | MANUAL TRANSFER SWITCH | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 4 | MANUAL TRANSFER SWITCH | GENERATOR RECEPTACLE | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 5 | POWER DISTRIBUTION BLOCK ENCLOSURE | 02LP | (2) #10 P<br>(1) #10 N<br>(1) #10 G | 1" | |
| 6 | POWER DISTRIBUTION BLOCK ENCLOSURE | 02ASD01 | (3) #8 P<br>(1) #10G | 1" | |
| 7 | 02ASD01 (ADJUSTABLE SPEED DRIVE) | PUMP CABLE (.8 02TJB01 | #8 VFD CABLE | 1" | PVC-RGS |
| 8 | POWER DISTRIBUTION BLOCK ENCLOSURE | 02FP06 (STRIPPER CONTROL PANEL) | (3) #6 P<br>(1) #10 G | 1" | |
| 9 | 02LP (120V PANELBOARD) | 02FP1 (TELEMETRY PANEL) | (1) #12 P<br>(1) #12 N<br>(1) #12 G | 1" | |
| 10 | 02FP01 (TELEMETRY PANEL) | 02FP06 | (8) #14 C<br>(4) #14 SP | 1" | |
| 11 | 02FP1 (TELEMETRY PANEL) | 02FIT08 (FLOW METER TRANSMITTER) | (2) #12 C<br>(2) #12 P<br>(1) #12 N<br>(1) #12 G | 3/4" | |
| 12 | 02FL008 (FLOW METER TUBE) | 02FIT08 (FLOW METER TRANSMITTER) | MFR'S CABLE | 1.25" | PVC-RGS |
| 13 | 02FP01 (TELEMETRY PANEL) | 02FIT08 (FLOW METER TRANSMITTER) | (1) #18TSP<br>(1) #18G | 3/4" | |
| 14 | 02FP01 (TELEMETRY PANEL) | XDCR | MFR'S CABLE | 3/4" | PVC-RGS |
| 15 | 02FP01 (TELEMETRY PANEL) | ANTENNA | ANTENNA CABLE | 2" | |
| 16 | MAIN DISCONNECT | GROUNDING ELECTRODES | MFR'S CABLE | - | |
| 17 | MAIN DISCONNECT | TVSS | (3) #3 P<br>(1) #3 N<br>(1) #8 G | 1.25" | |
| 18 | MANUAL TRANSFER SWITCH | POWER DISTRIBUTION BLOCK ENCLOSURE | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 19 | 02FP01 (TELEMETRY PANEL) | 02ASD01 | (1) #18 TSP<br>(8) #14 E<br>(4) #14 SP<br>(1) #12 C | 1.25" | |

## KEYED NOTES

1. EQUIPMENT PROVIDED AS PACKAGED UNIT. PROVIDE CONNECTIONS TO EQUIPMENT AS INDICATED ON DRAWINGS.
2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT FROM THE POWER COMPANY, PRIOR TO BID.

## PANEL SCHEDULE

PANEL: 02LP — BUS: 60A — VOLTAGE: 120/240V, 1PH, 3 WIRE

FEEDER: SEE POWER RISER — MAIN BKR: 40A — MOUNTING: (SURFACE)

| CKT NO. | CIRCUIT DESCRIPTION | CKT BREAKER POLES/AMPS | LOAD Type | LOAD Volt-Amps | PHASE | LOAD Volt-Amps | CKT BREAKER Type | CKT BREAKER POLES/AMPS | CIRCUIT DESCRIPTION | CKT NO. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING | 1-20 | L | 248 | A | 720 | 2 | 1-20 | 02FP1 TELEMETRY PANEL | 2 |
| 3 | RECEPTACLES | 1-20 | R | 360 | B | 360 | 2 | 1-20 | RECEPTACLES | 4 |
| 5 | SPARE | 1-20 | | | A | | | 1-20 | SPARE | 6 |
| 7 | SPARE | 1-20 | | | B | | | 1-20 | SPARE | 8 |
| 9 | SPARE | 1-20 | | | A | | | 1-20 | SPARE | 10 |

| | CONNECTED LOAD | TOTAL LOAD | NOTES |
|---|---|---|---|
| LOAD PER PHASE (VA) | A= 848<br>B= 720 | A= 1357<br>B= 929 | 1.<br>2. |
| LOAD PER PHASE (AMPS) | A= 7.80<br>B= 6.00 | A= 9.84<br>B= 7.74 | 3.<br>4. |
| TOTAL LOAD (KVA) | 1.67 | 2.08 | 5. |
| SPARE CAPACITY | 25.00% | 0.42 | DATE: 29-Sep-08 |

## RECORD DRAWING

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R&W ENGINEERING, INC. CIVIL/STRUCTURAL/MECHANICAL/ELECTRICAL/PLUMBING

WESTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

WELL 2, ELECTRICAL ONE-LINE DIAGRAMS AND SCHEDULES

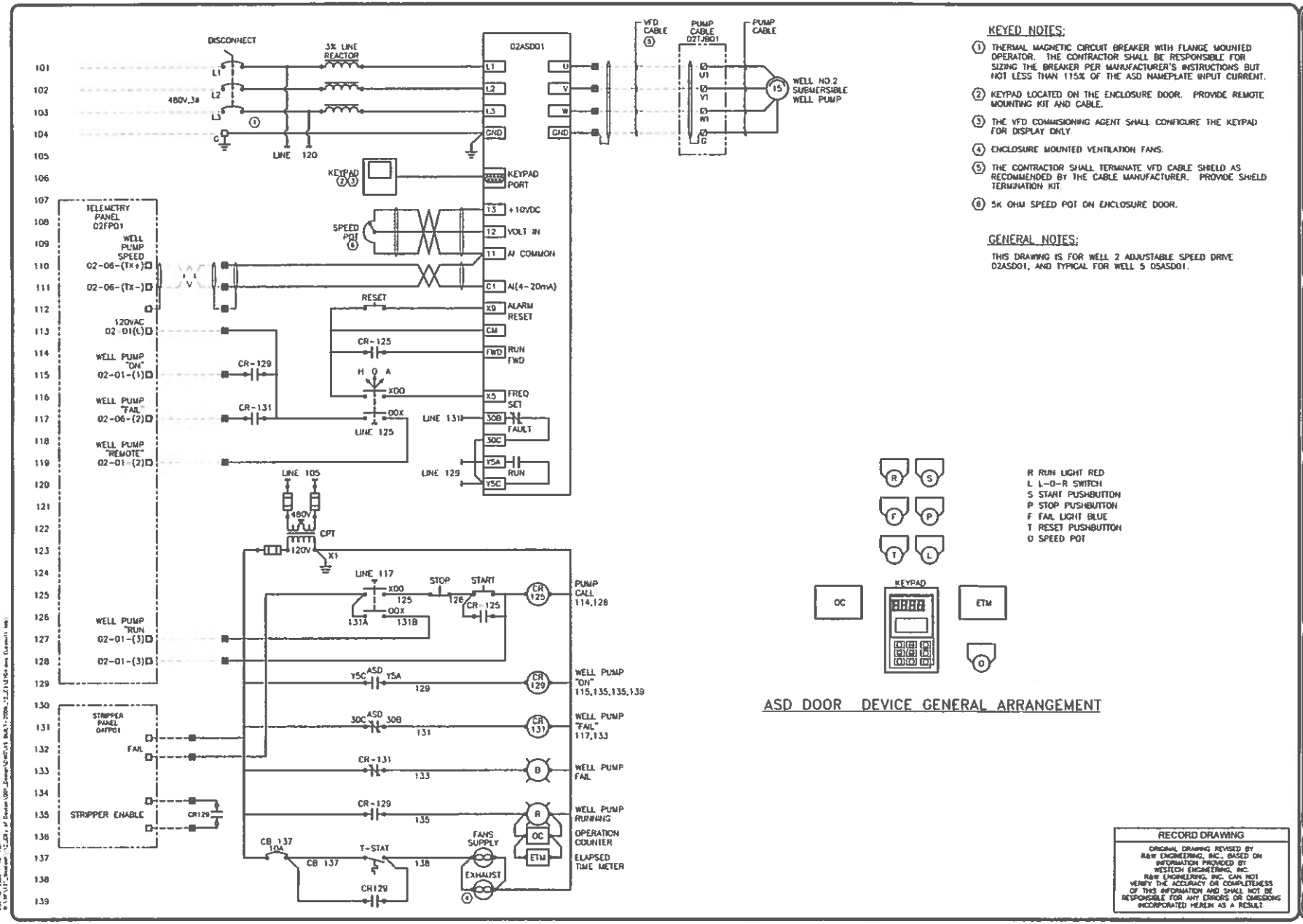
DRAWING NO. E103

SHEET 16 OF 38

JOB NUMBER 1897.4041.0

| NO | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 10/31/08 | ADDED NOTE 2 | MJV |

DSN: LMD
DRN: CMS
CHK: MJV
DATE: NOV '08




ASD DOOR DEVICE GENERAL ARRANGEMENT

## KEYED NOTES:

1. THERMAL MAGNETIC CIRCUIT BREAKER WITH FLANGE MOUNTED OPERATOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING THE BREAKER PER MANUFACTURER'S INSTRUCTIONS BUT NOT LESS THAN 115% OF THE ASD NAMEPLATE INPUT CURRENT.
2. KEYPAD LOCATED ON THE ENCLOSURE DOOR. PROVIDE REMOTE MOUNTING KIT AND CABLE.
3. THE VFD COMMISSIONING AGENT SHALL CONFIGURE THE KEYPAD FOR DISPLAY ONLY.
4. ENCLOSURE MOUNTED VENTILATION FANS.
5. THE CONTRACTOR SHALL TERMINATE VFD CABLE SHIELD AS RECOMMENDED BY THE CABLE MANUFACTURER. PROVIDE SHIELD TERMINATION KIT.
6. 5K OHM SPEED POT ON ENCLOSURE DOOR.

## GENERAL NOTES:

THIS DRAWING IS FOR WELL 2 ADJUSTABLE SPEED DRIVE 02ASD01, AND TYPICAL FOR WELL 5 05ASD01.

**RECORD DRAWING**

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CITY OF LAFAYETTE, OREGON

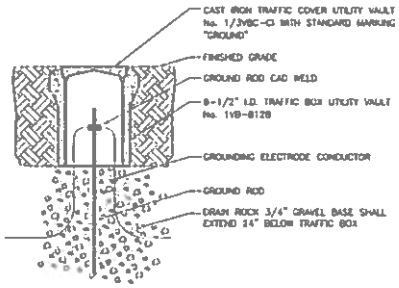
Dayton Wellfield, Well 2 & Well 5 Development

WELL 2, ELECTRICAL MOTOR CONTROL SCHEMATIC

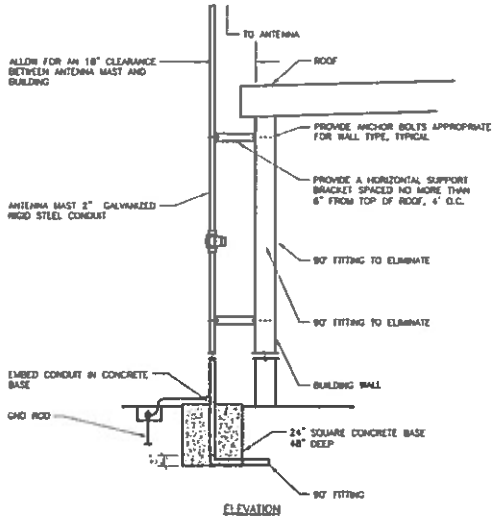
DRAWING NO. E104

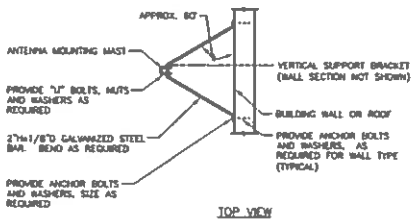
SHEET 17 OF 38

JOB NUMBER 1897.4041.0



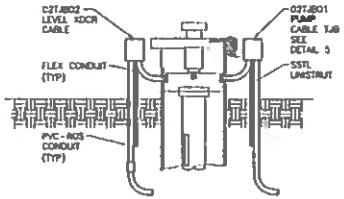

1 E105 GROUND ROD TEST WELL
NOT TO SCALE



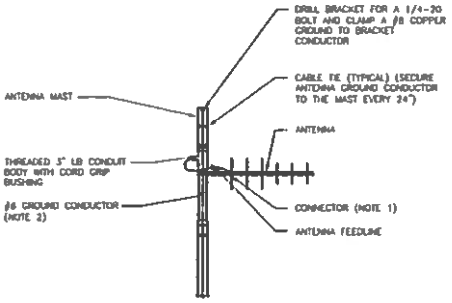




NOTES:
1. ALL MOUNTING HARDWARE SHALL BE GALVANIZED STEEL.
2. ANTENNA SHALL BE MOUNTED AT 20' MINIMUM ABOVE FINISHED GRADE.

2 E105 ANTENNA MAST MOUNTING
NOT TO SCALE

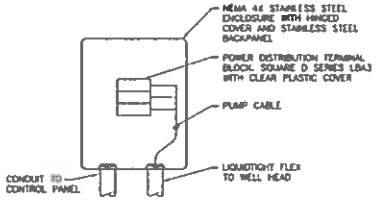



4 E105 WELLHEAD DETAIL
NOT TO SCALE




NOTES:
1. PROVIDE WEATHER SEAL AT ANTENNA/ANTENNA FEEDLINE CONNECTION.
2. GROUND CONDUCTOR DIRECTLY TO THE NEAREST ACCESSIBLE LOCATION ON THE BUILDING GROUNDING ELECTRODE SYSTEM WITH AN EXOTHERMIC WELD.

3 E105 ANTENNA GROUNDING DETAIL
NOT TO SCALE




5 E105 02TJB01 DETAIL
NOT TO SCALE

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|---|---|---|
| | | AS-BUILTS |

VERIFY SCALE

DRN. MHD
DES. CMS
CHK. CMS
DATE NOV '08

R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF LAFAYETTE, OREGON
Dayton Hatfield, Well 2 & Well 5 Development

WELL 2, ELECTRICAL DETAILS

DRAWING NO. E105
SHEET 18 OF 38
JOB NUMBER 1897.4041.0

## TERMINAL AND WIRING IDENTIFICATION

DOUBLE LINE INDICATES FIELD SIDE

- XXXX — FIELD DEVICE TERMINAL IN PANEL (WIRE AND TERMINAL ARE THE SAME NUMBER)
- XXX — INTERCONNECT TERMINAL IN PANEL (WIRE AND TERMINAL ARE THE SAME NUMBER)
- XXXX — ASD TERMINAL (WIRE AND TERMINAL ARE THE SAME NUMBER IF POSSIBLE)
- XXX — OTHER EQUIP. OUTDOOR PANEL TERMINAL OR AS DESIGNATED
- TWISTED SHIELDED PAIR
- SHIELD TERMINATION
- FIELD WIRING

## DRAWING SYMBOLS

- XXX — FUSE WITH BLOWN FUSE INDICATOR – AC
- XXX — FUSE WITH BLOWN FUSE INDICATOR – DC
- XXX — SWITCHING TERMINAL BLOCK
- GROUND – EARTH
- GROUND – CHASSIS

## KEYED NOTES

1. MANUFACTURER'S AND PART NUMBERS LISTED ARE CITY OF DAYTON STANDARD. NO SUBSTITUTES.
2. QUANTITIES INCLUDE SPARE PARTS AND ITEMS NOT SHOWN ON THE DRAWINGS.

## INSTRUMENT LIST

| ITEM NO | QTY (2) | TAG NO. | MFR PART NO. (1) | DESCRIPTION | SPECIFICATION SECTION | MANUFACTURER (1) | VENDOR | P.O. NO. |
|---|---|---|---|---|---|---|---|---|
| 10 | 1 | CBP1 | G-17568036 | FIBERGLASS, TYPE 4X ENCLOSURE, 30"H x 24"W x 12"D | 16903 | HOFFMAN | | |
| 11A | 1 | | A-30P24 | BACK PAN FOR ITEM #10 | 16903 | HOFFMAN | | |
| 22 | 1 | | AS-H0EA-200C | COMPACT SERIES, PRIMARY RACK FOR 2-SLOT CPU'S AND 3 I/O SLOTS WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 23 | 1 | | AS-H0EA-202C | COMPACT SERIES, SUB-RACK FOR 2 I/O SLOTS WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 24 | 1 | | PC-E984-275C | COMPACT SERIES, CPU, CONFORMAL COATING, 1M FLASH, 512KSRAM, 2 MODBUS PORTS, 1 MODBUS+ PORT, PCMCIA II, 10K LOGIC, 32K DATA, INTEGRATED P/S, 24VDC, 1 AMP | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 25 | 2 | | AS-B0EP-210 | COMPACT SERIES, DISCRETE INPUT MODULE 8-POINT ISOLATED | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 29 | 1 | | AS-B0AP-258C | COMPACT SERIES, DISCRETE OUTPUT MODULE, RELAY TYPE, 8-POINT, 2 AMP PER POINT, WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 30 | 1 | | AS-B0AU-258C | COMPACT SERIES, ANALOG INPUT MODULE, +/- 10V, +/- 20mA, 4 CHANNEL ISOLATED, WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 31 | 1 | | AS-B0AU-253C | COMPACT SERIES, ANALOG OUTPUT MODULE, +/- 10V, +/- 20mA, 2 CHANNEL, ISOLATED, WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 36 | 1 | | PW3115-430 | UNINTERRUPTIBLE POWER SUPPLY, 430VA/252W POWER RATING, 120VAC, (2) 5-15R OUTPUT CONNECTIONS, DIMENSIONS: 6.1"H x 14"W x 12.8"D | 16903 | POWERWARE | | |
| 40 | 1 | | 4710A | RADIO TRANSCEIVER, 330-512 MHz, 0.1 TO 5W RF OUTPUT, 12VDC | 16903 | MDS | | |
| | 15 | | 6-BSOLN-C1 | BROADBAND DC BLOCKED PROTECTOR, SURFACE OR BULKHEAD MOUNT, FREQ. RANGE 50-700mHz, N FEMALE CONNECTOR ON SURGE AND PROTECTED SIDE | 16903 | POLYPHASER | | |
| 42 | 1 | | CA7-440 | 7dB ANTENNA, 10dB GAIN, 406-512 MHz, HORIZONTAL OR VERTICAL POLARIZATION | 16903 | KATHREIN/SCALA | | |
| 45 | 1 | | | ANTENNA CABLE FROM TRANSCEIVER TO ARRESTOR | 16903 | | | |
| 48 | 1 | | LMR-500 | ANTENNA CABLE, 1/2" DIAMETER, FOAM DIELECTRIC, 50 OHM, 60 FEET | 16903 | TIMES MICROWAVE | | |
| 50 | 2 | | 141CSOOHMC | CONNECTOR: N-MALE CLAMP FOR LMR-500 | 16903 | TIMES MICROWAVE | | |
| 52 | 1 | | IC+ 115 | ISLATROL PLUS SURGE SUPPRESSOR, 15A, 120VAC | 16903 | CONTROL CONCEPTS | | |
| 53 | 1 | CB2 | 1492-SPU1C150 | CIRCUIT BREAKER, SINGLE POLE DIN RAIL MOUNT, 15A | 16903 | ALLEN-BRADLEY | | |
| 55 | 6 | CB1, UPS-CB1, UPS-CB2, UPS-CB3 CR-OS-CB-1 | 1492-SPU1C050 | CIRCUIT BREAKER, SINGLE POLE IN RAIL MOUNT, 5A | 16903 | ALLEN-BRADLEY | | |
| 58 | 1 | | 700-HA32A1-1-4 | 120VAC, GENERAL PURPOSE RELAY, BLADE STYLE, 4 FORM C CONTACTS, 10A RATING, WITH MANUAL OPERATOR AND INDICATOR LIGHT | 16903 | ALLEN-BRADLEY | | |
| 59 | 1 | | 700-HN154 | SCREW TERMINAL BASE SOCKET FOR 700-HB RELAY (ABOVE). OLD 700-HN127 | 16903 | ALLEN-BRADLEY | | |
| 60 | 1 | PS-1 | PS5R-C12 | 12VDC POWER SUPPLY, 30W, 2.5A, UNIVERSAL AC INPUT (85 TO 264VAC), AUTO RESETTING OUTPUT OVERCURRENT PROTECTION, DIN RAIL MOUNT, ADJUSTABLE OUTPUT VOLTAGE +/- 10% | 16903 | IDEC | | |
| 62 | 1 | PS-2 | PS5R-E24 | 24VDC POWER SUPPLY, 120W, 4.2A, UNIVERSAL AC INPUT (85 TO 264VAC), AUTO RESETTING OUTPUT OVERCURRENT PROTECTION, DIN RAIL MOUNT, ADJUSTABLE OUTPUT VOLTAGE +/- 10% | 16903 | IDEC | | |
| 63 | 15 | | A-LTDB1 | INCANDESCENT LIGHTING PACKAGE, DOOR SWITCH WITH TERMINAL BLOCK, 120VAC, REMOVABLE WIRE GUARD, 60W BULB | 16903 | HOFFMAN | | |
| 66 | 3 | | 5015-4 | SINGLE OUTLET RECEPTACLE, 15A, 125V | 16903 | LEVITON | | |
| 67 | 2 | | 5PC26 | BELL BOX, 4x2 (1 GANG) | 16903 | HUBBELL | | |
| 68 | 2 | | DRUB15 | DUPLEX RECEPTACLE, BOX AND COVER PLATE ASSEMBLY, 15A, DIN RAIL MOUNTING | 16903 | HUBBELL | | |
| 69 | | | 1492-B4 | TERMINAL BLOCK, GENERAL PURPOSE, 35A @ 600VAC RATED, GRAY | 16903 | ALLEN-BRADLEY | | |
| 70 | | | 1492-WC4 | TERMINAL BLOCK, GROUNDING, GRAY/YELLOW | 16903 | ALLEN-BRADLEY | | |
| 71 | | | 1492-B35T3 | TERMINAL BLOCK, KNIFE TYPE DISCONNECT, 15A RATING | 16903 | ALLEN-BRADLEY | | |
| 72 | | | 1492-EB3 | TERMINAL END BARRIER, GRAY | 16903 | ALLEN-BRADLEY | | |
| 73 | | | 1492-EB3Y | TERMINAL END BARRIER, YELLOW | 16903 | ALLEN-BRADLEY | | |
| 74 | | | 1492-EA35 | TERMINAL END ANCHOR, GRAY | 16903 | ALLEN-BRADLEY | | |
| 75 | | | 1492-CM35 | TERMINAL GROUP MARKER, GRAY, WRITING AREA 1-1/2" x 3/4" | 16903 | ALLEN-BRADLEY | | |
| 76 | | | 1492-H6 | FUSIBLE TERMINAL BLOCK WITH LED BLOWN FUSE INDICATOR, 12A, 300V, 10-57VDC | 16903 | ALLEN-BRADLEY | | |
| 77 | 1 | | 1492-H4 | FUSIBLE TERMINAL BLOCK WITH NEON BLOWN FUSE INDICATOR, 12A, 300V, 100-300VAC | 16903 | ALLEN-BRADLEY | | |
| 78 | 18D | | AGC-5A | FUSE, 5A, FAST ACTING | 16903 | BUSSMANN | | |
| 79 | FB1 | | AGC-3A | FUSE, 3A, FAST ACTING | 16903 | BUSSMANN | | |
| 81 | 1SD | | ACC-1/2A | FUSE, 1/2A, FAST ACTING | 16903 | BUSSMANN | | |
| 85 | 1 | 02FE08 | 8104A-S0A-MSJ-SM | 4" MAGNETIC FLOWTUBE, ANSI CLASS 150, CARBON STEEL FLANGE, AISI TYPE 304SS TUBE WITH NEOPRENE LINING, 316SS ELECTRODES, REMOTE MOUNTED TRANSMITTER, CALIBRATE @ 0-100 GPM | 11807 | FOXBORO | | |
| 86 | 1 | 02FT08 | 8732E-SDA08I0M | I/A SERIES INTELLIGENT MAGMETIC FLOW TRANSMITTER, 4-20mA OUTPUT, 120VAC | 11807 | FOXBORO | | |
| 84 | 1 | 02LT02 | 730-148-0100/815/940 | SUBMERSIBLE PRESSURE TRANSDUCER, 316SS, 0-100 PSI, 4-20mADC, CLOSED-FACE NOSECAP, 24VDC LOOP POWERED WITH 150 FEET OF CABLE AND DESICANT TUBE | 16903 | KPSI | | |
| 106 | 1 | | GB10 | GROUNDING BUSS | 16903 | SAE/MTS | | |

**REFERENCE WELL NO. 2**
**OPERATIONS & MAINTENANCE MANUALS**
**VOLUME FOUR**

TYPICAL I100-I108
SIM I200-I208 EXCEPT WELL NO 5

**RECORD DRAWING**

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| NO. | BY | DESCRIPTION |
|---|---|---|
| | | RECORD DRAWINGS |

VERIFY SCALE

DSN LMD
DWN CLD
CKD CMS
DATE NOV '06

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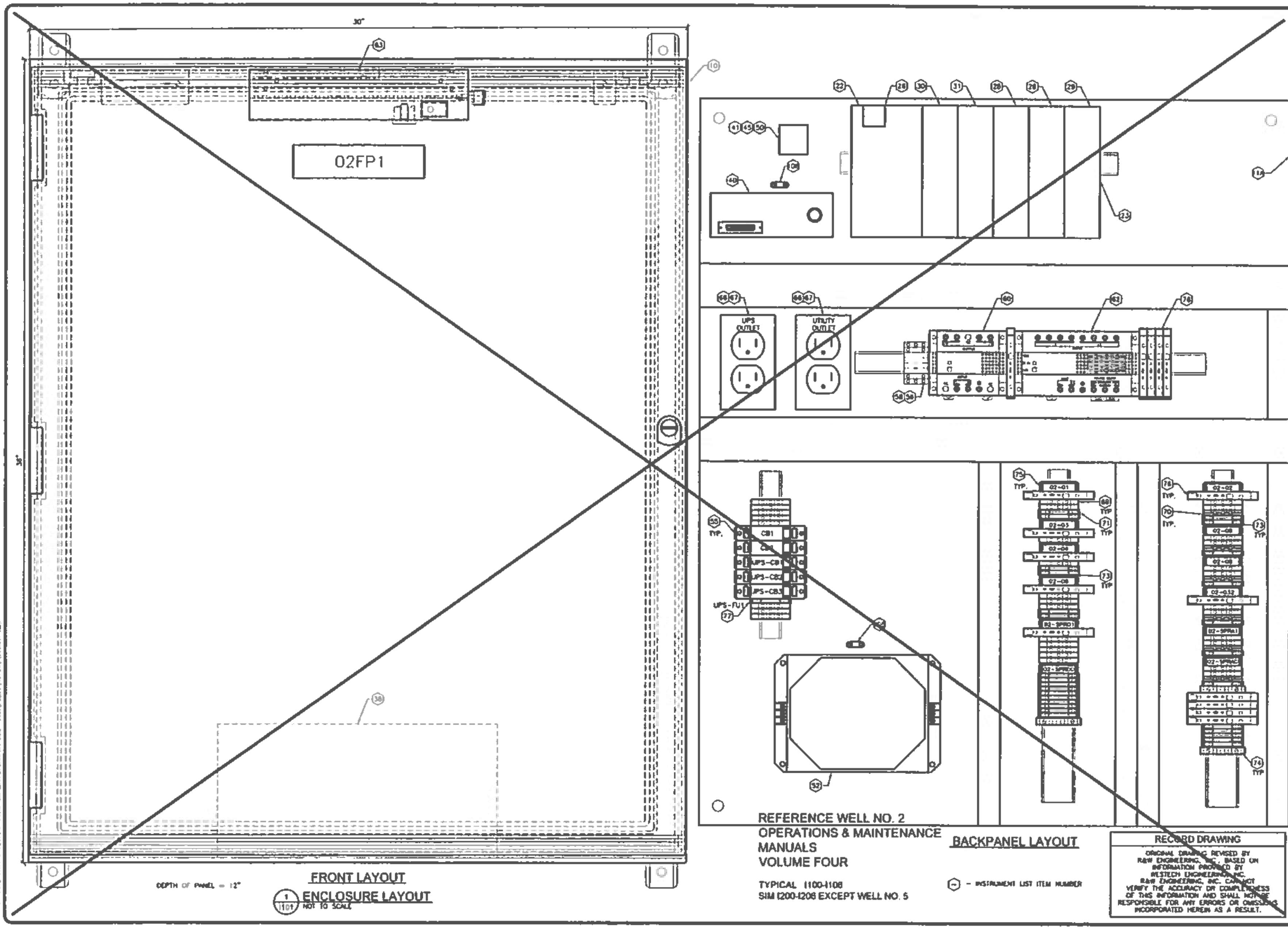
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

INSTRUMENT, & CONTROL LEGEND AND SCHEDULES

DRAWING NO. I100
SHEET 19 OF 38
JOB NUMBER 1897.4041.0




CITY OF LAFAYETTE, OREGON

Dayton Wellfield, Well 2 & Well 5 Development

INSTRUMENT AND CONTROL
PANEL 02FP1
LAYOUT

DRAWING NO. 1101

SHEET 20 OF 38

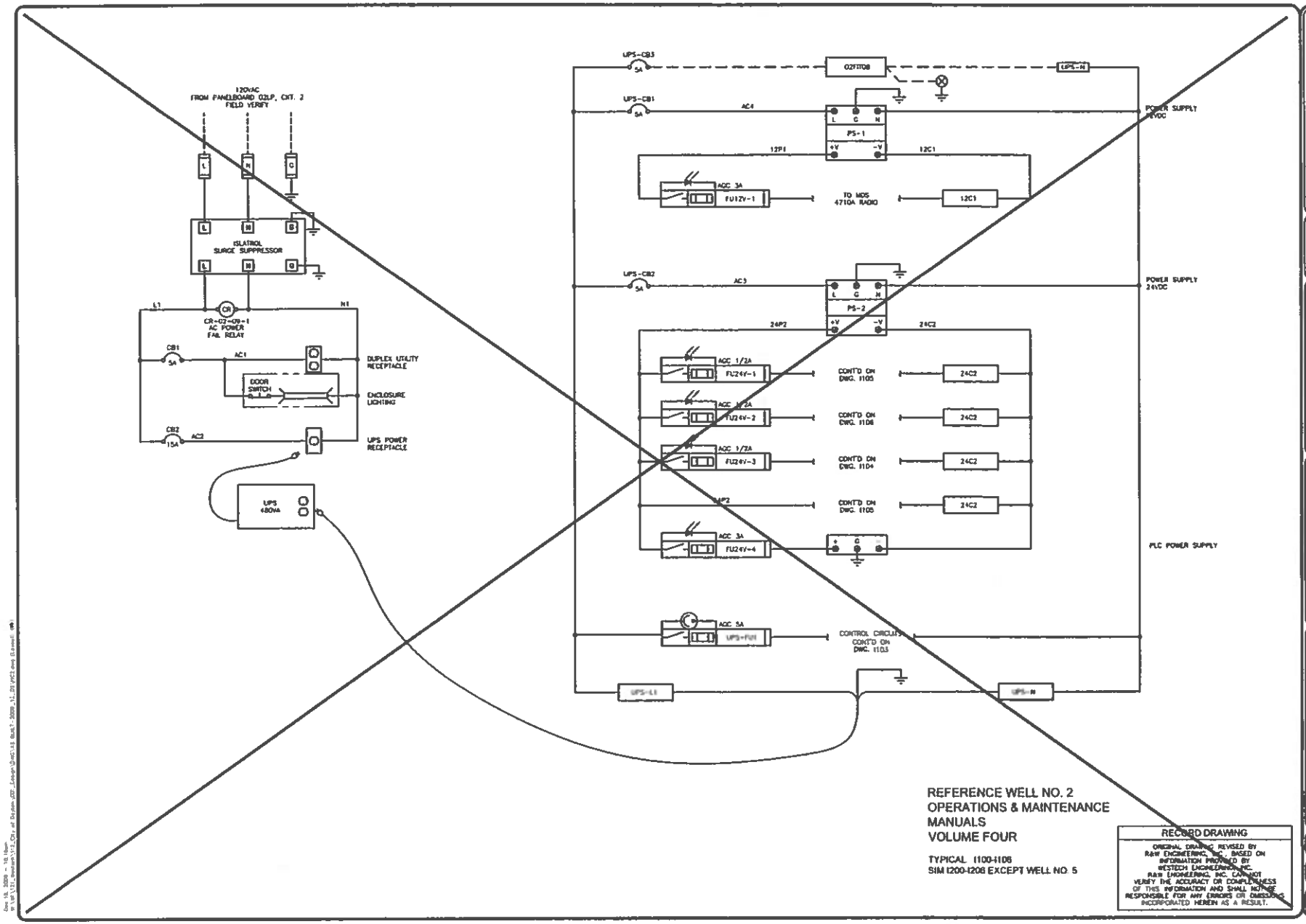
JOB NUMBER 1897.4041.0

WESTECH ENGINEERING, INC.

R&W ENGINEERING, INC.

DSN MRD
DWN CJD
CKD GHS
DATE NOV 08

REVISIONS




REFERENCE WELL NO. 2
OPERATIONS & MAINTENANCE
MANUALS
VOLUME FOUR

TYPICAL I100-I106
SIM I200-I206 EXCEPT WELL NO. 5

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CKD: GRS
DATE: NOV 08

R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

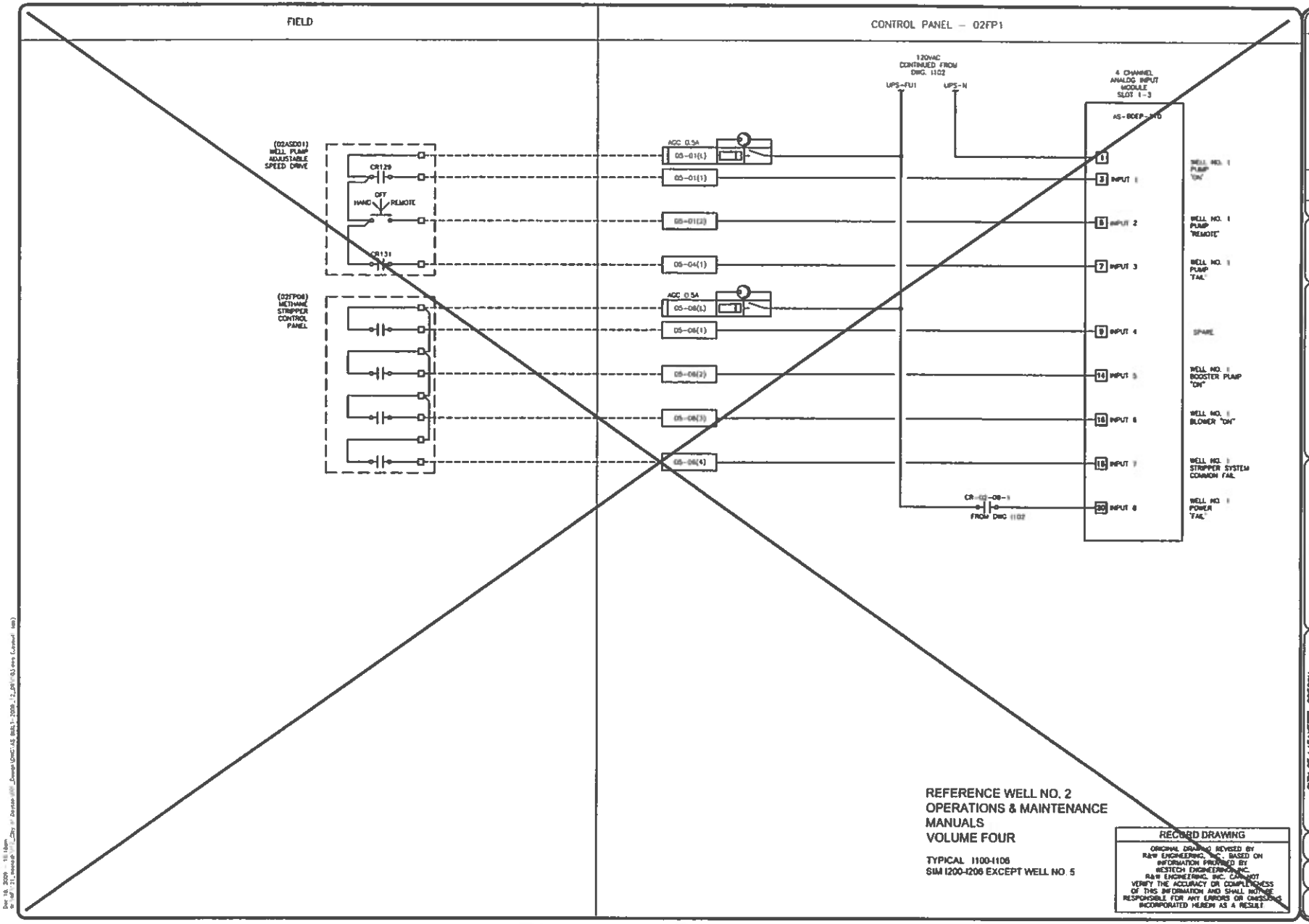
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

INSTRUMENT AND CONTROL
PANEL 02FP1
POWER DISTRIBUTION

DRAWING NO.
I102

SHEET
21 OF 38

JOB NUMBER
1897.4041.0


FIELD
CONTROL PANEL – 02FP1
120VAC
CONTINUED FROM
DWG. 1102
UPS-FU1
UPS-N
4 CHANNEL
ANALOG INPUT
MODULE
SLOT 1-3
AS-BDEP-1N0
(02ASD01)
WELL PUMP
ADJUSTABLE
SPEED DRIVE
CR129
OFF
HAND
REMOTE
CR131
(02FP08)
METHANE
STRIPPER
CONTROL
PANEL
AGC 0.5A
05-01(L)
05-01(1)
05-01(2)
05-04(1)
AGC 0.5A
05-06(L)
05-06(1)
05-06(2)
05-06(3)
05-06(4)
1
3 INPUT 1
5 INPUT 2
7 INPUT 3
9 INPUT 4
11 INPUT 5
13 INPUT 6
15 INPUT 7
20 INPUT 8
WELL NO. 1
PUMP
"ON"
WELL NO. 1
PUMP
"REMOTE"
WELL NO. 1
PUMP
"FAIL"
SPARE
WELL NO. 1
BOOSTER PUMP
"ON"
WELL NO. 1
BLOWER "ON"
WELL NO. 1
STRIPPER SYSTEM
COMMON FAIL
WELL NO. 1
POWER
"FAIL"
CR-02-08-1
FROM DWG 1102
REFERENCE WELL NO. 2
OPERATIONS & MAINTENANCE
MANUALS
VOLUME FOUR
TYPICAL 1100-1106
SIM 1200-1206 EXCEPT WELL NO. 5
RECORD DRAWING
ORIGINAL DRAWING REVISED BY
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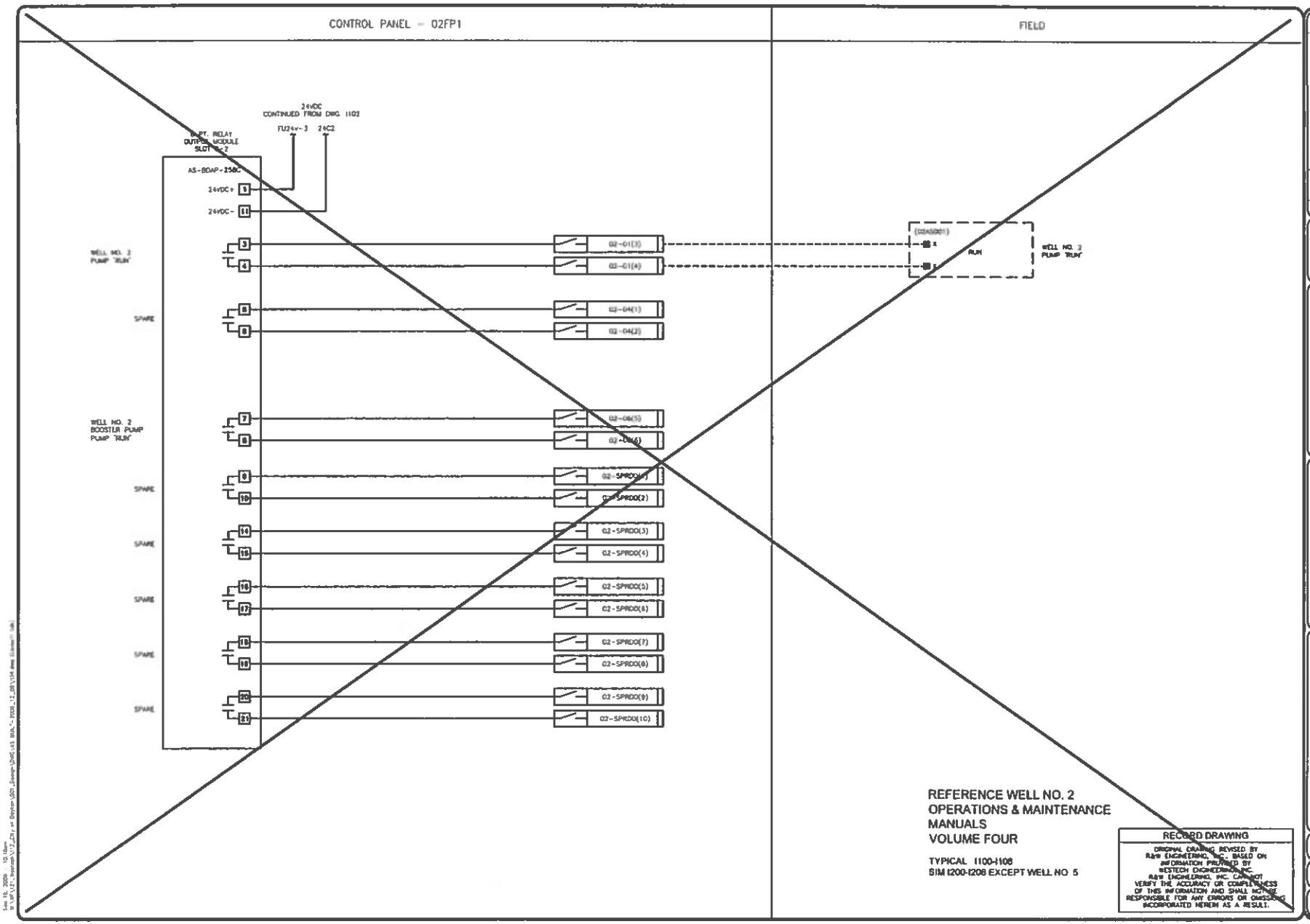
DSN
DWN
CHK
DATE
NO.
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development
INSTRUMENT AND CONTROL
PANEL 02FP1
DISCRETE INPUTS
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
R&W ENGINEERING, INC.
DRAWING NO.
1103
SHEET
22 OF 38
JOB NUMBER
1897.4041.0




REFERENCE WELL NO. 2
OPERATIONS & MAINTENANCE
MANUALS
VOLUME FOUR

TYPICAL 1100-1108
SIM 1200-1208 EXCEPT WELL NO 5

RECORD DRAWING

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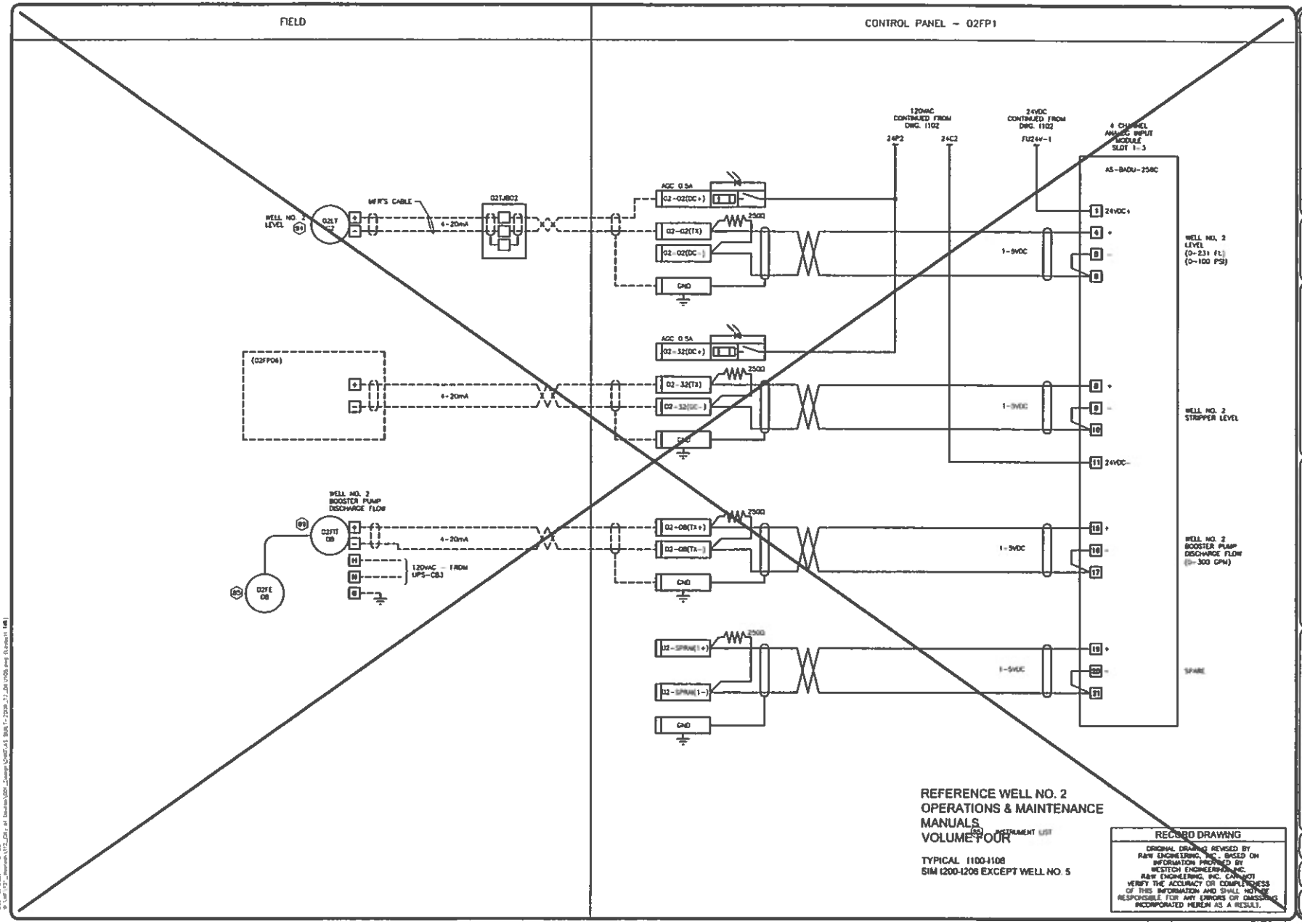
Dayton Wellfield, Well 2 & Well 5 Development

INSTRUMENT, AND CONTROL
PANEL 02FP1
DISCRETE OUTPUTS

DRAWING NO.
1104

SHEET
23 OF 38

JOB NUMBER
1897.4041.0




REFERENCE WELL NO. 2 OPERATIONS & MAINTENANCE MANUALS
(60) INSTRUMENT LIST
VOLUME FOUR

TYPICAL I100-I108
SIM I200-I208 EXCEPT WELL NO. 5

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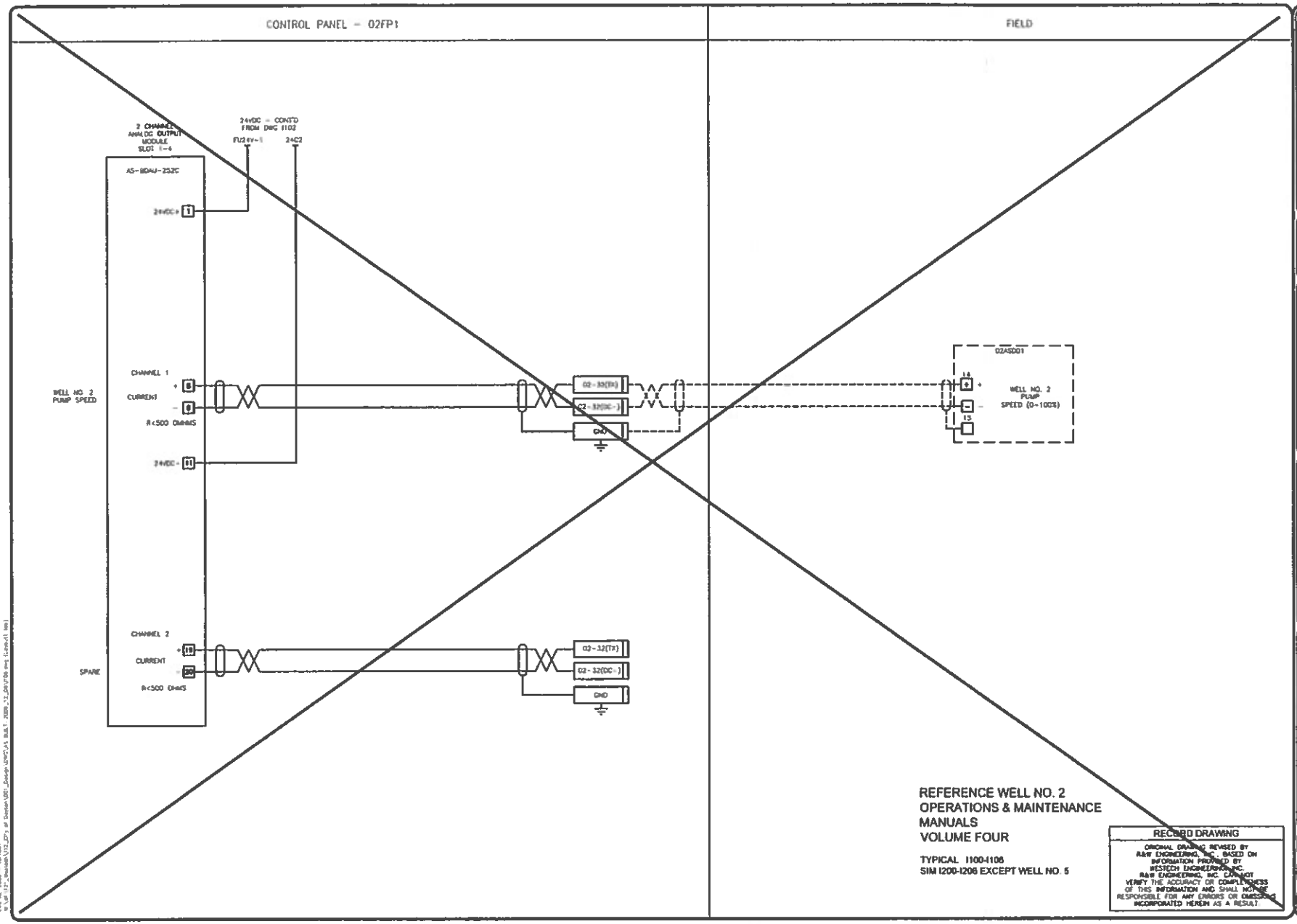
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development
INSTRUMENT, AND CONTROL PANEL 02FP1 ANALOG INPUTS

DRAWING NO. 1105
SHEET 24 OF 38
JOB NUMBER 1897.4041.0


CONTROL PANEL - 02FP1
FIELD
2 CHANNEL ANALOG OUTPUT MODULE SLOT 1-6
AS-BDAU-232C
24VDC - CONT'D FROM DWG 1102
FU24V-1
24C2
24VDC+ 1
CHANNEL 1
WELL NO. 2 PUMP SPEED
CURRENT
+ 8
- 9
R<500 OHMS
24VDC- 11
CHANNEL 2
SPARE
CURRENT
+ 18
- 20
R<500 OHMS
02-32(TX)
02-32(DC-)
GND
02ASD01
WELL NO. 2 PUMP SPEED (0-100%)
REFERENCE WELL NO. 2
OPERATIONS & MAINTENANCE
MANUALS
VOLUME FOUR
TYPICAL 1100-1106
SIM 1200-1206 EXCEPT WELL NO. 5
RECORD DRAWING
ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY WESTECH ENGINEERING, INC.
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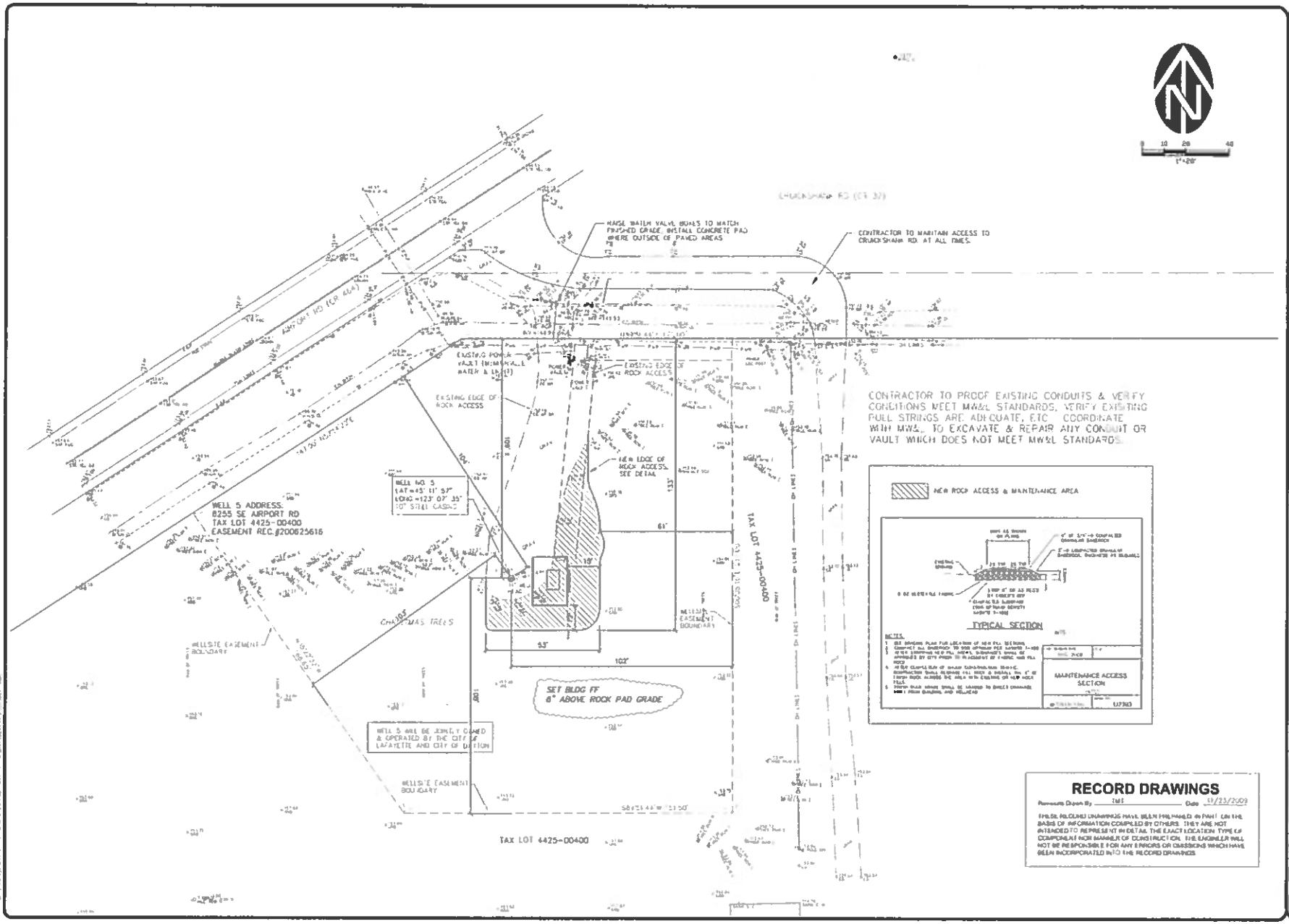
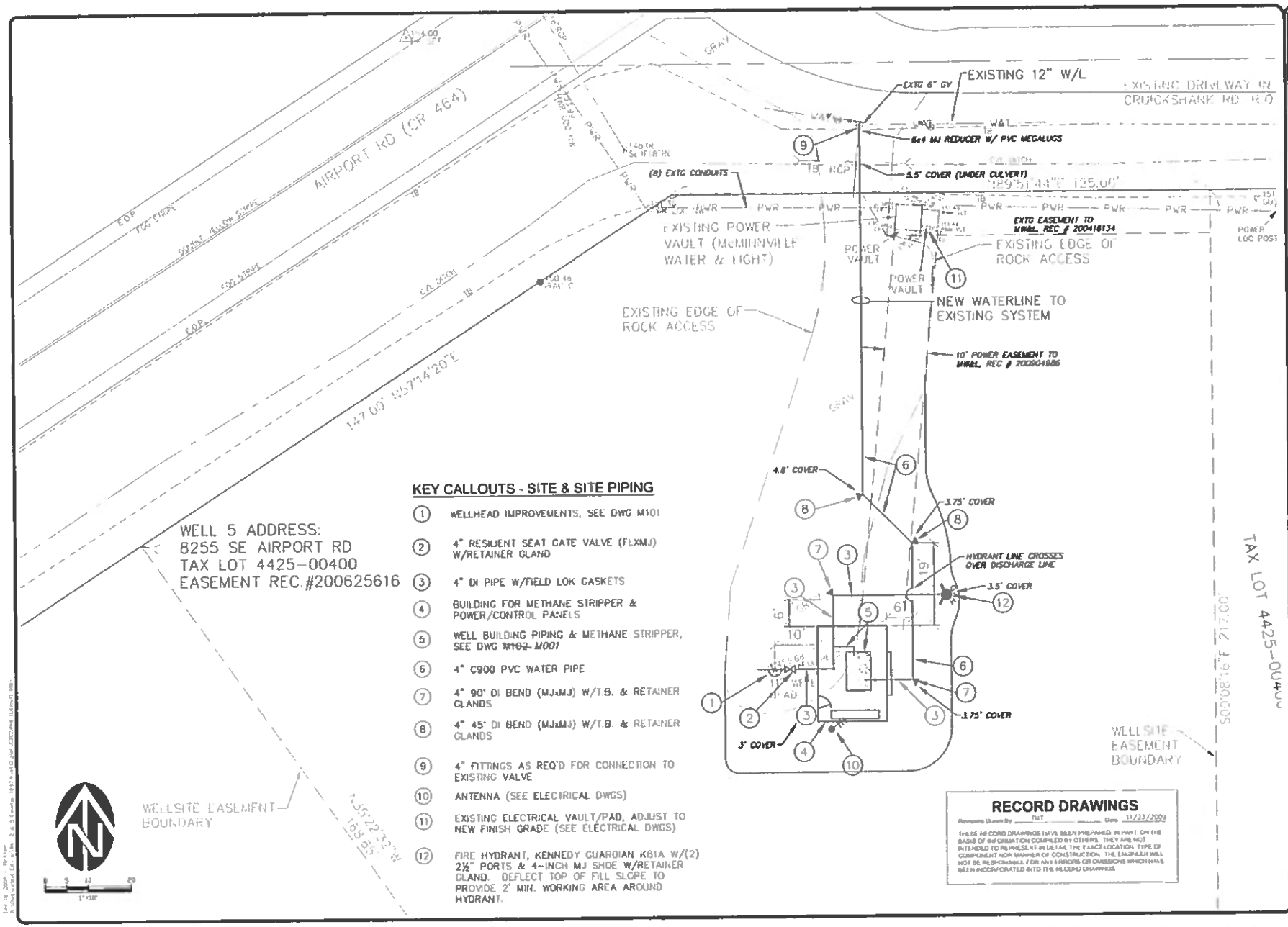
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 3 Development
INSTRUMENT AND CONTROL
PANEL 02FP1
ANALOG OUTPUTS
DRAWING NO. 1106
SHEET 25 OF 38
JOB NUMBER 1897.4041.0




CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

# WELL 5, EXTG COND'S, GRADING, DRAINAGE & EROSION CONTROL PLAN

DRAWING NO. C201
SHEET 26 OF 38
JOB NUMBER 1897.4041.0




## KEY CALLOUTS - SITE & SITE PIPING

1. WELLHEAD IMPROVEMENTS, SEE DWG M101
2. 4" RESILIENT SEAT GATE VALVE (FLXMJ) W/RETAINER GLAND
3. 4" DI PIPE W/FIELD LOK GASKETS
4. BUILDING FOR METHANE STRIPPER & POWER/CONTROL PANELS
5. WELL BUILDING PIPING & METHANE STRIPPER, SEE DWG ~~M102~~ M001
6. 4" C900 PVC WATER PIPE
7. 4" 90° DI BEND (MJxMJ) W/T.B. & RETAINER GLANDS
8. 4" 45° DI BEND (MJxMJ) W/T.B. & RETAINER GLANDS
9. 4" FITTINGS AS REQ'D FOR CONNECTION TO EXISTING VALVE
10. ANTENNA (SEE ELECTRICAL DWGS)
11. EXISTING ELECTRICAL VAULT/PAD, ADJUST TO NEW FINISH GRADE (SEE ELECTRICAL DWGS)
12. FIRE HYDRANT, KENNEDY GUARDIAN K81A W/(2) 2½" PORTS & 4-INCH MJ SHOE W/RETAINER GLAND. DEFLECT TOP OF FILL SLOPE TO PROVIDE 2' MIN. WORKING AREA AROUND HYDRANT.

**RECORD DRAWINGS**

Revisions Shown By: TMT Date: 11/23/2009

THESE AS-BUILT RECORD DRAWINGS HAVE BEEN PREPARED IN PART ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

WELL NO. 5
SITE LAYOUT & PIPING PLAN

DRAWING NO. C202
SHEET 27 OF 38
JOB NUMBER 1897.4041.0

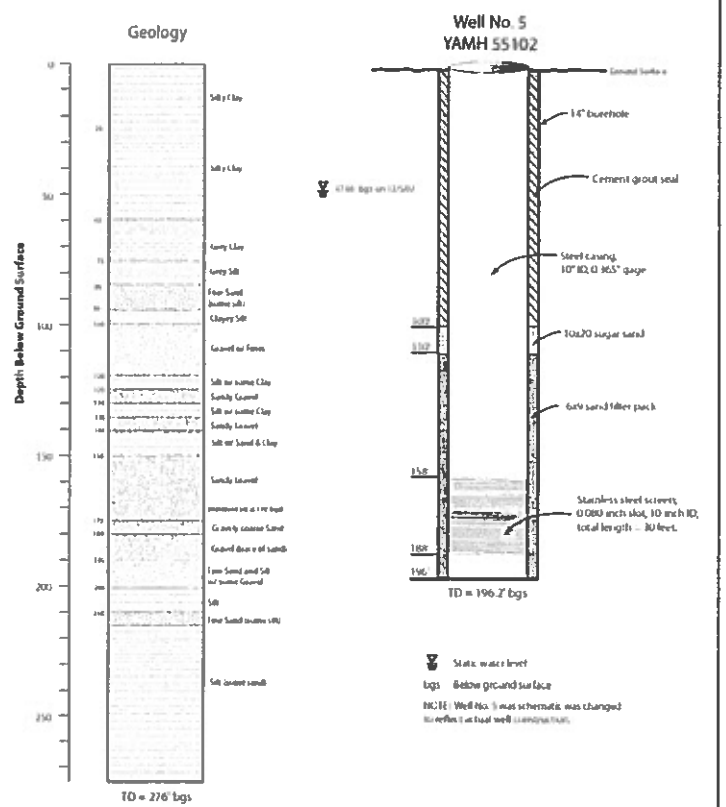
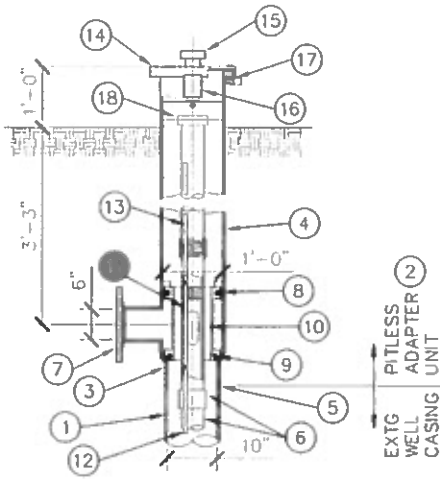



**FIGURE 8**
Well 5 As Built
City of Lafayette

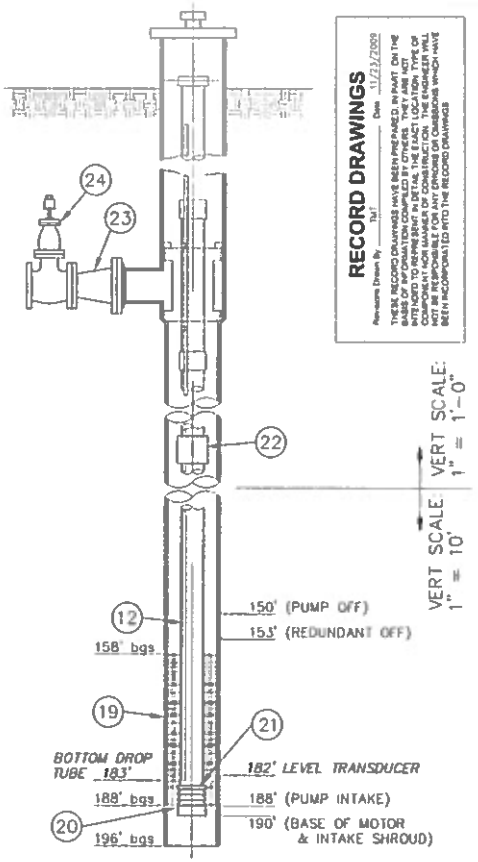
## KEY CALLOUTS - WELLHEAD/CASING/PUMP

1. EXISTING 10" STEEL WELL CASING, CONTRACTOR TO CLEANLY CUT AS REQUIRED.
2. PITLESS WELL ADAPTER UNIT, MAASS MIDWEST MODEL MB, FEATURES & OPTIONS AS SHOWN & SPECIFIED.
3. LOWER BARREL, 10" DIA. STEEL
4. UPPER BARREL, 12" DIA. STEEL
5. WELD LOWER BARREL OF PITLESS ADAPTER TO EXISTING WELL CASING PER MANUFACTURER'S RECOMMENDATIONS.
6. THREADED COUPLING & 4" COLUMN PIPE AS SPECIFIED (NOT PART OF PITLESS UNIT)
7. 6" FLANGED DISHARGE CONNECTION (CL 150)




## WELL NO. 5
## WELLHEAD SECTION
## (PITLESS ADAPTER)
SCALE: 1" = 1'-0"

8. STAINLESS STEEL O-RING SEATS, TYP 2 PLACES
9. BUNA N O-RING SEALS, TYP 2 PLACES
10. ACCESS CHANNELS (2) FOR PUMP WIRES, ETC.
11. 1" STAINLESS STEEL (MxM) DROP TUBE CONNECTOR (EXTENDS THROUGH SEAL SECTION OF PITLESS ADAPTER), TYP OF 2. ONE TUBE FOR LEVEL TRANSDUCER/PROBE, ONE SPARE TO ALLOW INDEPENDENT WATER LEVEL VERIFICATION.
12. 1" THREADED & PERFORATED PVC DROP TUBE AS SPECIFIED (2 EACH) FOR LEVEL TRANSDUCER & SPARE. EXTEND TO POINT ~~3' ABOVE BOWLS.~~ *5' ABOVE INTAKE.*
13. THREADED PVC TUBE AS SPECIFIED (2 EACH) FOR LEVEL TRANSDUCER & SPARE. CONNECT TRANSDUCER TUBE TO JUNCTION BOX, CAP SPARE 6" BELOW WELL CAP.
14. WATERTIGHT WELL CAP W/NEOPRENE GASKET
15. 2" WELL SCREEN WITH STAINLESS STEEL SCREEN
16. EXTRA LARGE JUNCTION BOX 1" & 2" NPT COUPLINGS (FOR WELL POWER CABLE & TRANSDUCER WIRE).
17. LOCKING BOLT
18. TORQUE ARRESTOR (PREVENTS ROTATION OF COLUMN PIPE & INTERIOR ADAPTER SPOOL DUE TO PUMP MOTOR TORQUE)
19. WELL SCREEN INTERVAL




## WELL NO. 5
## WELL SECTION
HORIZ. SCALE: 1" = 1'-0"
VERT SCALE AS SHOWN

20. SUBMERSIBLE WELL PUMP & MOTOR. PROVIDE WITH FLOW INDUCER SLEEVE. *PVC* FLOW INDUCER SLEEVE TO HAVE CENTERING STANDOFFS TO KEEP MOTOR CENTERED IN SLEEVE (STANDOFFS TO BE AT MOTOR CASTING LEVEL, DO NOT LOCATE ON STATOR SHELL)
21. PUMP COLUMN CHECK VALVE (EPOXY COATED DUCTILE IRON) MOUNT @ ~~TOP OF PUMP.~~ *1ST JOINT ABOVE PUMP*
22. INTERMEDIATE PUMP COLUMN CHECK VALVE (EPOXY COATED DUCTILE IRON)
23. 6x4 REDUCER (FLxFL)
24. 4 RESILIENT WEDGE GATE VALVE (FLxMJ)

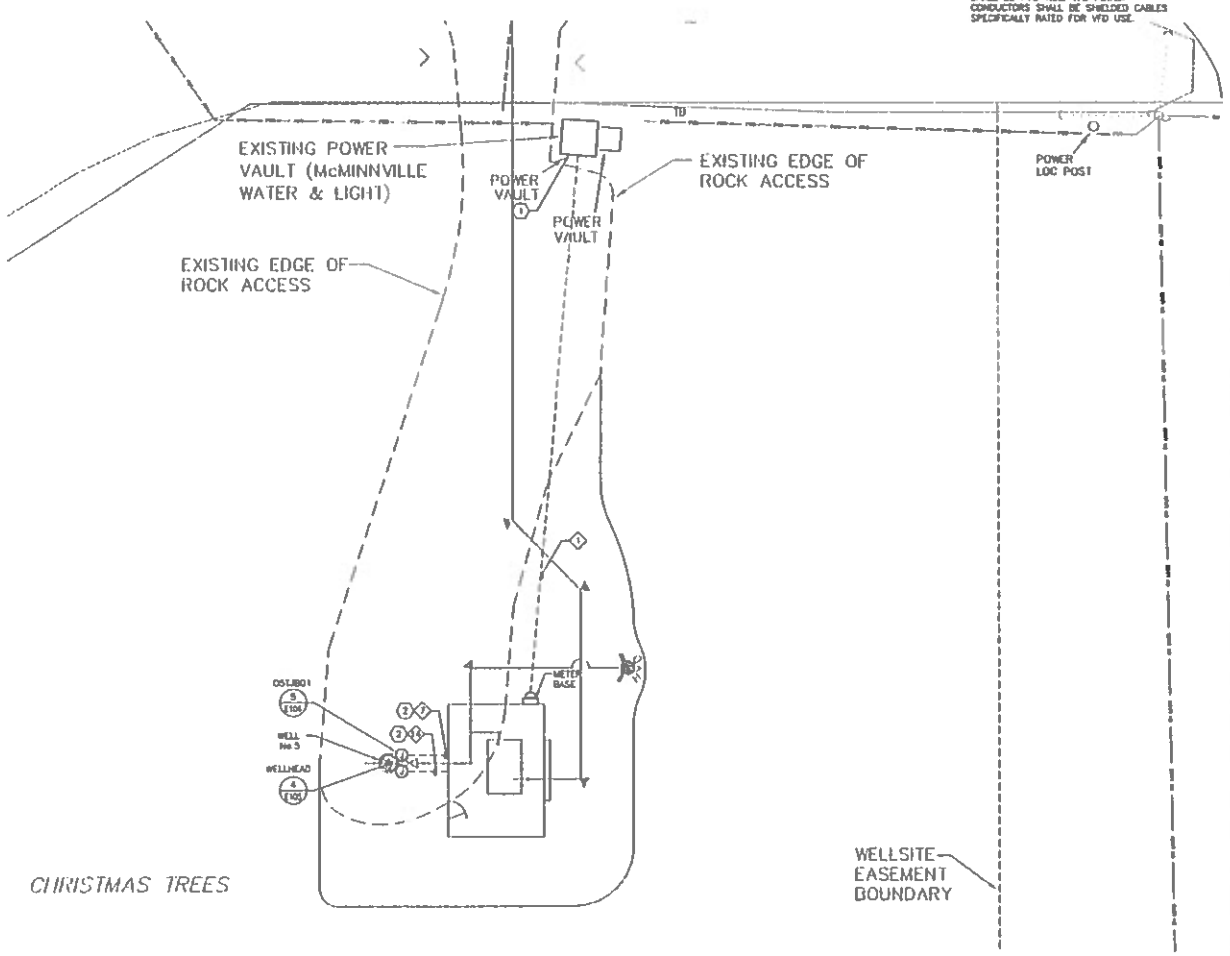
CITY OF LAFAYETTE, OREGON
Dayton Well#4, Well 2 & Well 5 Development
WELL 5, CASING/SCREEN AS-BUILT, WELLHEAD & CASING/PUMP SECTIONS
DRAWING NO. M201
SHEET 28 OF 38
JOB NUMBER 1897.4041.0

## ELECTRICAL LEGEND

- ELECTRICAL EQUIPMENT
- WALL SWITCH
- GFI WP — DUPLEX RECEPTACLE - NORMAL, GROUND FAULT INTERRUPTING
- CONNECTION TO SPECIAL EQUIPMENT OR OUTLET AS SHOWN
- P4 — HOME RUN, ELECTRICAL PANEL DESTINATION SHOWN
- 4 CONDUIT CONCEALED UNDERFLOOR OR UNDERGROUND.
- 4 CONDUIT CONCEALED IN WALL OR ABOVE CEILING IN FINISHED AREAS. EXPOSED IN PROCESS AND EQUIPMENT AREAS.
- 4 NOTE: ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO.12 CONDUCTORS IN CONDUIT. RUNS MARKED WITH CROSS-HATCHES INDICATE NUMBER OF NO.12 WIRE. LARGER GAUGES ARE SHOWN. REVERSE SLANT INDICATES GREEN GROUND WIRE. SIZE CONDUIT ACCORDING TO ELECTRICAL SPECIFICATIONS AND APPLICABLE CODE. LONG CROSS HATCH INDICATES NEUTRAL.
- J — JUNCTION BOX
- GROUND CONNECTION PER NEC ARTICLE 250
- TRANSFORMER
- 400AF — THERMAL MAGNETIC CIRCUIT BREAKER, FRAME SIZE AND TRIP SETTING SHOWN
- MOTOR, HORSEPOWER SHOWN
- CURRENT TRANSFORMER
- MOTOR THERMAL OVERLOAD RELAY
- OR — MOTOR STARTER CONTACTOR, NEMA OR IEC SIZE RATING SHOWN
- IEC 170a
- THERMAL MAGNETIC CIRCUIT BREAKER
- 15AC — MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUITS ONLY) CONTINUOUS CURRENT RATING AND TRIP SETTINGS SHOWN
- 400AF — FUSE
- 1 — DRAWING NOTE
- 1 — ELECTRICAL CIRCUIT IDENTIFICATION
- 2/1, 3/4, 3 — MULTIPLE ELECTRICAL CIRCUITS, SEPARATE CONDUITS
- 1"C — 2/1, 3/4, 3 — MULTIPLE ELECTRICAL CIRCUITS, COMMON CONDUIT (SIZE SHOWN)

## ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| ASD | ADJUSTABLE SPEED DRIVE (VFD) |
| ATS | AUTOMATIC TRANSFER SWITCH |
| CB | CIRCUIT BREAKER |
| CU | COPPER |
| GND | GROUND |
| HH | HANDHOLE |
| KW | KILOWATT |
| LP | LIGHTING PANEL |
| MCB | MAIN CIRCUIT BREAKER |
| MTS | MANUAL TRANSFER SWITCH |
| MW&L | MCMINNVILLE WATER & LIGHT |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |
| RGS | RIGID GALVANIZED STEEL |
| SSTL | STAINLESS STEEL |
| VFD | VARIABLE FREQUENCY DRIVE |
| WP | WEATHERPROOF |
| XDCR | TRANSDUCER |
| XFMR | TRANSFORMER |




## KEYED NOTES

1. EXISTING POWER COMPANY TRANSFORMER PADMULT. CONTRACTOR SHALL COORDINATE POWER SERVICE WITH POWER COMPANY REPRESENTATIVE AND MEET ALL POWER COMPANY REQUIREMENTS.
2. MAINTAIN SEPARATION OF CONTROL CONDUIT FROM POWER (VFD) CONDUIT (24" HORIZONTALLY AND VERTICALLY). CONDUITS SHALL BE PVC-RGS. VFD POWER CONDUCTORS SHALL BE SHIELDED CABLES SPECIFICALLY RATED FOR VFD USE.

### RECORD DRAWING

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DRN CD
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WESTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS

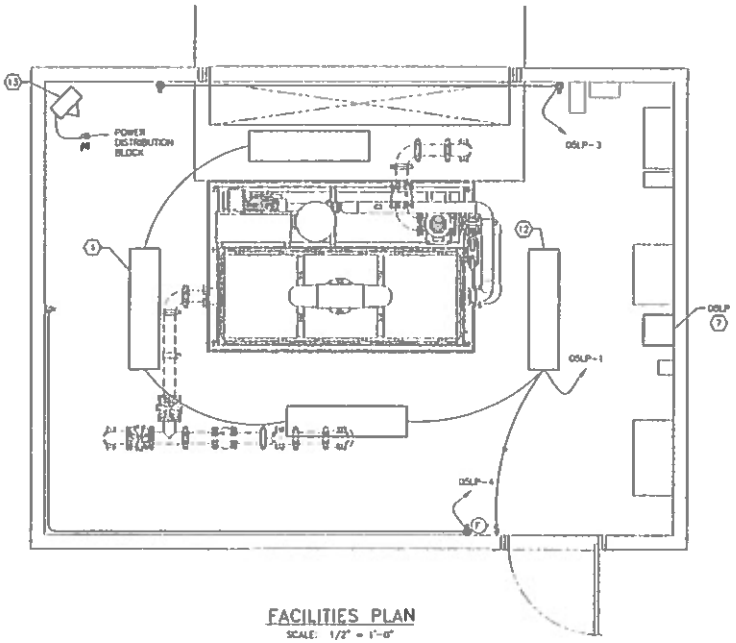
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

WELL 5, ELECTRICAL
SITE PLAN AND LEGEND

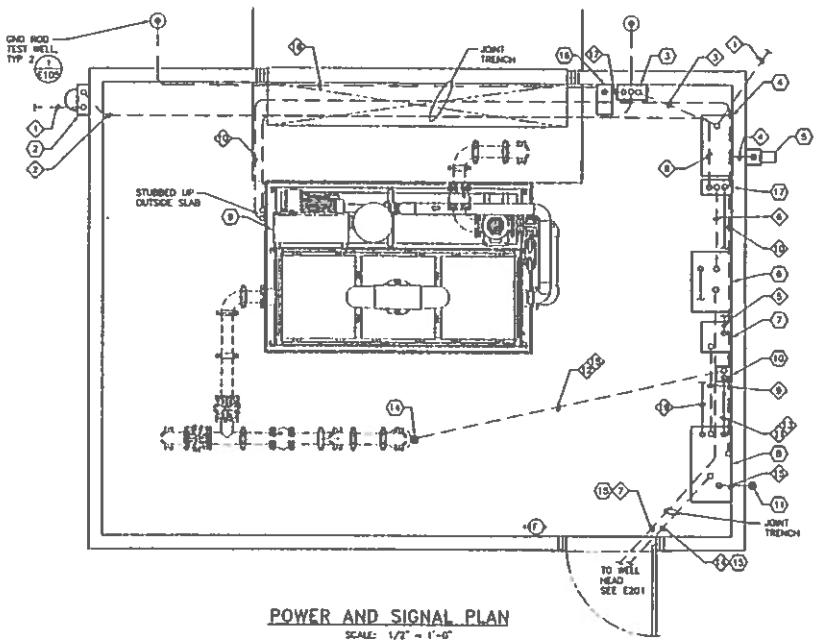
DRAWING NO. E201

SHEET 29 OF 38

JOB NUMBER 1897.4041.0




FACILITIES PLAN
SCALE: 1/2" = 1'-0"




POWER AND SIGNAL PLAN
SCALE: 1/2" = 1'-0"

## KEYED NOTES

1. 1'x4' LINEAR FLUORESCENT FIXTURE. LITHONIA #OMNI-2-32-120-GEB10IS OR EQUAL, TYPICAL OF 4.
2. NEMA 3R METER BASE, COORDINATE WITH POWER COMPANY FOR REQUIREMENTS.
3. MAIN SERVICE DISCONNECT IN NEMA 12 ENCLOSURE.
4. MANUAL TRANSFER SWITCH, DOUBLE THROW SAFETY SWITCH, 3-POLE, 600V, 200 AMP (30HP RATED), NEMA 12 ENCLOSURE GE TYPE TC, OR EQUAL.
5. SPECIAL PURPOSE RECEPTACLE, 100A, 600V, 4-WIRE, 4-POLE CROUSE-HINDS ARKTITE WITH BACK BOX AND ANGLE ADAPTER. NUMBER "AREA"
6. OSASD01, WELL PUMP ADJUSTABLE SPEED DRIVE.
7. POWER DISTRIBUTION PANELBOARD OSLP, SQUARE D "MINI POWER-ZONE", 480V-120/240V, 1-PHASE, 5KVA IN NEMA 12 ENCLOSURE.
8. TELEMETRY PANEL OSFP1.
9. OSFP08 METHANE STRIPPER PACKAGE CONTROL PANEL.
10. FLOW METER OSFIT08.
11. RADIO ANTENNA, SEE DETAIL 2/E105.
12. PROVIDE FIXTURE WITH EMERGENCY, BATTERY-BACKED BALLAST.
13. 3KW CEILING MOUNTED UNIT HEATER WITH INTEGRAL T-STAT AND DISCONNECT. UNIT HEATER SHALL BE QMARK #AUM0341 OR EQUAL.
14. OSFE08, FLOW METER TUBE.
15. MAINTAIN SEPARATION OF CONTROL CONDUIT FROM POWER (VFD) CONDUIT (24" HORIZONTALLY AND VERTICALLY). CONDUIT SHALL BE PVC-RGS. VFD POWER CONDUCTORS SHALL BE SHIELDED CABLES SPECIFICALLY RATED FOR VFD USE.
16. TY33.
17. 100A POWER DISTRIBUTION BLOCK IN NEMA 12 ENCLOSURE.

**RECORD DRAWING**

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| | | REVISIONS |

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DRN: LMD
CHK: DRS
DATE: NOV '08

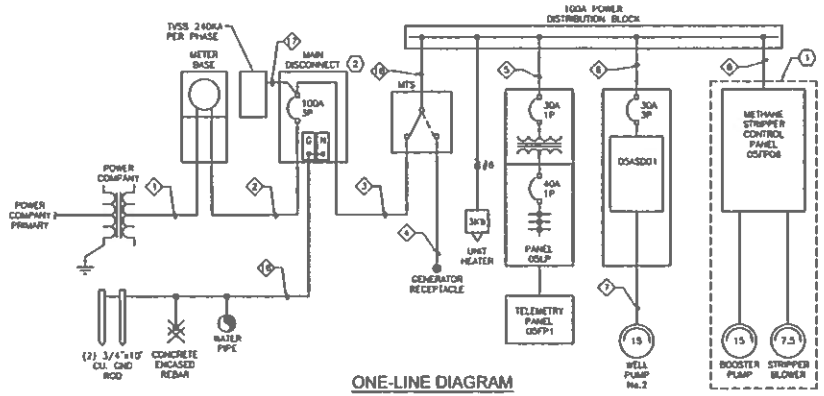
R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

WELL 5, ELECTRICAL
CONTROL BUILDING
FLOOR PLANS

DRAWING NO. E202
SHEET 30 OF 38
JOB NUMBER 1897.4041.0




## ONE-LINE DIAGRAM

SCALE: NONE

## LOAD SUMMARY

| | | | | |
|---|---|---|---|---|
| LARGEST MOTOR LOAD | | | | |
| Well Pump | 15.0 HP | 21.0 x 1.25 | 26.3 | 21.0 |
| OTHER MOTOR LOADS | | | | |
| Booster Pump | 15.0 HP | 21.0 x 1.00 | 21.0 | 17.5 |
| Stripper Blower | 7.5 HP | 11.0 x 1.00 | 11.0 | 9.1 |
| TOTAL MOTOR LOAD: | 37.5 HP | 53.0 A | 58.3 A | 48.6 |
| NON-MOTOR CONTINUOUS LOADS | | | | |
| Transformer | 3 KVA | 10.4 x 1.25 | 13.0 | 10.8 |
| Unit Heater | 3 KW | 3.6 x 1.25 | 4.5 | 3.8 |
| Subtotal Cont. Load | 6 KVA | 14 A | 18 A | 15 |
| TOTAL CONNECTED LOAD: | | 67 A | 76 A | 63 |

## KEYED NOTES

1. EQUIPMENT PROVIDED BY OTHERS AS PACKAGED UNIT. PROVIDE CONNECTIONS TO EQUIPMENT AS INDICATED ON DRAWINGS.
2. THE AVAILABLE FAULT CURRENT SHALL BE OBTAINED FROM THE POWER COMPANY BY THE CONTRACTOR PRIOR TO BID. THE CONTRACTOR SHALL SUPPLY EQUIPMENT EXCEEDING AVAILABLE FAULT CURRENT.

## RACEWAY SCHEDULE

ALL CIRCUITS ARE IDENTIFIED ON THE PLANS WITH THE DIAMOND SYMBOL. CONDUCTOR SIZES ARE BASED ON COPPER CONDUCTORS. CONDUIT SIZES ARE SHOWN FOR CASES WHEN CIRCUIT CONDUCTORS ARE RUN WITHOUT OTHER CIRCUITS. MULTIPLE CIRCUITS RUN IN COMMON CONDUITS ARE SHOWN ON PLANS AND SUPERSEDE THE BASIC CONDUIT SIZE SHOWN.

RACEWAY SIZES ARE IN INCHES WITH QUANTITIES IN EXCESS OF (1) SHOWN IN ADJACENT PARENTHESIS. CONDUCTOR CONFIGURATIONS ARE CODED AS FOLLOWS: P- FOR POWER CONDUCTORS, G - FOR GROUND CONDUCTORS, N - FOR NEUTRAL CONDUCTORS, C - FOR CONTROL CONDUCTORS, TSP - TWISTED SHIELDED PAIR, AND SP - FOR SPARE CONDUCTORS.

CIRCUITS REVISED SINCE LAST ISSUE ARE INDICATED BY AN ASTERISK(*).

| CIRCUIT NUMBER | FROM | TO | CONDUCTORS | RACEWAY | NOTES |
|---|---|---|---|---|---|
| 1 | 5'MH PAD | METER BASE | -- | 3" | COORDINATE AND VERIFY WITH POWER COMPANY PRIOR TO INSTALLATION. PROVIDE PULL CORD. |
| 2 | METER BASE | MAIN DISCONNECT | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 3 | MAIN DISCONNECT | MANUAL TRANSFER SWITCH | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 4 | MANUAL TRANSFER SWITCH | GENERATOR RECEPTACLE | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 5 | POWER DISTRIBUTION BLOCK ENCLOSURE | OSLP | (2) #10 P<br>(1) #10 N<br>(1) #10 G | 1" | |
| 6 | POWER DISTRIBUTION BLOCK ENCLOSURE | OSASD01 | (3) #4<br>(1) #10 | 1" | |
| 7 | OSASD01 (ADJUSTABLE SPEED DRIVE) | PUMP CABLE TAB OSTJB01 | #8 WTD CABLE | 1" | PVC-RGS |
| 8 | POWER DISTRIBUTION BLOCK ENCLOSURE | OSFP08 (STRIPPER CONTROL PANEL) | (3) #6 P<br>(1) #10 G | 1" | |
| 9 | OSLP | OSFP1 (TELEMETRY PANEL) | (1) #12 P<br>(1) #12 N<br>(1) #12 G | 1" | |
| 10 | OSFP1 (TELEMETRY PANEL) | OSFP08 | (6) #14 C<br>(4) #14 SP<br>(1) #12 G | 1" | |
| 11 | OSFP1 (TELEMETRY PANEL) | OSFT08 (FLOW METER TRANSMITTER) | (1) #12 P<br>(1) #12 N<br>(1) #12 G | 3/4" | |
| 12 | OSFE008 (FLOW METER TUBE) | OSFT08 (FLOW METER TRANSMITTER) | MFM'S CABLE | 1.25" | PVC-RGS |
| 13 | OSFP01 (TELEMETRY PANEL) | OSFT08 (FLOW METER TRANSMITTER) | (1)#16TSP<br>(1)#12G | 3/4" | |
| 14 | OSFP01 (TELEMETRY PANEL) | XDCR CABLE TAB OSTJB02 | (1)#16TSP<br>(1)#12G | 3/4" | PVC-RGS |
| 15 | OSFP01 (TELEMETRY PANEL) | ANTENNA | ANTENNA CABLE | 2" | |
| 16 | MAIN DISCONNECT | GROUNDING ELECTRODES | #6 BARE CU | -- | |
| 17 | MAIN DISCONNECT | TVSS | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 18 | MANUAL TRANSFER SWITCH | POWER DISTRIBUTION BLOCK ENCLOSURE | (3) #2 P<br>(1) #2 N<br>(1) #6 G | 1.25" | |
| 19 | OSFP01 | OSASD01 | (1) #16 TSP<br>(6) #14 C<br>(4) #14 SP<br>(1) #12 G | 1.25" | |

## PANEL SCHEDULE

PANEL: "OSLP" BUS: 80A VOLTAGE: 120/240V, 1Ph, 3 WIRE

FEEDER: SEE POWER RISER MAIN BRKR: 40A MOUNTING: (SURFACE)

| CKT NO. | CIRCUIT DESCRIPTION | CKT BREAKER POLES/AMPS | LOAD Type | Volt-Amps | PHASE | LOAD Volt-Amps | LOAD Type | CKT BREAKER POLES/AMPS | CIRCUIT DESCRIPTION | CKT NO. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING | 1-20 | L | 748 | A | 720 | L | 1-20 | OSFP1 TELEMETRY PANEL | 2 |
| 3 | RECEPTACLES | 1-20 | R | 540 | B | 540 | R | 1-20 | RECEPTACLES | 4 |
| 5 | SPARE | 1-20 | | | A | | | 1-20 | SPARE | 6 |
| 7 | SPARE | 1-20 | | | B | | | 1-20 | SPARE | 8 |
| 9 | SPARE | 1-20 | | | A | | | 1-20 | SPARE | 10 |

| | CONNECTED LOAD | | TOTAL LOAD | | NOTES |
|---|---|---|---|---|---|
| LOAD PER PHASE (VA) | A= | 948 | A= | 1157 | 1. |
| | B= | 720 | B= | 829 | 2. |
| LOAD PER PHASE (AMPS) | A= | 7.90 | A= | 9.64 | 3. |
| | B= | 6.00 | B= | 7.74 | 4. |
| TOTAL LOAD (KVA) | | 1.67 | | 2.08 | 5. |
| SPARE CAPACITY | 22.00% | | 0.42 | DATE 20-Nov-08 | |

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| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | REVISIONS | |

VERIFY SCALE

DSN. MKO
DWN. CJD
CKD. CWS
DATE NOV '08

RAW ENGINEERING, INC. 1026 S.W. Yamhill Street, Suite 100, Portland, Oregon 97205 Phone: (503) 445-2222 Fax: (503) 445-2299

WESTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS 3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302 Phone: (503) 585-2474 Fax: (503) 585-2686

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

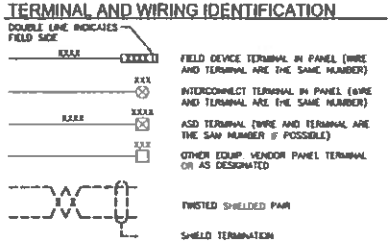
# WELL 5, ELECTRICAL ONE-LINE DIAGRAMS AND SCHEDULES

DRAWING NO. E203

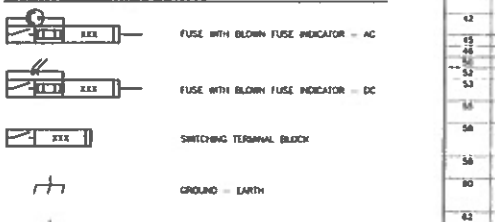
SHEET 31 OF 38

JOB NUMBER 1897.4041.0

## TERMINAL AND WIRING IDENTIFICATION




## DRAWING SYMBOLS




## KEYED NOTES

(1) MANUFACTURER'S AND PART NUMBERS LISTED ARE CITY OF DAYTON STANDARD. NO SUBSTITUTES.

(2) QUANTITIES INCLUDE SPARE PARTS AND ITEMS NOT SHOWN ON THE DRAWINGS.

## INSTRUMENT LIST

| ITEM NO. | (2) QTY | TAG NO | (1) MFR. PART NO | DESCRIPTION | SPECIFICATION SECTION | (1) MANUFACTURER | VENDOR | P.O. NO. |
|---|---|---|---|---|---|---|---|---|
| 10 | 1 | CONT1 | U-U1M830 | PANELBOARD, TYPE 4X ENCLOSURE, 30"W x 24"H x 12"D | 16903 | HOFFMAN | | |
| 11A | 1 | | A-30P24 | BACK PAN FOR ITEM #10 | 16903 | HOFFMAN | | |
| 22 | 1 | | AS-H01A-200C | COMPACT SERIES, PRIMARY RACK FOR 2-SLOT CPU'S | 16903 | MODICON/SCHNEIDER ELEC. | | |
| | | | | AND 3 I/O SLOTS WITH CONFORMAL COATING | 16903 | | | |
| 23 | 1 | | AS-H01A-202C | COMPACT SERIES, SUB-RACK FOR 2 I/O SLOTS WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 25 | 1 | | PC-E984-375C | COMPACT SERIES, CPU, CONFORMAL COATING, 1M FLASH, 512KRAM, 2 MODBUS PORTS, 1 MODBUS+ PORT, PCMCIA & 1M KRAM, 32K DATA, INTEGRATED P/S, 24VDC, 1 AMP | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 28 | 2 | | AS-B0EP-[illegible] | COMPACT SERIES, DISCRETE INPUT MODULE, 8-POINT ISOLATED | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 29 | 1 | | AS-B0AP-258C | COMPACT SERIES, DISCRETE OUTPUT MODULE, RELAY TYPE, 8-POINT, 2 AMP PER POINT, WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 30 | 1 | | AS-B4DU-256C | COMPACT SERIES, ANALOG INPUT MODULE, +/- 10V, +/- 20mA, 4 CHANNEL, ISOLATED, WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 31 | 1 | | AS-B0XU-253C | COMPACT SERIES, ANALOG OUTPUT MODULE, +/- 10V, +/- 20mA, 2 CHANNEL, ISOLATED, WITH CONFORMAL COATING | 16903 | MODICON/SCHNEIDER ELEC. | | |
| 36 | 1 | | PW3113-420 | UNINTERRUPTIBLE POWER SUPPLY, 420VA/252W POWER RATING, 120VAC, (2) 5-15R OUTPUT CONNECTIONS, DIMENSIONS: 6.1"H x 3.4"W x 12.6"D | 16903 | POWERWARE | | |
| 40 | 1 | | 47108A | RADIO TRANSCEIVER, 330-512 MHz, 0.1 TO 5W RF OUTPUT, 12VDC | 16903 | MDS | | |
| 41 | 15 | | LS-B5GLN-C1 | BROADBAND DC BLOCKED PROTECTOR, SURFACE OR BULKHEAD MOUNT, FIELD RANGE 50-700MHz, N FEMALE CONNECTOR ON SURGE AND PROTECTED SIDE | 16903 | POLYPHASER | | |
| 42 | 1 | | CAT-440 | TWO ANTENNA, 10dBi GAIN, 406-512 MHz, HORIZONTAL OR VERTICAL POLARIZATION | 16903 | RAYMER/SCALA | | |
| 45 | 1 | | | ANTENNA CABLE FROM TRANSCEIVER TO ARRESTER | 16903 | | | |
| 46 | 1 | | LMR-300 | ANTENNA CABLE, 1/2" DIAMETER, FOAM DIALECTRIC, 50 OHM, 40 FEET | 16903 | TIMES MICROWAVE | | |
| 47 | 1 | | [illegible]SMAC | CONNECTOR: N-MALE CLAMP FOR LMR-300 | 16903 | TIMES MICROWAVE | | |
| 52 | 1 | | IC+ 115 | ELATROL PLUS SURGE SUPPRESSOR, 15A, 120VAC | 16903 | CONTROL CONCEPTS | | |
| 53 | 1 | CB2 | 1492-SPULC150 | CIRCUIT BREAKER, SINGLE POLE DIN RAIL MOUNT, 15A | 16903 | ALLEN-BRADLEY | | |
| 54 | 4 | CB1, UPS-CB1, UPS-CB2, UPS-CB3 | 1492-SPULC050 | CIRCUIT BREAKER, SINGLE POLE DIN RAIL MOUNT, 5A | 16903 | ALLEN-BRADLEY | | |
| 58 | 1 | DR-05-08-1 | 700-HBL3A1-1-4 | 120VAC, GENERAL PURPOSE RELAY, BLADE STYLE, 3 FORM C CONTACTS, 10A RATING, WITH MANUAL OPERATOR AND INDICATOR LIGHT | 16903 | ALLEN-BRADLEY | | |
| 59 | 1 | | 700-HN154 | SCREW TERMINAL BASE SOCKET FOR 700-HB RELAY (ABOVE), SEE 700-HN127 | 16903 | ALLEN-BRADLEY | | |
| 80 | 1 | PS-1 | PS5R-C12 | 12VDC POWER SUPPLY, 30W, 2.5A, UNIVERSAL AC INPUT (85 TO 264VAC), AUTO RESETTING OUTPUT OVERCURRENT PROTECTION, DIN RAIL MOUNT, ADJUSTABLE OUTPUT VOLTAGE +/- 10% | 16903 | IDEC | | |
| 82 | 1 | PS-2 | PS5R-E24 | 24VDC POWER SUPPLY, 120W, 4.2A, UNIVERSAL AC INPUT (85 TO 264VAC), AUTO RESETTING OUTPUT OVERCURRENT PROTECTION, DIN RAIL MOUNT, ADJUSTABLE OUTPUT VOLTAGE +/- 10% | 16903 | IDEC | | |
| 83 | 15 | | [illegible]TD81 | INCANDESCENT LIGHTING PACKAGE, DOOR SWITCH WITH TERMINAL BLOCK, 120VAC, REMOVABLE WIRE GUARD, 60W BULB | 16903 | HOFFMAN | | |
| 86 | 2 | | 5015-I | SINGLE OUTLET RECEPTACLE, 15A, 125V | 16903 | LEVITON | | |
| 87 | 2 | | BXC56 | BELL BOX, 4x9 (1 GANG) | 16903 | HUBBELL | | |
| 88 | 2 | | DR1815 | DUPLEX RECEPTACLE, BOX AND WALL PLATE ASSEMBLY, 15A, DIN RAIL MOUNTING | 16903 | HUBBELL | | |
| 89 | | | 1492-B4 | TERMINAL BLOCK, GENERAL PURPOSE, 30A @ 600VAC RATED, GRAY | 16903 | ALLEN-BRADLEY | | |
| 70 | | | 1492-BG4 | TERMINAL BLOCK, GROUNDING, GREEN/YELLOW | 16903 | ALLEN-BRADLEY | | |
| 71 | | | 1492-SM3D3 | TERMINAL BLOCK, KNIFE TYPE DISCONNECT, 15A RATING | 16903 | ALLEN-BRADLEY | | |
| 72 | | | 1492-EB3 | TERMINAL END BARRIER, GRAY | 16903 | ALLEN-BRADLEY | | |
| 73 | | | 1492-EB3Y | TERMINAL END BARRIER, YELLOW | 16903 | ALLEN-BRADLEY | | |
| 74 | | | 1492-EA35 | TERMINAL END ANCHOR, GRAY | 16903 | ALLEN-BRADLEY | | |
| 75 | | | 1492-GM35 | TERMINAL GROUP MARKER, GRAY, WRITING AREA 1 - 1/2" x 3/8" | 16903 | ALLEN-BRADLEY | | |
| 76 | | | 1492-H6 | FUSIBLE TERMINAL BLOCK WITH LED BLOWN FUSE INDICATOR, 12A, 300V, 10-57VDC | 16903 | ALLEN-BRADLEY | | |
| 77 | 1 | | 1492-H4 | FUSIBLE TERMINAL BLOCK WITH NEON BLOWN FUSE INDICATOR, 12A, 300V, 100-300VAC | 16903 | ALLEN-BRADLEY | | |
| 78 | TBD | | ACC-5A | FUSE, 5A, FAST ACTING | 16903 | BUSSMAN | | |
| 79 | TBD | | ACC-3A | FUSE, 3A, FAST ACTING | 16903 | BUSSMAN | | |
| 81 | TBD | | ACC-1/2A | FUSE, 1/2A, FAST ACTING | 16903 | BUSSMAN | | |
| 85 | 1 | 05FE08 | 01044-SBA-MSJ-GM | 8" MAGNETIC FLOWTUBE, ANSI CLASS 150, CARBON STEEL FLANGE, ANSI TYPE 304SS TUBE WITH NEOPRENE LINING, 316SS ELECTRODES, REMOTE MOUNTED TRANSMITTER, CALIBRATE @ 0-100 CFM | 11807 | FOXBORO | | |
| 88 | 1 | 05FT08 | IMT25-SDMB10M | I/A SERIES INTELLIGENT MAGNETIC FLOW TRANSMITTER, 4-20mA OUTPUT, [illegible] | 11807 | FOXBORO | | |
| 94 | 1 | 05LT02 | 730-148-0100/615/840 | SUBMERSIBLE PRESSURE TRANSDUCER, 316SS, 0-100 PSI, 4-20mADC, CLOSED-FACE HOSECAP, 24VDC LOOP POWERED WITH 150 FEET OF CABLE AND DESICANT TUBE | 16903 | RPSI | | |
| 128 | 1 | | CB10 | CIRCUIT BREAKER, 10A | 16903 | SQUARE D | | |

**RECORD DRAWING**

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| NO. | DATE | DESCRIPTION |
|---|---|---|
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DRN: LRD
CKD: GATS
DATE: NOV '06

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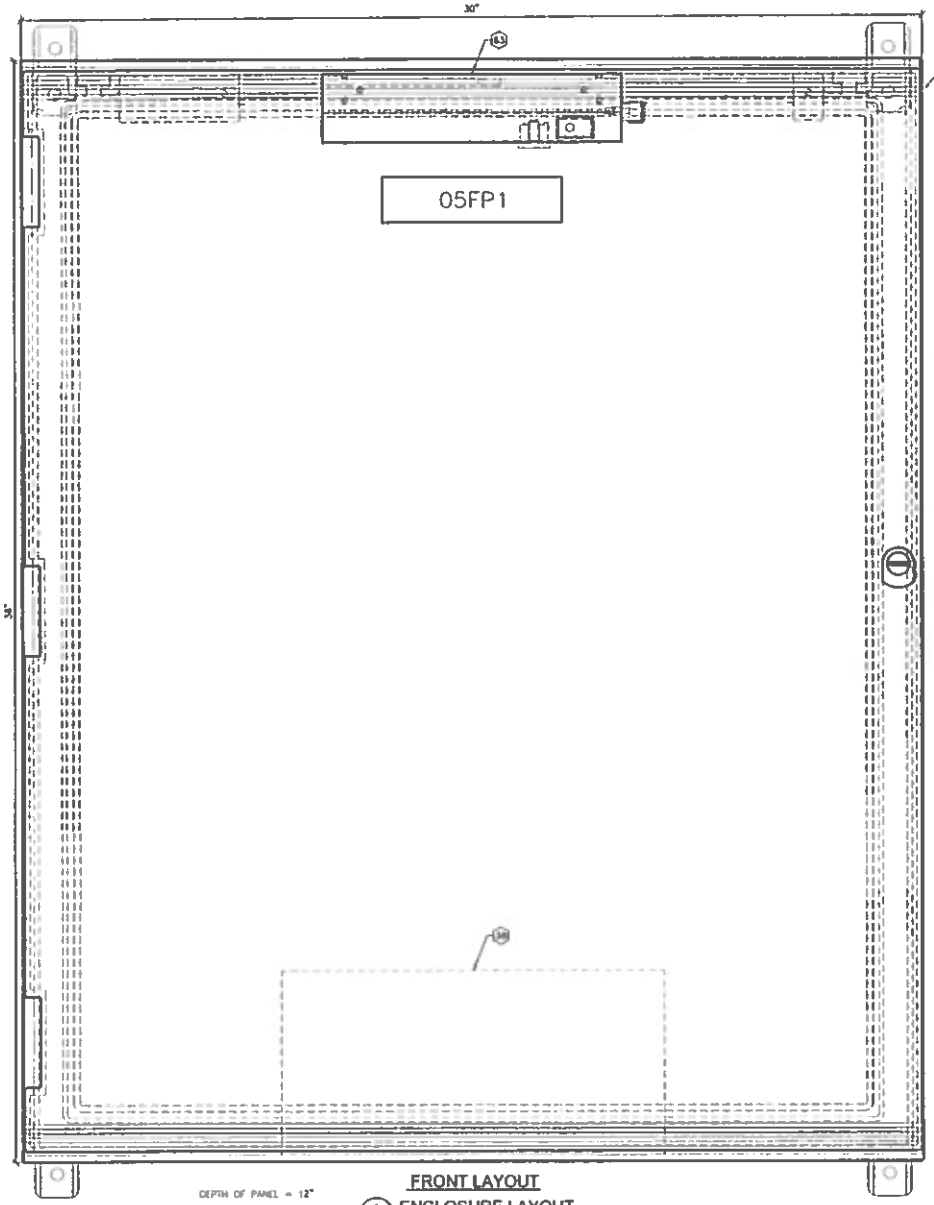
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

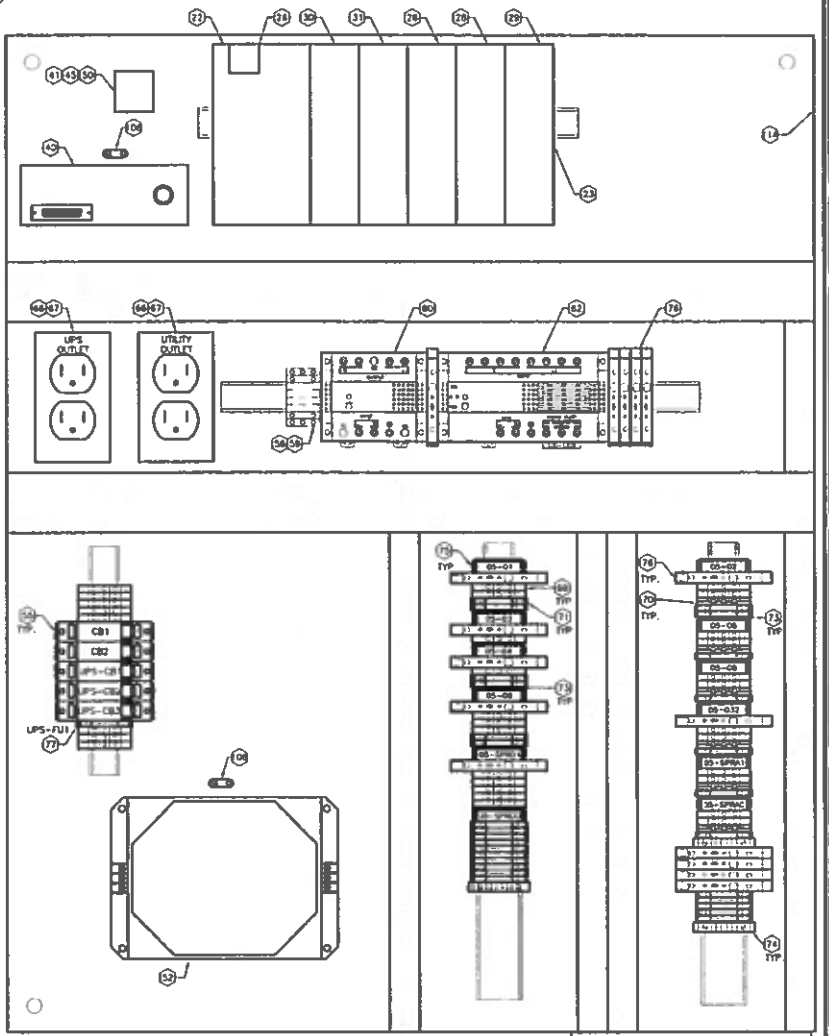
INSTRUMENT & CONTROL LEGEND AND SCHEDULES

DRAWING NO. 1200
SHEET 32 OF 38
JOB NUMBER 1897.4041.0




FRONT LAYOUT

1 / 1201 ENCLOSURE LAYOUT
NOT TO SCALE




BACKPANEL LAYOUT

(##) - INSTRUMENT LIST ITEM NUMBER

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CIVIL ● INDUSTRIAL ● MECHANICAL

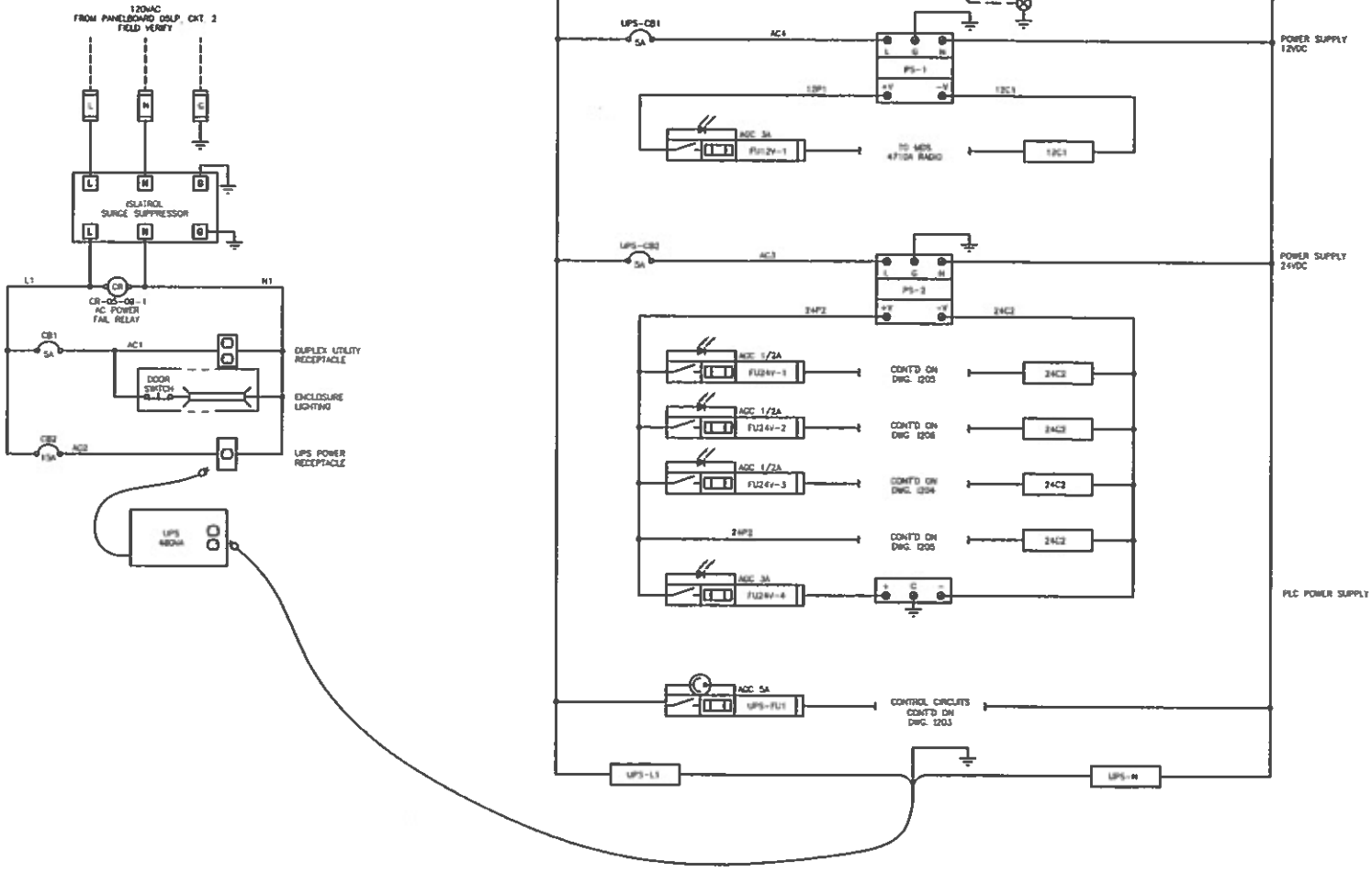
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

INSTRUMENT AND CONTROL
PANEL 05FP1
LAYOUT

DRAWING NO.
1201

SHEET
33 OF 38

JOB NUMBER
1897.4041.0

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CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development

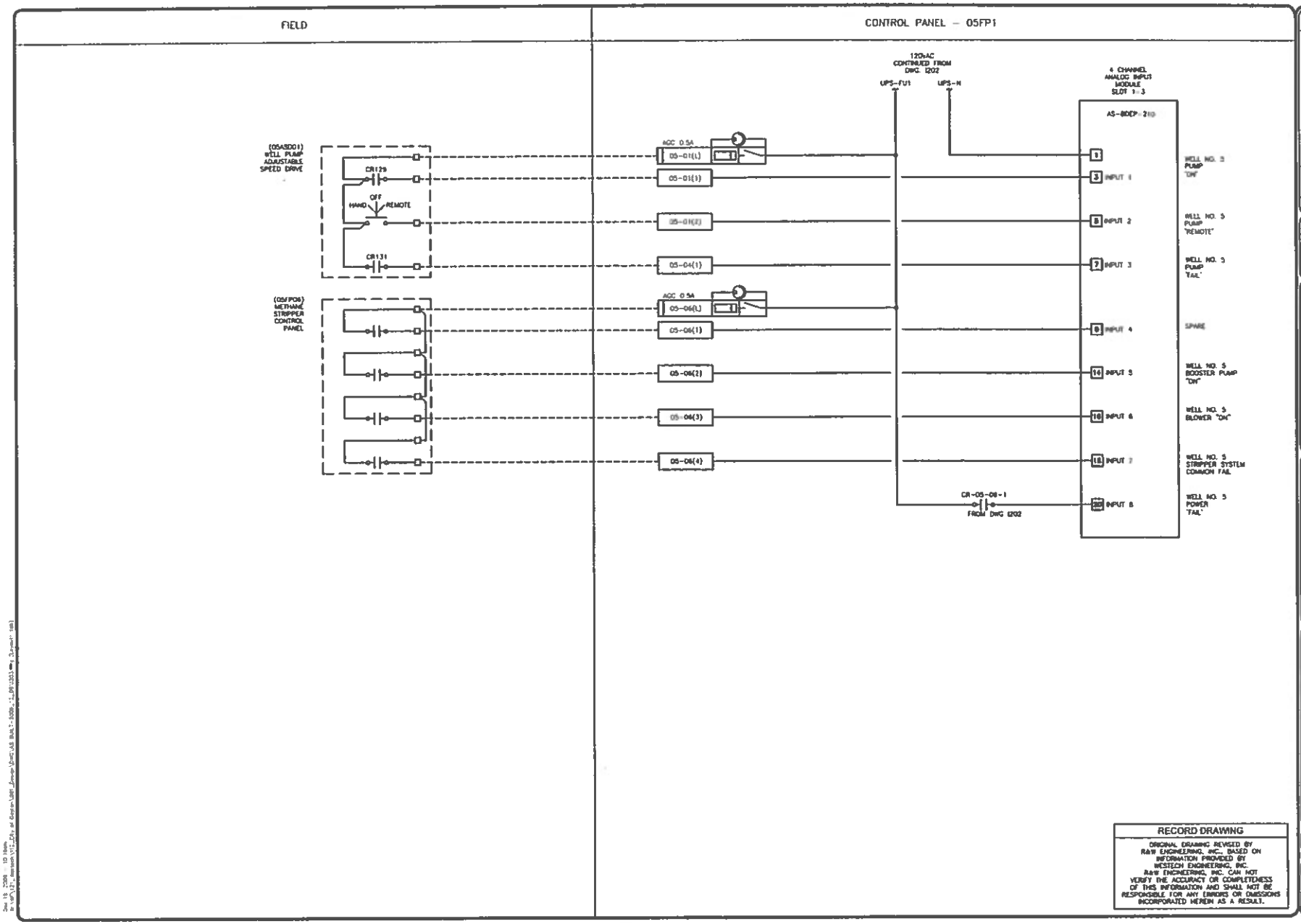
# INSTRUMENT AND CONTROL PANEL 05FP1 POWER DISTRIBUTION

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

DRAWING NO. 1202

SHEET 34 OF 38

JOB NUMBER 1897.4041.0

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CITY OF LAFAYETTE, OREGON

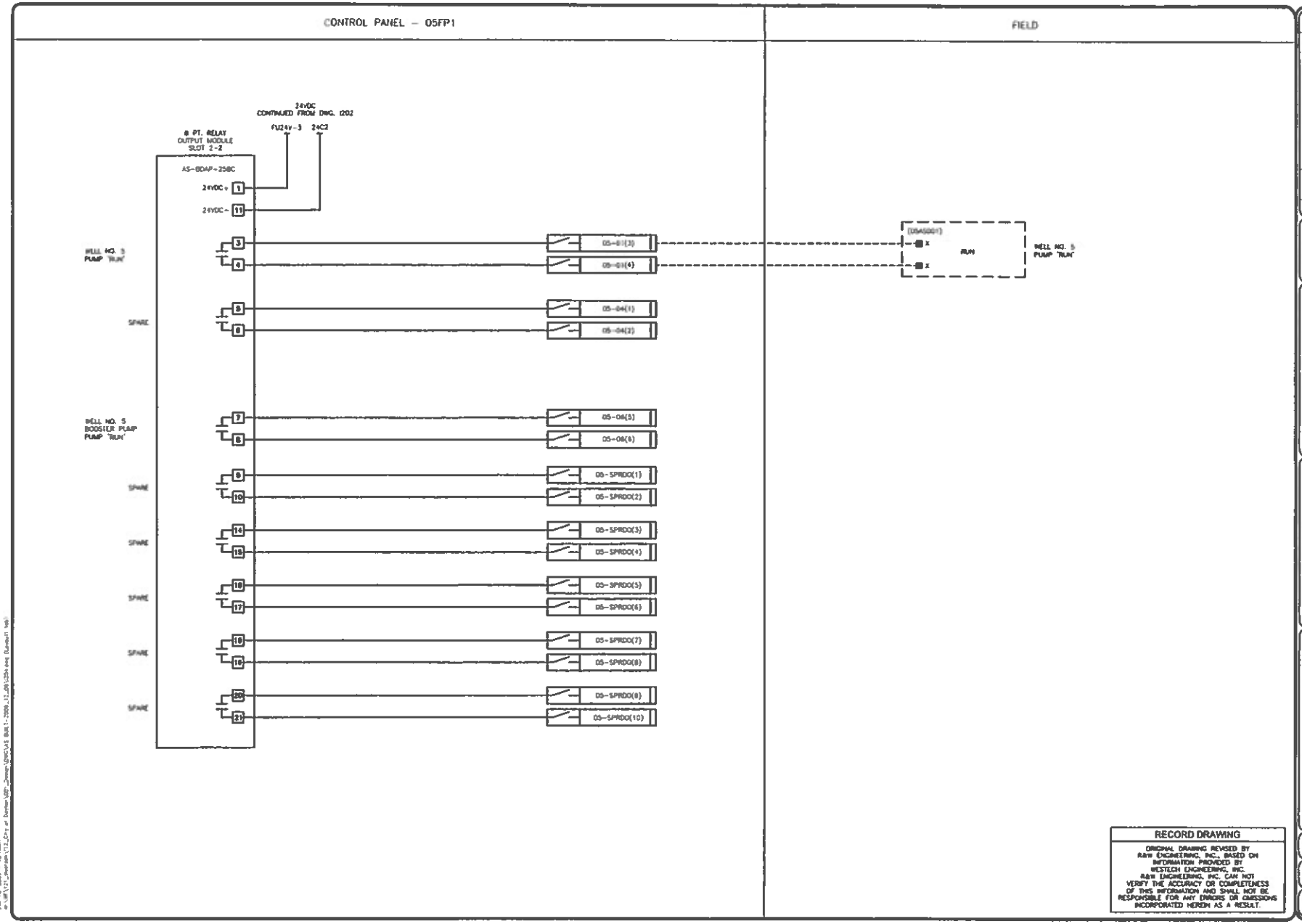
Dayton Wellfield, Well 2 & Well 5 Development

INSTRUMENT AND CONTROL PANEL 05FP1 DISCRETE INPUTS

DRAWING NO. 1203

SHEET 35 OF 38

JOB NUMBER 1897.4041.0

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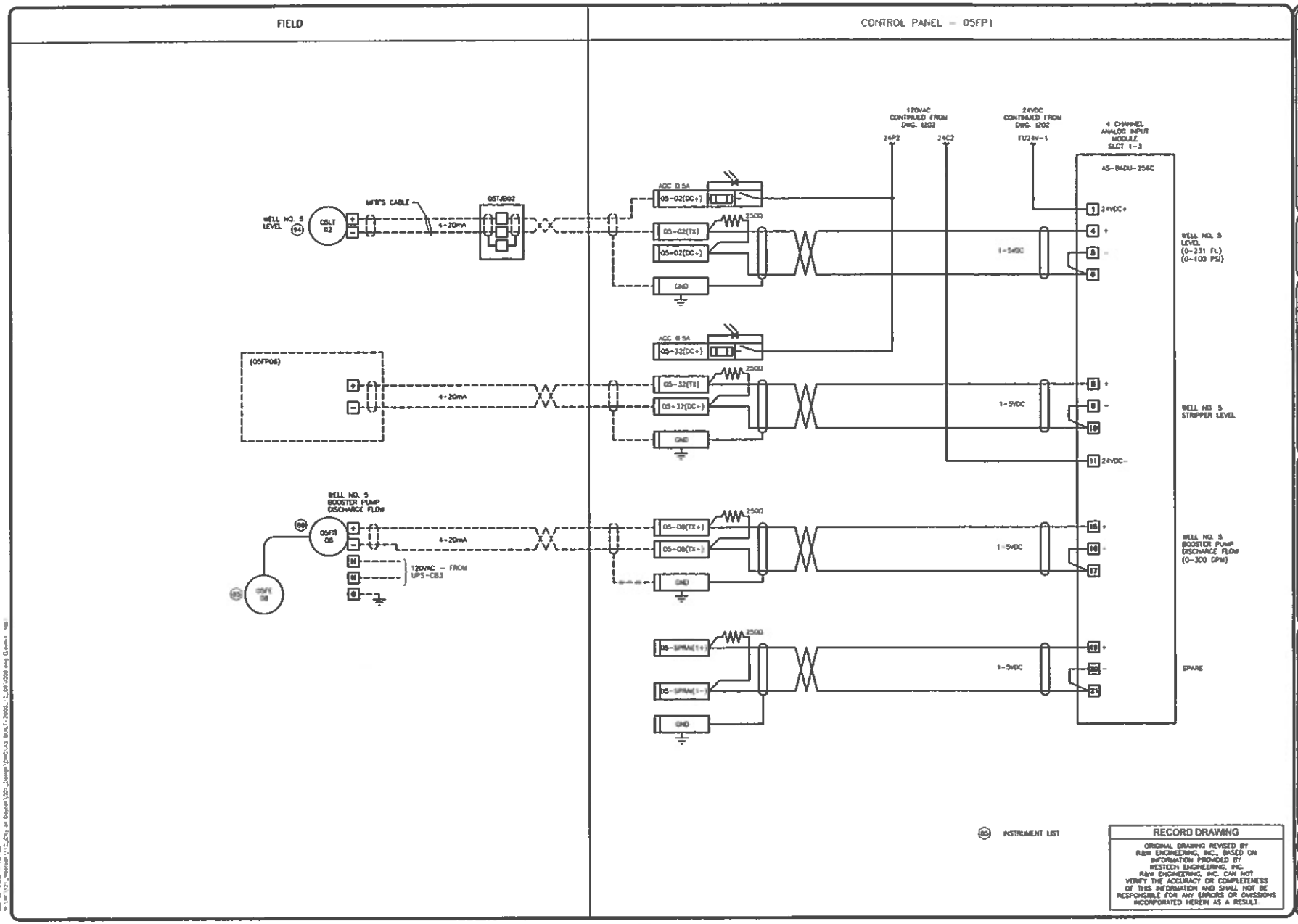
CITY OF LAFAYETTE, OREGON
Dayton Westfield, Well 2 & Well 5 Development

INSTRUMENT AND CONTROL
PANEL 05FP1
DISCRETE OUTPUTS

DRAWING NO. 1204

SHEET 36 OF 38

JOB NUMBER 1897.4041.0


FIELD
CONTROL PANEL – 05FP1
WELL NO. 5 LEVEL
05LT 02
MFR'S CABLE
4-20mA
05TJB02
ACC. 0.5A
05-02(DC+)
05-02(TX)
05-02(DC-)
GND
250Ω
120VAC CONTINUED FROM DWG. 1202
24VDC CONTINUED FROM DWG. 1202
24P2
24C2
FU24V-1
4 CHANNEL ANALOG INPUT MODULE SLOT 1-3
AS-BADU-256C
24VDC+
1-5VDC
WELL NO. 5 LEVEL (0-231 FL) (0-100 PSI)
(05FP06)
05-32(DC+)
05-32(TX)
05-32(DC-)
24VDC-
WELL NO. 5 STRIPPER LEVEL
WELL NO. 5 BOOSTER PUMP DISCHARGE FLOW
05FT 08
120VAC – FROM UPS-CB3
05-08(TX+)
05-08(TX-)
WELL NO. 5 BOOSTER PUMP DISCHARGE FLOW (0-300 GPM)
SPARE
INSTRUMENT LIST
RECORD DRAWING
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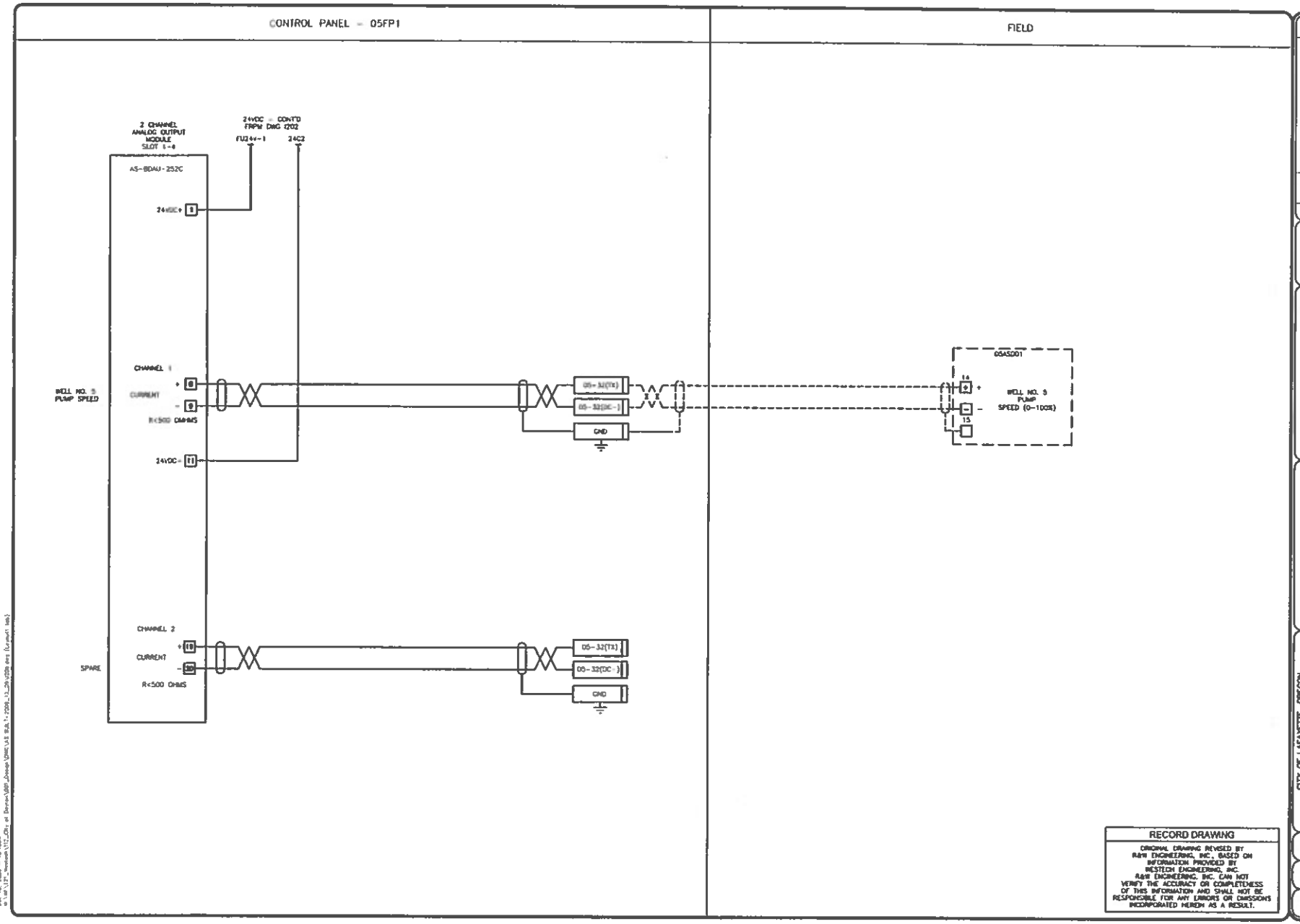
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 2 & Well 5 Development
INSTRUMENT AND CONTROL PANEL 05FP1 ANALOG INPUTS
DRAWING NO. 1205
SHEET 37 OF 38
JOB NUMBER 1897.4041.0

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CITY OF LAFAYETTE, OREGON

Dayton Wellfield, Well 2 & Well 5 Development

INSTRUMENT AND CONTROL PANEL 05FP1 ANALOG OUTPUTS

DRAWING NO. 1206

SHEET 38 OF 38

JOB NUMBER 1897.4041.0

WESTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS

R&W ENGINEERING, INC.

DESIGN LMD
DRN CAS
CHK
DATE NOV 08

NO. DATE DESCRIPTION
BY

# DRAWINGS FOR:
# DAYTON WELLFIELD WELL DEVELOPMENT
## Well 1 VFD Improvements

(9705 SE Airport Road)

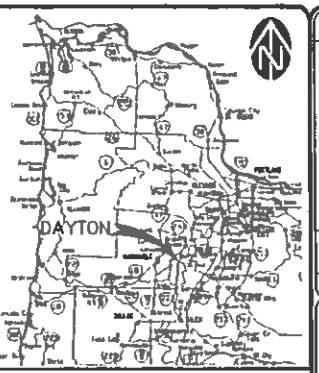
FOR: The City of Dayton
P.O. Box 339
416 Ferry Street
Dayton, Oregon 97114
503-864-2221

WELL 1 IS OWNED & OPERATED BY THE CITY OF DAYTON.

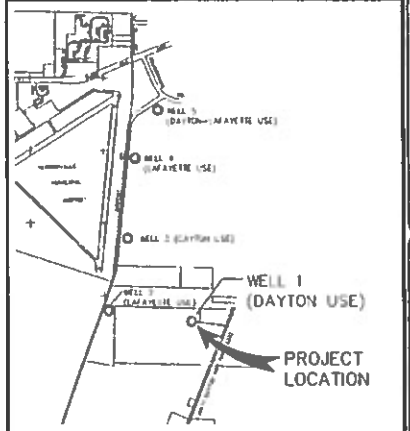
SHEET INDEX

| Sheet | Dwg. | Title |
|---|---|---|
| **GENERAL** | | |
| 1 | G001 | Cover Sheet, Vicinity & Location Maps, and Sheet Index |
| 2 | G002 | Well No. 1, Generalized Equipment & Process Schematic |
| 3 | G003 | Design Criteria & Sequence of Operations |
| 4 | G004 | Construction Notes & Legend |
| 5 | G005 | Erosion Control Notes & Details |
| **COMMON CIVIL DETAILS** | | |
| 6 | C001 | Civil Details |
| **CIVIL SITEWORK** | | |
| 7 | C101 | Well No. 1, Existing Conditions, Erosion Control & Demolition Plans |
| 8 | C102 | Well No. 1, Site Piping Plan |
| **MECHANICAL** | | |
| 9 | M101 | Well No. 1, Existing Mechanical Piping Plan & Sections |
| 10 | M102 | Well No. 1, Proposed Mechanical Piping Plan & Sections |
| **ELECTRICAL** | | |
| 11 | E101 | Electrical Site Plan & Legend |
| 12 | E102 | Control Building Electrical Plan |
| 13 | E103 | One-Line Diagrams & Schedules |
| 14 | E104 | Motor Control Schematic |
| **INSTRUMENTATION & CONTROL** | | |
| 15 | I100 | Instrument & Control, Legend and Schedules |
| 16 | I101 | 120VAC Power Distribution |
| 17 | I102 | Discrete Input Wiring Diagram |
| 18 | I103 | Discrete Input Wiring Diagram |
| 19 | I104 | Discrete Output Wiring Diagram |
| 20 | I105 | Analog Input Wiring Diagram |
| 21 | I106 | Analog Output Wiring Diagram |

PRELIMINARY




VICINITY MAP




PROJECT LOCATION MAP

BENCHMARK INFORMATION
ELEVATIONS ARE BASED ON
DOWELL'S WATER SYSTEM IMPROVEMENT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | BY |

DSN: DAM
DRN: DAM
CHK: DAM
DATE: SEP 2019

REVIEW

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 1 VFD Improvements

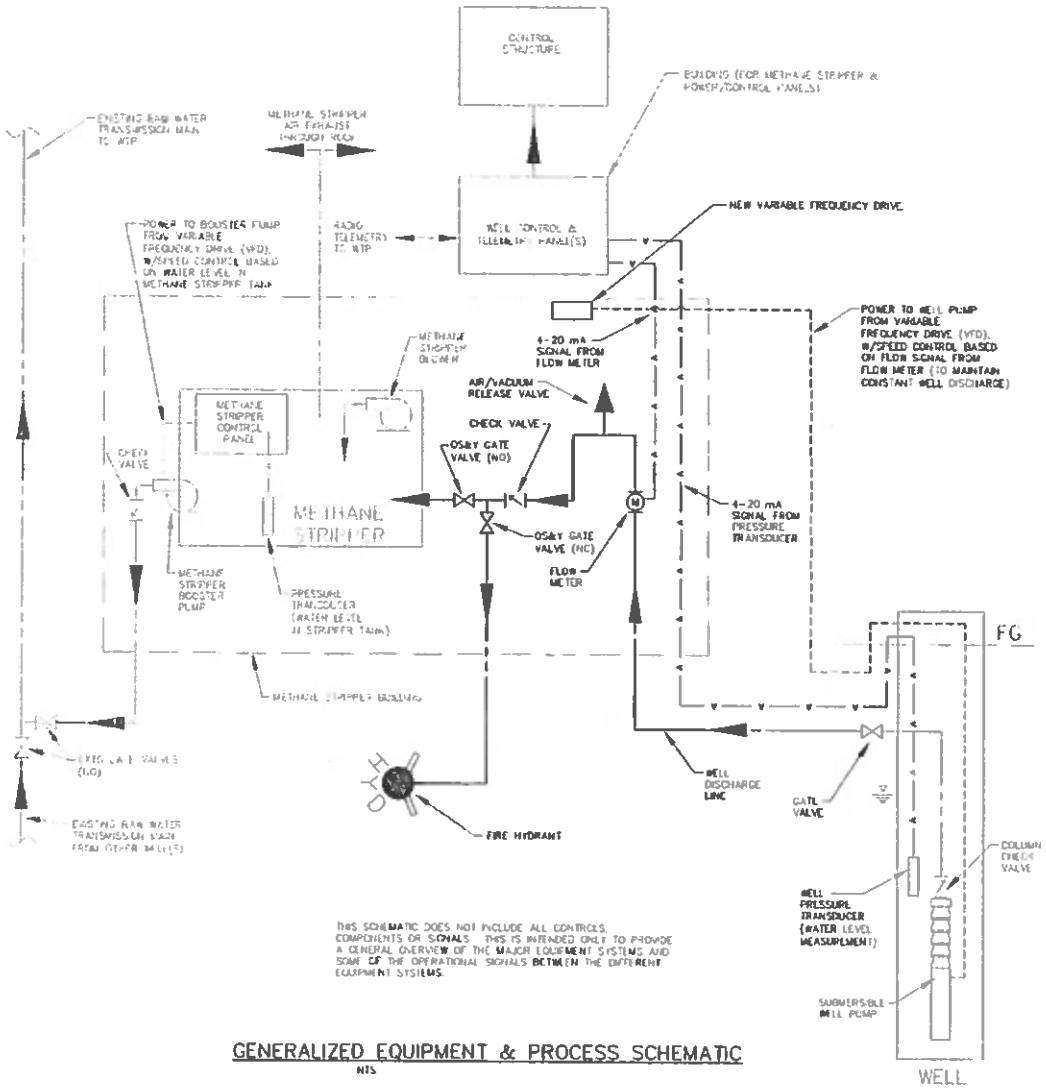
COVER SHEET
VICINITY & LOCATION MAPS, and SHEET INDEX

DRAWING NO. G001
SHEET 1 OF
JOB NUMBER 2609.4066.0



well 1 VFD impr prelim (not constr), 2019

17




THIS SCHEMATIC DOES NOT INCLUDE ALL CONTROLS, COMPONENTS OR SIGNALS. THIS IS INTENDED ONLY TO PROVIDE A GENERAL OVERVIEW OF THE MAJOR EQUIPMENT SYSTEMS AND SOME OF THE OPERATIONAL SIGNALS BETWEEN THE DIFFERENT EQUIPMENT SYSTEMS.

## GENERALIZED EQUIPMENT & PROCESS SCHEMATIC

NTS

### GENERAL SEQUENCE OF OPERATIONS Well 3

1. The following sequence of operations does not include all steps and is intended only to outline a general framework of construction that meets the project sequencing requirements and maintains sewer service during the course of the work. In addition to the issues outlined herein, the Contractor shall conform to all City, County, and State conditions and directives concerning the work wherein each has jurisdiction. The Contractor can propose alternate construction sequencing, but such alternate sequencing must address the issues noted below.

2. The work will likely be completed in phases. Some of the work under these phases may simultaneously. The phases are:
   a. Phase I - Coordination and Equipment Procurement
   b. Phase II - VFD, Site & Mechanical Piping, & Control Panel
   c. Phase III - New Well System Performance Testing & Startup
   d. Phase IV - Place Well in Operation, Final Sitework

3. Phase I - Coordination, Submittals, Equipment Procurement, Site Preparation
   a. Submit schedule, equipment and material submittals, shop drawings and sequence of operations (if different than contained herein) to City and Engineer for review and approval.
   b. Coordinate procurement of materials and equipment.
   c. Notify utilities and coordinate activities as required.
   d. Obtain needed building and construction permits.
   e. Install erosion control measures.
   f. Pothole existing utilities, existing waterline at connection point, etc. Notify Engineer of any conflicts or discrepancies.

4. Phase II - VFD, Site & Mechanical Piping, & Control Panel
   a. Construct new site waterlines.
   b. Install process piping in extg. building.
   c. Install variable frequency drive (VFD) and well control panel.
   d. Submit draft equipment O&M manuals.

5. Phase III - New Well System Performance Testing & Startup
   a. Startup up and test booster pump, control panels, and other system components prior to placing system in operation. Contractor shall provide all equipment required for testing.
   b. Submit final O&M manuals. Final O&M manuals must be submitted and approved by the City prior to placing the new well in operation.

6. Phase IV - Place Well in Operation, Final Sitework
   a. Place well system in operation, provide final operator training.
   b. Complete remaining site surface restoration.
   c. Clean up and demobilize from the site.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | | REVISIONS |

DSN. DM
DRN. RM
CKD. DM
DATE SEP 2009

REVIEW

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 1 VFD Improvements
WELL 1
GENERALIZED EQUIPMENT & PROCESS SCHEMATIC

DRAWING NO. G002
SHEET 2 OF
JOB NUMBER 2609.4066.0

GENERAL DESIGN CRITERIA (Well No. 4)

1. Well
   - Date drilled: 06/2002
   - Well Log #: Yamh 55101
   - Ground elevation @ casing after drilling: 156.7 ft
   - Well depth: 276 ft bgs (elev -119.3')
   - Well diameter
   - 14" borehole
   - 10" casing grouted to 103' bgs
   - Filter pack below 105' bgs
   - Screen: 0.065" slot, 10" ID
   - Screen intervals: See As-builts
   - 130-170' bgs
   - 216-217' bgs
   - 258-264' bgs
   - Static Water Level 37' bgs (11/02)

2. Design Discharge Conditions
   - Summer (assumes 90 day continuous pumping)
   - Pump rate: 100 gpm
   - Drawdown: 50 ft
   - Max. pump lift: ±185 ft (ie. pump shutoff level bgs)
   - Winter (assumes 90 day continuous pumping)
   - Pump rate: 260 gpm
   - Drawdown: 81 ft
   - Max. pump lift: ±270 ft (ie. pump shutoff level)

3. Well Pump
   - Type: Grundfos 300S15B (4 stage)
   - Pump design point: 300 gpm @145' TDH
   - Pump diameter: 6"
   - Pump motor fully shrouded for cooling
   - Motor size: 15 hp (new 2008), __V, 3 ϕ
   - Motor speed: 3450 rpm full speed
   - Pump setting: ±373 ft bgs (intake)
   - Column pipe: 5" dia.
   - Column check valves: top of pump & ±100' above pump
   - Well Discharge: Pitless adapter w/3' bury

4. Well Pump Operational & Hydraulic Control
   - On/Off telemetry signal from WTP: local manual over-ride
   - Well Pump Speed Control: Variable Frequency Drive (VFD)
   - Magnetic flow meter on well discharge, 4-20 mA signal for VFD control
   - Pressure transducer in well for low level pump protection
   - Isolation valves to allow well to be pumped to waste

5. Methane Stripper
   - Multistage aeration stripper w/booster pump & controls (Lowrey DB63P)
   - Design flow rate: 240 gpm
   - Blower: Spencer VB-075, 10 hp regenerative blower
   - Design air flow rate: 392 scfm
   - Design methane removal: 97.3%
   - Booster pump: vertical multi-stage, 10 hp
   - Booster pump control: VFD based on level in stripper tank

6. Flow monitoring
   - Flow meter outside well building (direct reading and totalizer)

7. Standby Power System
   - None, manual transfer switch

8. Telemetry
   - Radio to WTP

PRELIMINARY

Placeholder only

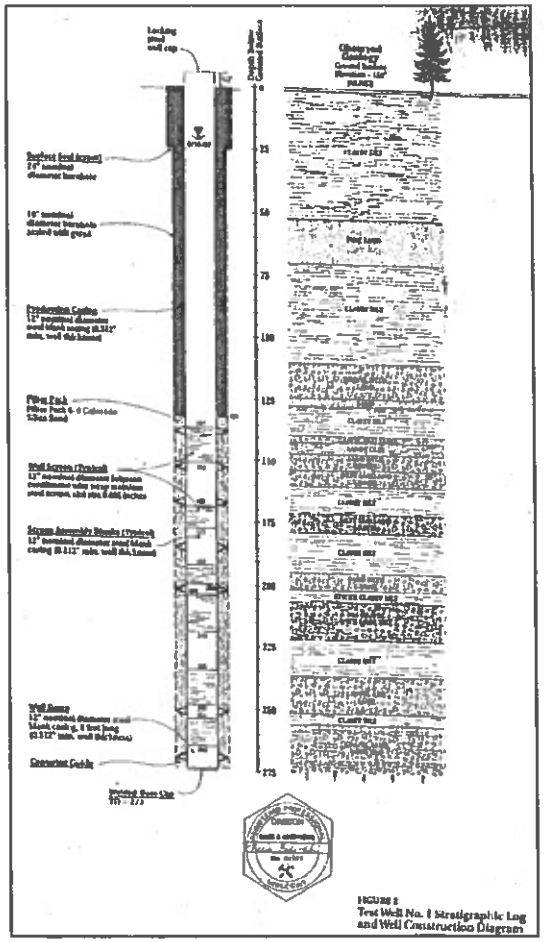
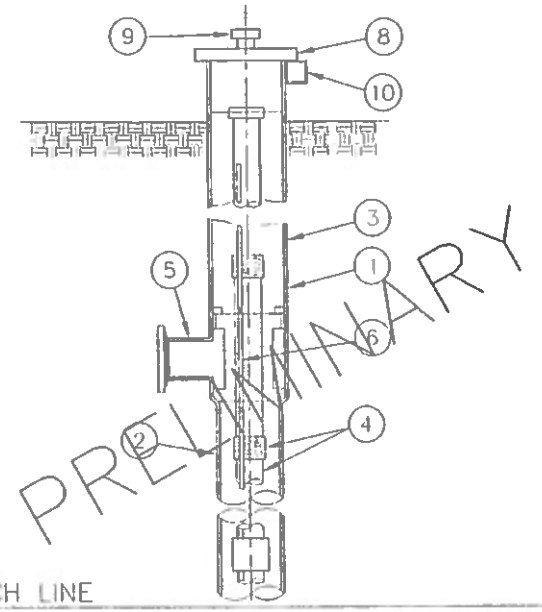


FIGURE 5
Test Well No. 1 Stratigraphic Log and Well Construction Diagram



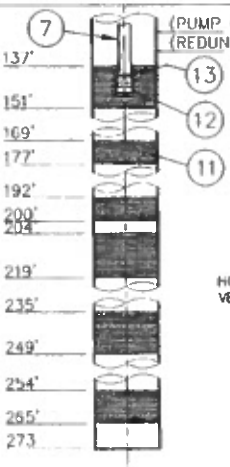

PRELIMINARY

MATCH LINE

MATCH LINE

VERT SCALE: 1" = 1'-0"

VERT SCALE: 1" = 20'




HORIZ. SCALE: 1" = 1'-0"
VERT SCALE AS SHOWN

WELL NO. 1
WELL SECTION (EXTG)

KEY CALLOUTS - WELLHEAD/CASING/PUMP

1. PITLESS WELL ADAPTER UNIT
2. LOWER BARREL, 10" DIA. STEEL
3. UPPER BARREL, 10" DIA. STEEL
4. STEEL COLUMN PIPE.
5. 6" FLANGED DISCHARGE CONNECTION
6. 1" (MIN) DROP TUBE CONNECTOR (EXTENDS THROUGH SEAL SECTION OF PITLESS ADAPTER).
7. 1" THREADED & PERFORATED PVC DROP TUBE FOR LEVEL TRANSDUCER.
8. WATERTIGHT WELL CAP W/NEOPRENE GASKET
9. 2" WELL SCREEN WITH STAINLESS STEEL SCREEN
10. JUNCTION BOX (FOR WELL POWER CABLE & TRANSDUCER WIRE).
11. WELL SCREEN INTERVAL
12. SUBMERSIBLE WELL PUMP & MOTOR.
13. PUMP COLUMN CHECK VALVE MOUNTED ABOVE PUMP

REVIEW

WESTECH ENGINEERING, INC.
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 1 VFD Improvements

WELL NO. 1
DESIGN CRITERIA & SEQUENCE OF OPERATIONS

DRAWING NO. G003
SHEET 3 OF ___
JOB NUMBER 2609.4066.0

GENERAL NOTES:

1. Contractor shall procure and conform to all construction permits required by the City of Dayton and Yamhill County.

2. Contractor shall provide all bonds and insurance required by public and/or private agencies having jurisdiction.

3. All materials and workmanship for facilities in street right of way or easements shall conform to approving agencies' construction specifications wherein each has jurisdiction, including but not limited to the City, County, Oregon Health Division (OHD) and the Oregon Department of Environmental Quality (DEQ).

4. Unless otherwise approved by the Public Works Director, construction of all public facilities shall be done between 7:00 a.m. and 6:00 p.m., Monday through Friday, and between 8:00 a.m. and 6:00 p.m. Saturday.

5. The Contractor shall perform all work necessary to complete the project in accordance with the approved construction drawings including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.

6. Contractor to notify City, County, ODOT and all utility companies a minimum of 48 business hours (2 business days) prior to start of construction, and comply with all other requirements of ORS 757.541 to 757.571.

7. Any inspection by the City, County or other agencies shall not, in any way, relieve the Contractor from any obligation to perform the work in strict compliance with the applicable codes and agency requirements.

8. Contractor shall erect and maintain barricades, warning signs, traffic cones per City, County and ODOT requirements in accordance with the MUTCD (including Oregon amendments). Access to driveways shall be maintained at all times. All traffic control measures shall be approved and in place prior to any construction activity.

9. Record Drawings. The Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record any approved deviations in construction from the approved drawings, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the City upon request.

10. Upon completion of construction of public facilities, Contractor shall submit a clean set of field record drawings containing all as-built information to the Design Engineer for use in the preparation of As-Built drawings for submittal to the City.

11. Address Numbers. Per OFC 505.1, all new and existing buildings shall have approved address numbers (4" minimum number height) placed in a position that is plainly legible and visible from the fronting street. Temporary address signs shall be mounted in a visible location prior to and during any construction, and the permanent numbers mounted prior to occupancy.

EXISTING UTILITIES & FACILITIES:

12. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

13. The location and descriptions of existing utilities shown on the drawings are compiled from available records and/or field surveys. The engineer or utility companies do not guarantee the accuracy or the completeness of such records. Contractor shall field verify sizes and locations of all existing utilities prior to construction.

14. The Contractor shall locate and mark all existing property and street monuments prior to construction. Any monuments disturbed during construction of the project shall be replaced by a Registered Land Surveyor at the Contractor's expense. The monuments shall be replaced within a maximum of 90 days, and the County Surveyor shall be notified in writing as required by ORS 209.150.

15. Contractor shall field verify location and depth of all existing utilities where new facilities cross. All utility crossings marked or shown on the drawings shall be potholed using hand tools or other non-invasive methods prior to excavating or boring. Contractor shall be responsible for exposing potential utility conflicts far enough ahead of construction to make necessary grade modifications without delaying the work. If grade modification is necessary, Contractor shall notify the Design Engineer, and the Design Engineer shall obtain approval from the City Engineer prior to construction. All utility crossings shall be potholed as necessary prior to excavating or boring to allow the Contractor to prevent grade or alignment conflicts.

16. All existing facilities shall be maintained in-place by the Contractor unless otherwise shown or directed. Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. Contractor to leave existing facilities in an equal or better than original condition and to the satisfaction of the City Engineer.

17. Utilities, or interfering portions of utilities, that are abandoned in place shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug the remaining exposed ends of abandoned utilities.

18. Contractor shall remove all existing signs, mailboxes, fences, landscaping, etc., as required to avoid damage during construction and replace them to existing or better condition.

GRADING, PAVING & DRAINAGE:

19. The Contractor shall be responsible for managing construction activities to insure that public streets and right-of-ways are kept clean of mud, dust or debris. Dust abatement shall be maintained by adequate watering of the site by the Contractor.

20. Unless otherwise noted, all grading, rocking and paving to conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

21. Immediately following fine grading operations, compact subgrade to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Subgrade must be inspected and approved by the City prior to placing embankments or base rock.

22. Unless otherwise shown on the drawings, straight grades shall be run between all finish grade elevations and/or finish contour lines shown.

23. Crushed rock shall conform to the requirements of OSSC (ODOT/APWA) 02630.10 (Dense Graded Base Aggregate). Compact to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Prior to placing AC pavement, written compaction test results for baserock and trench backfill must be received by the City, and a proof roll (witnessed by the City) must be performed.

24. All existing or constructed manholes, cleanouts, monuments, water valves and similar structures shall be adjusted to match finish grade of the area wherein they lie.

PIPED UTILITIES:

25. Contractor shall coordinate and pay all costs associated with connecting to existing water, sanitary sewer and storm sewer facilities.

26. Unless otherwise noted, materials and workmanship for water, sanitary sewer and storm sewer shall conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

27. Bedding and Backfill. All pipes shall be bedded with minimum 6 inches of 3/4" minus crushed rock bedding and backfilled with compacted 3/4" minus crushed rock in the pipe zone (crushed rock shall extend a minimum of 12 inches over the top of the pipe in all cases). Crushed rock trench backfill shall be used under all improved areas, including sidewalks. Granular trench backfill shall be compacted to 92% of the maximum dry density per AASHTO T-180 test method (Modified Proctor).

28. The Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade. The bottom of the trench excavation shall be shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.

29. Contractor shall provide all materials, equipment and facilities required for testing all utility piping in accordance with City construction specifications.

30. Tracer Wire. All water piping located outside of the public right-of-way or not laid in straight lines between structures shall have an electrically conductive insulated 12 gauge copper tracer wire the full length of the installed pipe using blue wire for water. Tracer wire shall be extended up into all valve boxes.

31. Warning Tape. Detectable or non-detectable acid and alkali resistant safety warning tape shall be provided along the full length of all water mainline segments not located under paved portions of public streets.

32. No trenches in roads or driveways shall be left in an open condition overnight. All such trenches shall be closed before the end of each work day and normal traffic flows restored.

- Water

33. City forces to operate all valves, including fire hydrants, on existing public mains.

34. All water mains shall be C-900 PVC (DR 18) or Class 52 ductile iron as shown. All fittings 4-inches through 24-inches in diameter shall be ductile iron fittings in conformance with AWWA C 153 or AWWA C 110. The maximum working pressure for all MJ cast iron or ductile iron fittings 4-inches through 24-inch in diameter shall be 350 psi for MJ fittings and 250 psi for flanged fittings.

35. All water mains to be installed with a minimum 36 inch cover to finish grade unless otherwise noted or directed. Service lines to be installed with a minimum 30 inches cover within the right-of-way. Deeper depths may be required as shown on the drawings or to avoid obstructions.

36. Thrust restrain shall be provided on all bends, tees and other direction changes per local jurisdiction requirements and as specified or shown on the drawings. Unless otherwise approved by the City Engineer, all valves shall be flange connected to adjacent tees or crosses.

37. Contractor shall install temporary plug and blowoff as required at the end of waterline for flushing, testing and chlorination.

38. The work shall be performed in a manner designated to maintain water service in existing waterlines. In no case shall service to any main line be interrupted form more than four (4) hours in any one day. Contractor shall notify the City a minimum of 48 hours (2 business days) prior to any interruption of service.

FRANCHISE UTILITIES:

39. Unless otherwise shown on the drawings and approved in writing by all jurisdictions having authority, new and relocated private utilities shall be installed underground.

40. Contractor shall coordinate with power or telephone company for location of conduits in common trenches, as well as location of vaults, pedestals, etc. Installation of private utilities in a common trench with or within 3 feet horizontally of paralleling watermains is prohibited.

41. Power & telephone trenching and conduits shall be installed per utility company requirements with pull wire. Contractor shall verify with utility company for size, location and type of conduit prior to construction, and shall ensure that trenches are adequately prepared for installation per utility company requirements. All changes in direction of utility conduit runs shall have long radius steel bends.

TESTING AND INSPECTION:

42. The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems arising from uninspected work. Inspections shall include inspection and/or special inspection as required by any building permit.

43. Unless otherwise specified, the attached "Required Testing and Frequency" table outlines the minimum testing schedule for the project. This testing schedule is not complete, and does not relieve the Contractor of the responsibility of obtaining all necessary inspections or observations for all work performed, regardless of who is responsible for payment. Cost for retesting shall be borne by the Contractor.

| REQUIRED TESTING AND FREQUENCY TABLE | | Party Responsible for payment: Contractor | | Others (see note 1) |
|---|---|---|---|---|
| Streets, Parking Lots, Peds, Fills, etc. | | | | |
| Subgrade | 1 Test/4000 S.F./Lift (4 min) | ✓ | See note 2 | |
| Baserock | 1 Test/4000 S.F./Lift (4 min) | ✓ | See note 2 | |
| Piped Utilities, All | | | | |
| Trench Backfill | 1 Test/200 Feet Trench/Lift (4 min) | ✓ | See note 2 | |
| Water | | | | |
| Pressure Test | (to be witnessed by Owner's Representative or approving agency) | ✓ | See note 3 | |
| Bacterial Water Test | Per Oregon Health Division | ✓ | See note 2 | |
| Chlorine Residual Test | Per City Requirements | ✓ | | |

Note 1: "Others" refers to Owner's authorized Representative or Approving Agency as applicable. Contractor responsible for scheduling testing. All testing must be completed prior to performing subsequent work.

Note 2: Testing shall be performed by an approved independent testing laboratory.

Note 3: To be witnessed by the Owner's Representative or approving agency. The Contractor shall perform pressure tests prior to scheduling witnessed pressure tests of sanitary sewer, pressure tests, or pipeline mandrel test.

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| REVISIONS | | | |

VERIFY SCALE

DSN. DM | DWN. BJF | CHKD. DM | DATE: MAY 2009

REVIEW

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 1 VFD Improvements
CONSTRUCTION NOTES & LEGEND

DRAWING NO. G004
SHEET 4 OF
JOB NUMBER 2609.4066.0

CONSTRUCTION NOTES

1. THE AREA OF THE CONSTRUCTION ENTRANCE SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROOTS, AND OTHER NON-COMPACTABLE MATERIAL.
2. SUBGRADE SHALL BE COMPACTED AND PROOFROLLED PRIOR TO PLACEMENT OF GRANULAR MATERIAL. FAILURE TO PASS PROOFROLL WILL REQUIRE USE OF WET WEATHER SECTION.
3. FAILURE OR PUMPING OF THE DRY WEATHER SECTION WILL REQUIRE REMOVAL OF THE GRANULAR MATERIAL AND INSTALLATION OF THE WET WEATHER SECTION.

MAINTENANCE NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF STRUCTURES USED TO TRAP SEDIMENT.
2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. ALL TRUCKS TRANSPORTING SATURATED SOILS SHALL BE WELL SEALED. WATER DRIPPAGE FROM TRUCKS MUST BE REDUCED TO 1 GALLON PER HOUR PRIOR TO LEAVING THE SITE.

| | |
|---|---|
| JAN 2000 | STANDARD |
| TEMPORARY CONSTRUCTION ENTRANCE (NTS) | |
| WESTECH ENG. | 6100 |

SILT FENCE NOTES

1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. TRENCH TO BE DUG WITH DITCH-WITCH BY HAND OR OTHER METHOD AS REQUIRED TO MINIMIZE WIDTH.
3. BACKFILL & COMPACT NATIVE SOIL IN TRENCH AFTER FENCE INSTALLATION.
4. STITCHED LOOPS TO BE INSTALLED TO THE UPHILL SIDE OF THE FENCE.

STRAW BALE NOTES

1. EMBED BALES 4"-6" BELOW GROUND SURFACE.
2. DRIVE STAKES MIN. 12" INTO GROUND SURFACE, AND FLUSH W/ TOP OF BALES.

MAINTENANCE NOTES

1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP-SLOPE AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND SEDIMENT FENCES, STRAW BALES OR BIOFILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

| | |
|---|---|
| JAN 2000 | STANDARD |
| SEDIMENT BARRIERS (NTS) | |
| WESTECH ENG. | 6110 |

EROSION CONTROL NOTES

1. Clearing and grading erosion control measures shall be in place prior to site disturbance. All other necessary erosion control measures shall be implemented prior to starting work on the portion/phase of the project to which the measures are related. Erosion control measures shall be maintained in such a manner as to ensure that sediment and sediment-laden water does not enter the drainage system, roadways, or violate applicable water quality standards.

2. The erosion control construction, maintenance, replacement and upgrading of the erosion control facilities is the responsibility of the Contractor until all construction is completed and approved, and permanent erosion control (i.e. vegetation/landscaping) is established on all disturbed areas.

3. All recommended erosion control procedures are dependent on construction methods, staging, site conditions, weather and scheduling. During the construction period, erosion control facilities shall be upgraded as necessary due to unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.

4. The Contractor is responsible for control of sediment transport within project limits. If an installed erosion control system does not adequately contain sediment on site, then the erosion control measures shall be adjusted or supplemented by the Contractor as necessary to ensure that sediment laden water does not leave the site. Additional measures shall be provided as required to ensure that all paved areas are kept clean for the duration of the project. Additional interim measures will include, at a minimum, installation of hay bale sediment barriers or silt fences in accordance with the details shown on the drawings. These measures shall be installed along all exposed embankments and cut slopes to prevent sediment transport.

5. All existing and newly constructed storm inlets and drains shall be protected until pavement surfaces are completed and/or vegetation is established.

6. Erosion control facilities and sediment fences on active sites shall be inspected by the Contractor at least daily during any period with measurable precipitation. Any required repairs or maintenance shall be completed immediately. The erosion control facilities on inactive sites shall be inspected and maintained by the Contractor a minimum of once a month or within 24 hours following the start of a storm event.

7. At no time shall sediment accumulation within a trapped catch basin exceed 50% of the sediment capacity. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system. The Contractor shall remove all accumulated sediment from all impacted catch basins and storm pipes prior to acceptance by the Owner.

8. The Contractor is solely responsible for protection of all adjacent property and downstream facilities from erosion and siltation during project construction. Any damage resulting from such erosion and siltation shall be corrected at the sole expense of the Contractor.

9. The Contractor shall provide site watering as necessary to prevent wind erosion of fine-grained soils.

10. Unless otherwise indicated on the drawings, all temporary erosion control facilities, including sediment fences, hay bales, silt sacks, bio-bags, etc. shall be removed by the Contractor within 30 days after permanent landscaping/vegetation is established.

11. Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to a post.

12. Sediment fence shall be installed per drawing details. Sediment fences shall have adequate support to contain all silt and sediment captured.

13. The standard strength filter fabric shall be fastened securely to stitched loops installed on the upslope side of the posts, and 6 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

14. Straw bales shall be standard 40 to 60-pound rectangular bales of cereal grain or seed straw. Straw bales shall be keyed into the ground a minimum of 4 to 6 inches, and be held in place by 1-inch x 2-inch x 36-inch wood stakes driven through the bales and into the ground a minimum of 12-inches.

15. Bio-filter bags shall be clean 100 percent wood product waste. Bags shall be 18-inch x 18-inch x 30-inch, weigh approximately 45 lbs., and be contained in a bag made of 1/2-inch plastic mesh.

16. Sediment barriers shall be maintained until the up-slope area has been permanently stabilized. At no time shall more than 10-inches of sediment be allowed to accumulate behind sediment fences and straw bales. No more than 2 inches of sediment shall be allowed to accumulate behind bio-filter bags. Sediment shall be removed prior to reaching the above stated depths. New sediment barriers shall be installed uphill as required to control sediment transport.

17. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

18. The Contractor shall verify that all trucks are well sealed when transporting saturated soils from the site. Water drippage from trucks transporting saturated soils must be reduced to less than 1 gallon per hour prior to leaving the site.

19. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto the public right-of-way or approved access point. The entrance may require periodic top dressing as conditions demand, and repair and/or cleanout of any structures used to trap sediment.

20. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately, and the Contractor shall provide protection of downstream inlets and catch basins to ensure sediment laden water does not enter the storm drain system.

21. Temporary grass cover measures must be fully established by Nov 1st, or other cover measures (ie. erosion control blankets with anchors, 3-inches minimum of straw mulch, 6 mil HDPE plastic sheet, etc.) shall be in place over all disturbed soil areas until April 30th. To establish an adequate grass stand for controlling erosion by Nov 1st, it is recommended that seeding and mulching occur by September 1st. Straw mulch, if used, shall not leave any bare ground visible through the straw.

22. Minimum wet weather slope protection. For 3H:1V or steeper slopes use Bon Terra Type C2 or North American Green Type C125 erosion control blanket. Use a minimum of 2-inches straw mulch or North American Green Type S150 for slopes flatter than 3H:1V. Slope protection shall be placed on all disturbed areas immediately after completion of each section of construction activity, until the erosion control seeding has been established. As an option during temporary or seasonal work stoppages, a 6-mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be provided with an anchor trench at the top and bottom of the slope, and shall be sandbagged on the slopes as required to prevent damage or displacement by wind.

23. Permanent erosion control vegetation on all embankments and disturbed areas shall be re-established as soon as construction is completed.

24. Soil preparation. Topsoil should be prepared according to landscape plans, if available, or recommendations of grass seed supplier. It is recommended that slopes be textured before seeding by track walking (ie. driving a crawling tractor up and down the slopes to leave a pattern of cleat imprints parallel to slope contours) or other method to provide stable areas for seeds to rest.

25. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10, or between September 1 and October 1. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.

26. When used in lieu of hydromulch, dry, loose, weed free straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.

27. When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover.

28. Seeding. Recommended erosion control grass seed mix is as follows. Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80% by weight), creeping red fescue (20% by weight). Application rate shall be 120 lbs. per acre minimum.

29. Grass seed shall be fertilized at a rate of 10 lbs. per 1000 S.F. with 16-16-16 slow release type fertilizer. Development areas within 50 feet of water bodies and wetlands must use a non-phosphorous fertilizer.

BARRIER SPACING FOR GENERAL APPLICATION

| INSTALL BARRIERS TO CONTOURS AS FOLLOWS: SLOPE RATIO | MAXIMUM SPACING ON SLOPE BETWEEN BARRIERS |
|---|---|
| 10:1 OR FLATTER | 50' O.C. |
| 10:1 TO 20:1 | 25' O.C. |
| 20:1 TO 30:1 | 10' O.C. |
| 30:1 OR STEEPER | 5' O.C. |

NOTES:

1. ALL MATERIAL SHALL CONFORM TO ODOT STANDARD SPECIFICATIONS, 1996 EDITION
2. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP-SLOPE AREA IS PERMANENTLY STABILIZED
3. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE ABOVE THE TOP OF THE STRAW WATTLE.
4. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT

| | |
|---|---|
| DEC 2000 | STANDARD |
| STRAW WATTLE SEDIMENT BARRIER (NTS) | |
| WESTECH ENG. | 6120 |

MAINTENANCE NOTES:

1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP-SLOPE AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND STRAW BALES OR BIOFILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.
4. PT "A" SHALL BE 6" MIN HIGHER THAN PT "B".

| | |
|---|---|
| JAN 2000 | STANDARD |
| DITCH AND SWALE EROSION PROTECTION (NTS) | |
| WESTECH ENG. | 6140 |

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 1 VFD Improvements
EROSION CONTROL NOTES & DETAILS

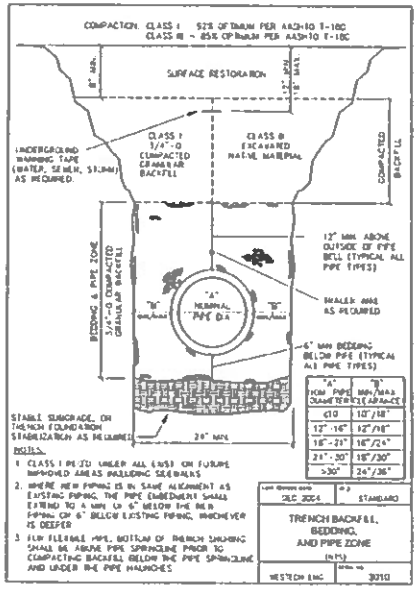
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986

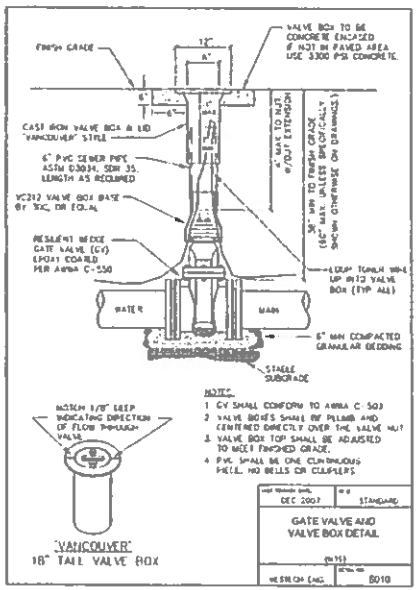
REVIEW

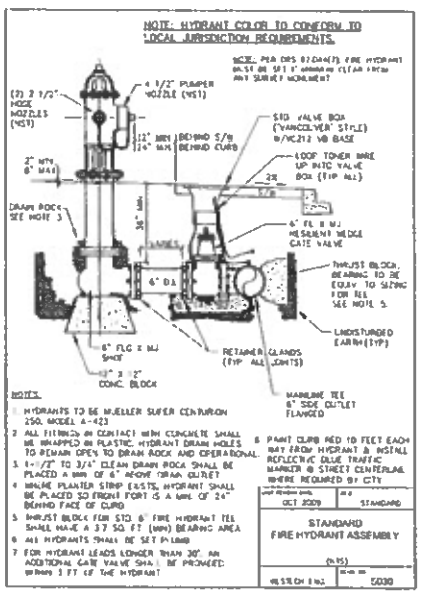
DRAWING NO. G005
SHEET 5 OF
JOB NUMBER 2609.4066.0

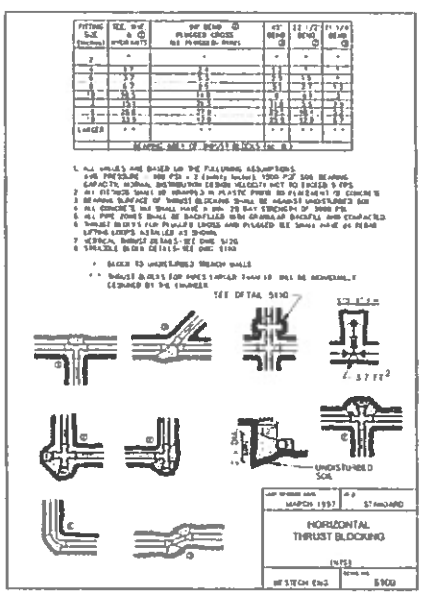
| NO | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | | | |
| | | REVISIONS | |

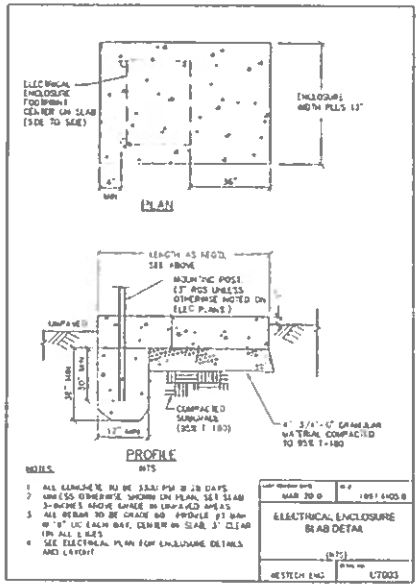
DSN: DM
DRN: EKF
CKD: DM
DATE: SEP 2019



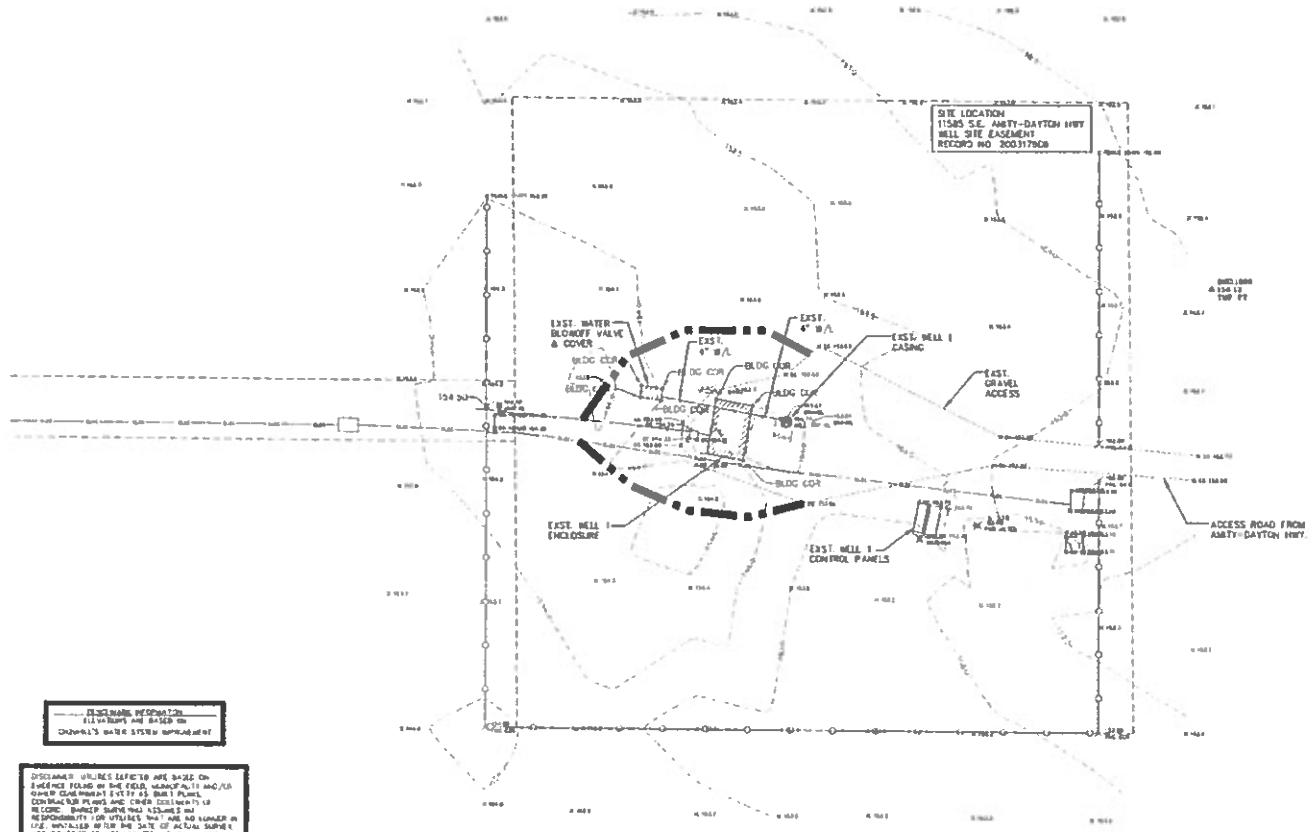






CITY OF DAYTON, OREGON
Dayton Wellfield, Well 1 VFD Improvements
CIVIL DETAILS
DRAWING NO. C001
SHEET 6 OF
JOB NUMBER 2609.4066.0




SCALE: 1" = 20'

EROSION CONTROL / DEMO LEGEND

- (1) = SAWCUT
- = SILT SACK (SS)
- = BIO BAGS (BB)
- = SILT FENCE
- (P) = PROTECT AT ALL TIMES
- (R) = REMOVE & DISPOSE OF AT AN APPROVED LOCATION
- (R1) = REMOVE & REPLACE GATE

DISCLAIMER INFORMATION
ELEVATIONS ARE BASED ON
CARLWELL'S WATER SYSTEM IMPROVEMENT

DISCLAIMER UTILITIES DEPICTED ARE BASED ON EVIDENCE FOUND ON THE FIELD, MANHOLES AND/OR OTHER CONSTRUCTION FEATURES, AS BUILT PLANS, CONSTRUCTION PLANS AND OTHER DOCUMENTS OF RECORD. BARKER SURVEYING ASSUMES NO RESPONSIBILITY FOR UTILITIES THAT ARE NO LONGER IN USE, INSTALLED AFTER THE DATE OF ACTUAL SURVEY, NOT IDENTIFIED OR NOT LOCATED. THIS INCLUDES UTILITIES WITH PUBLIC OR PRIVATE PROPERTY.

THE LOCATIONS INDICATED ON THE GROUND SURFACE PROVIDED BY LOCATION SERVICES MAY VARY DUE TO UNDERGROUND DETECTION CAPABILITIES

BARKER SURVEYING
[illegible]
SALEM, OREGON 97317
ph. (503) 585-2266
fax (503) 585-3986

278

REVIEW

| REVISIONS | | | |
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| DESCRIPTION | DATE | NO. | BY |
| | | | |

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| DESIGN | DM |
| DRWN | DM |
| CHKD | BEP |
| APVD | DHE |
| DATE | [illegible] |

WE — WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
[illegible]
Phone (503) 585-2474 Fax (503) 589-3488
E-mail westech@westech-eng.com

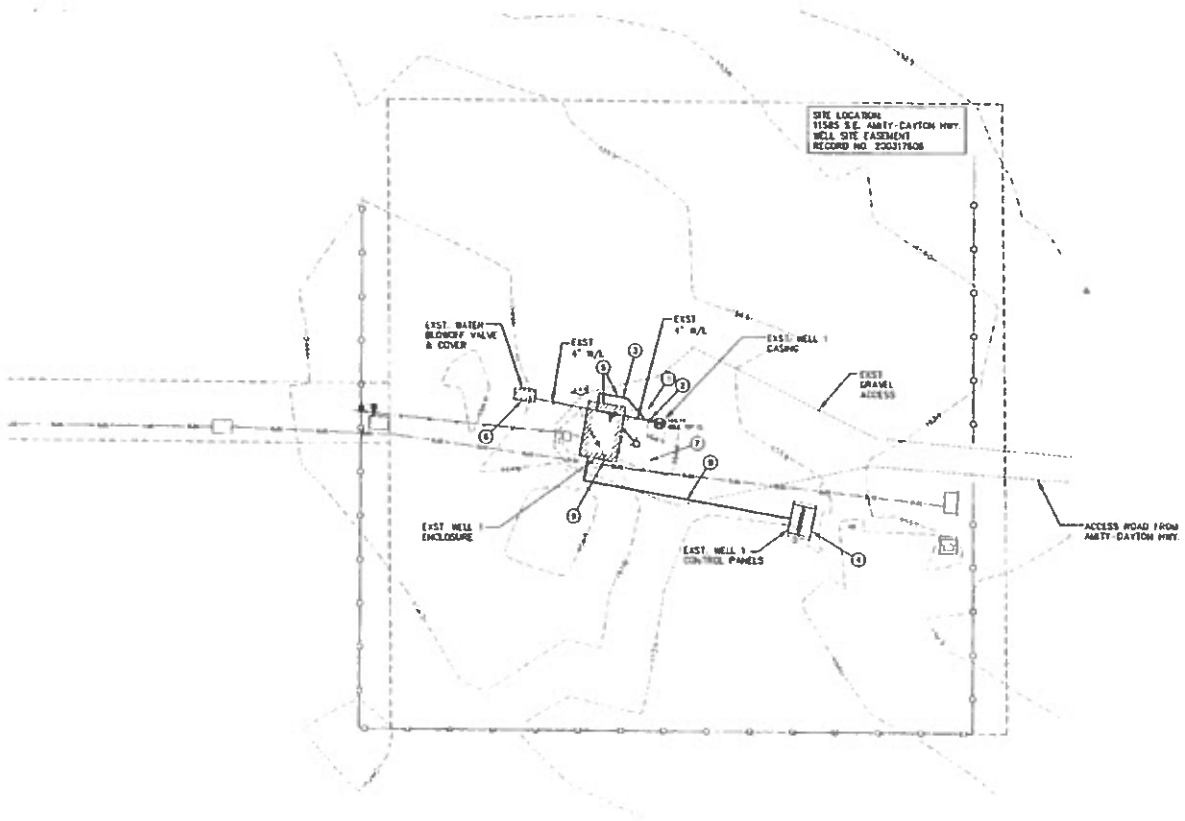
CITY OF DAYTON, OREGON
Dayton Wellfield, Well 3/1YD Improvements

# WELL NO. 1 EXISTING CONDITIONS/ EROSION CONTROL PLAN

DRAWING NO. C101

SHEET 7 OF

JOB NUMBER 2609.4066.0



SCALE: 1" = 20'

## KEY CALLOUTS - SITE & SITE PIPING

1. PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL POTHOLE WATER LINES & VERIFY ALIGNMENT, DEPTH AND DETERMINE IF WATER LINE CONFLICTS WITH DESIGN. IF CONFLICT EXISTS CONTACT ENGINEER.
2. 6" RESILIENT SEAT GATE VALVE (FLOW) W/RETAINER GLAND
3. 6" DI PIPE W/FIELD LOK GASKETS
4. SHELTER W/ EXTG POWER/CONTROL PANELS
5. WELL BUILDING & METHANE STRIPPER PIPING, SEE DWG M-32
6. REMOVE BLOWOFF VALVE & COVER.
7. CUT 6" DI W/L & INSTALL FIRE HYDRANT, KENNEDY GUARDIAN K81A W/(2) 2½" PORTS & 4-INCH W/ SHOE W/RETAINER GLAND. INSTALL 6" MIN. THICK CRUSHED ROCK TO PROVIDE 3' MIN. WORKING AREA AROUND HYDRANT & CONNECTED TO EXTG GRAVEL PAD. PROVIDE OUT OF SERVICE BAG FOR HYDRANT AS SPECIFIED.
8. CONTRACTOR TO INSTALL CONDUITS. SEE ELECTRICAL FOR CONDUIT SIZE, # OF CONDUITS, & WIRE SIZE.
9. EXIST. WELL & METHANE STRIPPER BUILDING TO REMAIN (CONTRACTOR TO PROTECT).

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | | REVISIONS |

VERIFY SCALE

DSN DWJ
DFM BBF
CHD DWJ
DATE

REVIEW

WESTECH ENGINEERING, INC.
CIVIL • STRUCTURAL • ENVIRONMENTAL
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-2888
E-mail: mail@westech-eng.com

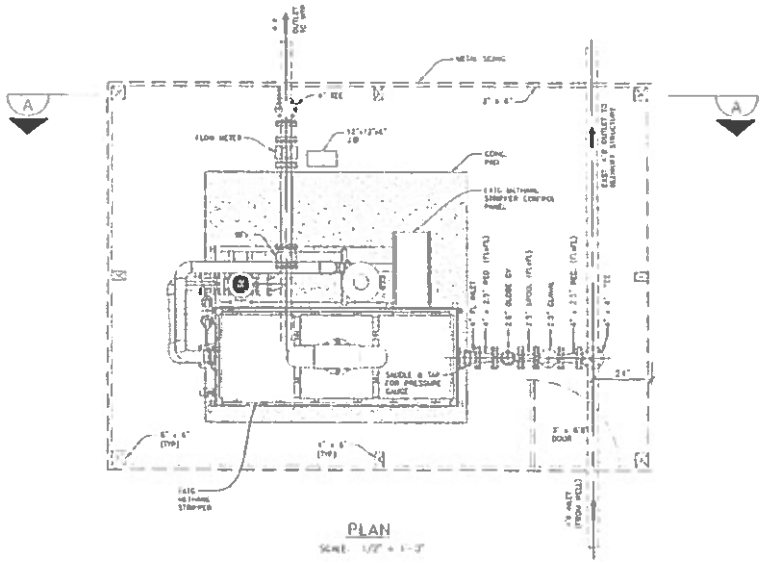
CITY OF DAYTON, OREGON
Dayton Wellfield, Well 1 VFD Improvements

WELL NO. 1
SITE PIPING PLAN

DRAWING NO.
C102

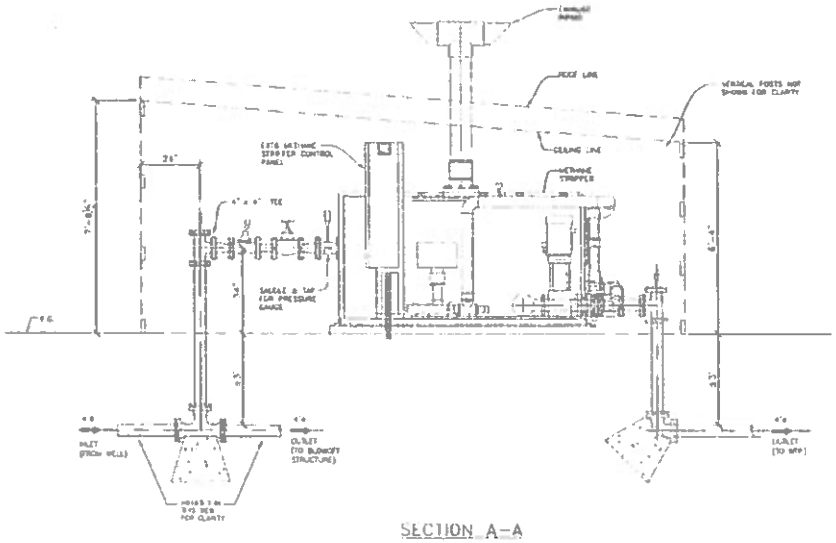
SHEET
8 OF

JOB NUMBER
2609.4066.0




PLAN

SCALE: 1/2" = 1'-0"




SECTION A-A

SCALE: 1/2" = 1'-0"

NOTE: ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS AND ARE BELIEVED TO BE ACCURATE. HOWEVER, PRIOR TO STARTING CONSTRUCTION CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & CONFLICT EXISTS CONTACT ENGINEER

CITY OF DAYTON, OREGON

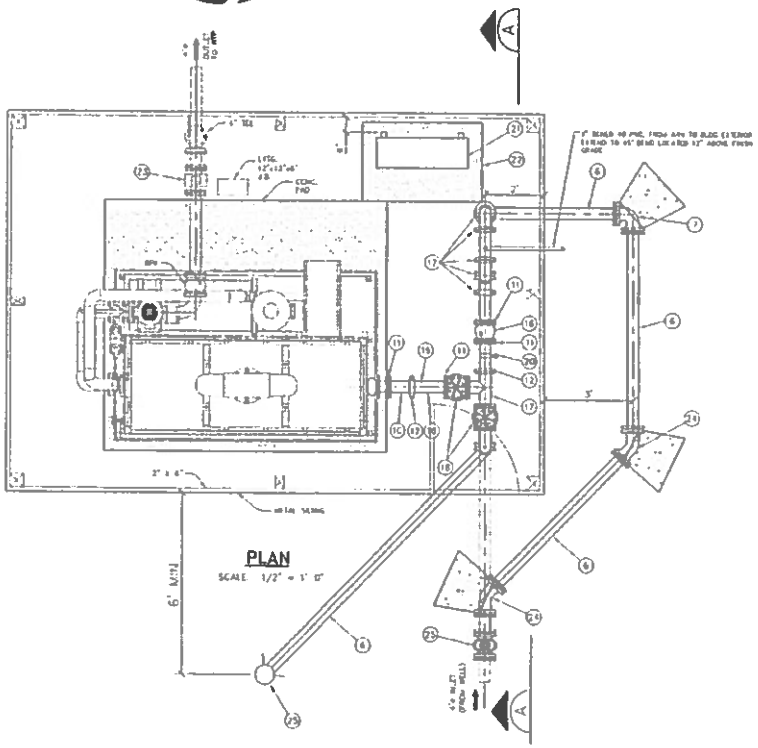
Dayton Wellfield, Well 1 VFD Improvements

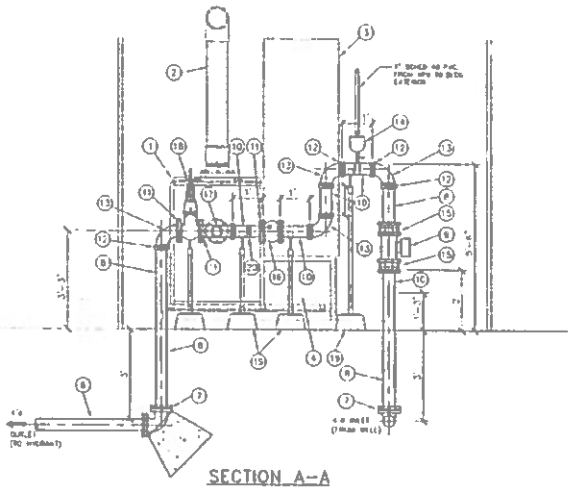
WELL 1, EXISTING MECHANICAL PIPING PLAN & SECTIONS

DRAWING NO. M101

SHEET 9 OF

JOB NUMBER 2609.4066.0

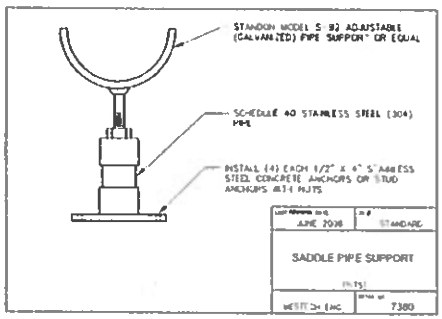



## KEY CALLOUTS - WELL BUILDING PIPING

1. EXISTING METHANE STRIPPER AS SPECIFIED, LOMMER SYSTEMS OB83P MULTI-STAGE AERATION SYSTEM
2. EXISTING METHANE STRIPPER AIR EXHAUST STACK
3. EXISTING METHANE STRIPPER CONTROL PANEL
4. EXISTING METHANE STRIPPER BLOWER
5. EXISTING METHANE STRIPPER DISCHARGE BOOSTER PUMP, 6" DISCHARGE, VFD SPEED CONTROL
6. 6" CLASS 52 DI PIPE.
7. 6" DI 90° BEND (MJxMJ) W/ (2) RETAINER GLANDS & THRUST BLOCK
8. 6" DI PIPE (PExCRV) OR (PExPE) AS SHOWN, CL 53 MIN
9. 6" MAG FLOW METER W/FLOW TRANSMITTER AS SPECIFIED, UNIMAG DS-M W/4416 TRANSMITTER (FLMTR)
10. 6" DI PIPE (CRVxCRV), CL 53 MIN
11. 6" VICTAULIC 341 DI FLANGE ADAPTER.
12. 6" VICTAULIC 31 DI COUPLING
13. 6" VICTAULIC 10-C 90° BEND (CRVxCRV)
14. AMI DI-DAD OR APPROVED EQUAL W/ SCREEN PROVIDE VALVE WITH STAINLESS STEEL ISOLATION BALL VALVE & HANDLE MOUNTED TO EPOXY COATED DI SERVICE SADDLE AS SPECIFIED. INSTALL 1" SCHED 40 PVC FROM ANY OUTLET TO BUILDING EXTERIOR, EXTEND DOWN TO 45° BEND 12" ABOVE FINISH GRADE.
15. 6" MEGA-FLANGE ADAPTOR.
16. 6" FLANGED DI INDEX SILENT CHECK VALVE, VAL-MATIC 7800 OR EQUAL
17. 6" VICTAULIC 20-C RED (CRVxCRV).
18. 6" RESILIENT SEAT WEDGE GATE VALVE AS SPECIFIED, OSBY STEM W/HANDWHEEL.
19. ADJUSTABLE PIPE SUPPORT (FLANGE OR SADDLE STYLE AS SHOWN), STANDOFF OR EQUAL. SEE DETAIL 7380. MOUNT ON 12" x 12" CONCRETE PIER BLOCK
20. 3/4" SAMPLING PORT, BRASS VALVE W/HOSE END OUTLET & VACUUM BREAKER. MOUNT TO EPOXY COATED DI SERVICE SADDLE
21. NEW VFD & PANEL (SEE ELECTRICAL FOR DETAILS) MOUNTED TO POSTS SEE DTL 7003, DWG C001
22. NEW CONC PAD SEE DTL 7003, DWG C001
23. CONTRACTOR TO REMOVE EXTG FLOW METER & REPLACE W/ DI SPOOL. FLOW METER TO BE DELIVERED TO LAFAYETTE PUBLIC WORKS
24. 6" DI 45° BEND (MJxMJ) W/RETAINER GLANDS & THRUST BLOCK
25. NEW 4" 2-PORT BLOWOFF HYDRANT, SEE SHEET 7. ORIENT PORTS AWAY FROM BUILDING

NOTE: ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS, AND ARE BELIEVED TO BE ACCURATE HOWEVER, PRIOR TO STARTING CONSTRUCTION CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS IF CONFLICT EXISTS—CONTACT ENGINEER




CITY OF DAYTON, OREGON
Dayton Well Field, Well 1 VFD Improvements

WELL 1 PROPOSED MECHANICAL PIPING PLAN & SECTIONS

DRAWING NO. M102
SHEET 10 OF
JOB NUMBER 2609.4066.0

# DRAWINGS FOR:
# DAYTON WELLFIELD WELL DEVELOPMENT
## Well 3 VFD Improvements

(9705 SE Airport Road)

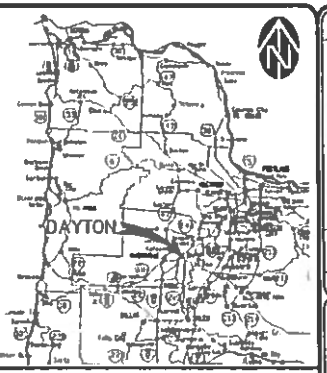
FOR: The City of Dayton
P.O. Box 339
416 Ferry Street
Dayton, Oregon 97114
503-864-2221

WELL 3 IS OWNED & OPERATED BY THE CITY OF DAYTON.

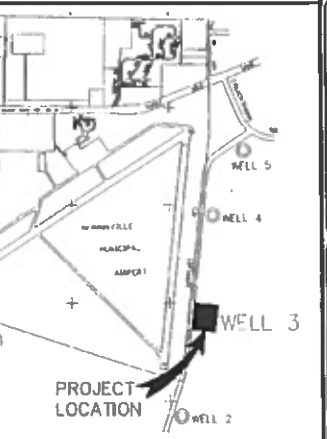
SHEET INDEX

| Sheet | Dwg. | Title |
|---|---|---|
| **GENERAL** | | |
| 1 | G001 | Cover Sheet, Vicinity & Location Maps, and Sheet Index |
| 2 | G002 | Well No. 3, Generalized Equipment & Process Schematic |
| 3 | G003 | Design Criteria & Sequence of Operations |
| 4 | G004 | Construction Notes & Legend |
| 5 | G005 | Erosion Control Notes & Details |
| **COMMON CIVIL DETAILS** | | |
| 6 | C001 | Civil Details |
| **CIVIL SITEWORK** | | |
| 7 | C101 | Well No. 3, Existing Conditions, Erosion Control & Demolition Plans |
| 8 | C102 | Well No. 3, Site Piping Plan |
| **MECHANICAL** | | |
| 9 | M101 | Well No. 3, Existing Mechanical Piping Plan & Sections |
| 10 | M102 | Well No. 3, Proposed Mechanical Piping Plan & Sections |
| **ELECTRICAL** | | |
| 11 | E101 | Electrical Site Plan & Legend |
| 12 | E102 | Control Building Electrical Plan |
| 13 | E103 | One-Line Diagrams & Schedules |
| 14 | E104 | Motor Control Schematic |
| **INSTRUMENTATION & CONTROL** | | |
| 15 | I100 | Instrument & Control, Legend and Schedules |
| 16 | I101 | 120VAC Power Distribution |
| 17 | I102 | Discrete Input Wiring Diagram |
| 18 | I103 | Discrete Input Wiring Diagram |
| 19 | I104 | Discrete Output Wiring Diagram |
| 20 | I105 | Analog Input Wiring Diagram |
| 21 | I106 | Analog Output Wiring Diagram |

PRELIMINARY




VICINITY MAP




PROJECT LOCATION MAP

| NO. | DATE | DESCRIPTION |
|---|---|---|

DRAWN DJM
CHK'D BJD
APP'D BJD
DATE SEP 2010

REVIEW

WEST ENGINEERING, INC.

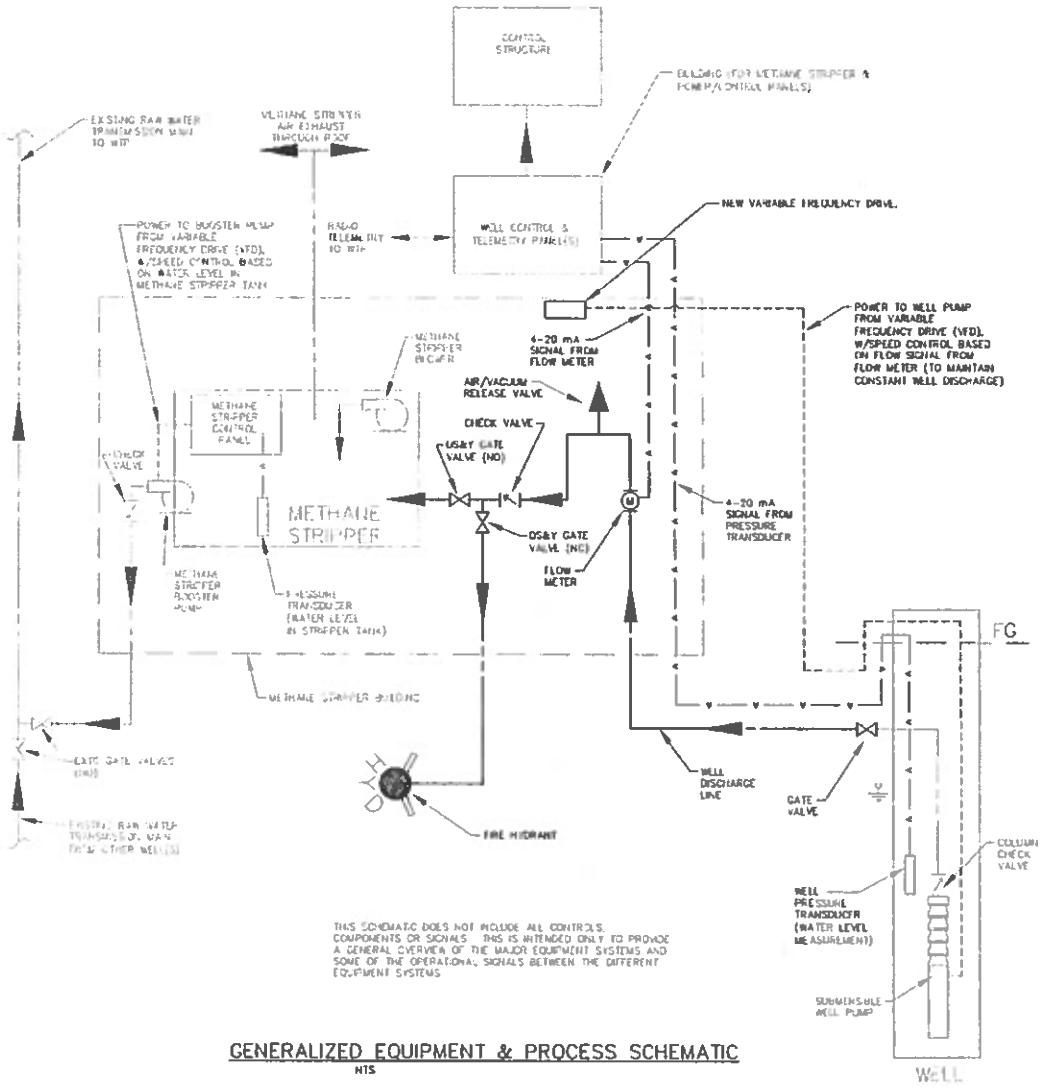
CITY OF DAYTON, OREGON
Dayton Wellfield, Well 3 VFD Improvements

COVER SHEET
VICINITY & LOCATION MAPS, and SHEET INDEX

DRAWING NO. G001
SHEET 1 OF
JOB NUMBER 2609.4065.0

282

well3 VFD Impr Prelim (not constr), 2010




THIS SCHEMATIC DOES NOT INCLUDE ALL CONTROLS, COMPONENTS OR SIGNALS. THIS IS INTENDED ONLY TO PROVIDE A GENERAL OVERVIEW OF THE MAJOR EQUIPMENT SYSTEMS AND SOME OF THE OPERATIONAL SIGNALS BETWEEN THE DIFFERENT EQUIPMENT SYSTEMS.

GENERALIZED EQUIPMENT & PROCESS SCHEMATIC
NTS

## GENERAL SEQUENCE OF OPERATIONS Well 3

1. The following sequence of operations does not include all steps and is intended only to outline a general framework of construction that meets the project sequencing requirements and maintains sewer service during the course of the work. In addition to the issues outlined herein, the Contractor shall conform to all City, County, and State conditions and directives concerning the work wherein each has jurisdiction. The Contractor can propose alternate construction sequencing, but such alternate sequencing must address the issues noted below.

2. The work will likely be completed in phases. Some of the work under these phases may simultaneously. The phases are:
   a. Phase I - Coordination and Equipment Procurement
   b. Phase II - VFD, Site & Mechanical Piping, & Control Panel
   c. Phase III - New Well System Performance Testing & Startup
   d. Phase IV - Place Well in Operation, Final Sitework

3. Phase I - Coordination, Submittals, Equipment Procurement, Site Preparation
   a. Submit schedule, equipment and material submittals, shop drawings and sequence of operations (if different than contained herein) to City and Engineer for review and approval.
   b. Coordinate procurement of materials and equipment.
   c. Notify utilities and coordinate activities as required.
   d. Obtain needed building and construction permits.
   e. Install erosion control measures.
   f. Pothole existing utilities, existing waterline at connection point, etc. Notify Engineer of any conflicts or discrepancies.

4. Phase II - VFD, Site & Mechanical Piping, & Control Panel
   a. Construct new site waterlines.
   b. Install process piping in exig. building.
   c. Install variable frequency drive (VFD) and well control panel.
   d. Submit draft equipment O&M manuals.

5. Phase III - New Well System Performance Testing & Startup
   a. Startup up and test booster pump, control panels, and other system components prior to placing system in operation. Contractor shall provide all equipment required for testing.
   b. Submit final O&M manuals. Final O&M manuals must be submitted and approved by the City prior to placing the new well in operation.

6. Phase IV - Place Well in Operation, Final Sitework
   a. Place well system in operation, provide final operator training.
   b. Complete remaining site surface restoration.
   c. Clean up and demobilize from the site.

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | REVISIONS | |

DSN. DW
DRN. BH
CKD. DW
DATE SEP 2009

REVIEW

WESTECH ENGINEERING, INC.
CIVIL STRUCTURAL MECHANICAL ELECTRICAL
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E-mail westech@westech-eng.com

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 3 VFD Improvements
WELL 3
GENERALIZED EQUIPMENT & PROCESS SCHEMATIC

DRAWING NO. G002
SHEET 2 OF
JOB NUMBER 2609 4065.0

GENERAL DESIGN CRITERIA (Well No. 4)

1. Well
   - Date drilled: 08/2002
   - Well Log #: Yamh 55101
   - Ground elevation @ casing after drilling: 156.7 ft
   - Well depth: 276 ft bgs (elev -119.3')
   - Well diameter
   - 14" borehole
   - 10" casing grouted to 103' bgs
   - Filter pack below 105' bgs
   - Screen: 0.065" slot, 10" ID
   - Screen intervals: See As-buits
   - 136-170' bgs
   - 216-217' bgs
   - 258-264' bgs
   - Static Water Level 37' bgs (11/02)

2. Design Discharge Conditions
   - Summer (assumes 90 day continuous pumping)
   - Pump rate: 100 gpm
   - Drawdown: 50 ft
   - Max. pump lift: ±185 ft (ie. pump shutoff level bgs)
   - Winter (assumes 90 day continuous pumping)
   - Pump rate: 250 gpm
   - Drawdown: 81 ft
   - Max. pump lift: ±270 ft (ie pump shutoff level)

3 Well Pump
   - Type: Grundfos 300S150 (4 stage)
   - Pump design point: 300 gpm @145' TDH
   - Pump diameter: 6"
   - Pump motor fully shrouded for cooling
   - Motor size: 15 hp (new 2008), __V, 3 ϕ
   - Motor speed: 3450 rpm full speed
   - Pump setting: ±173 ft bgs (intake)
   - Column pipe: 5" dia
   - Column check valves: top of pump & ±100' above pump
   - Well Discharge: Pitless adapter w/3' bury

4 Well Pump Operational & Hydraulic Control
   - On/Off telemetry signal from WTP, local manual over-ride
   - Well Pump Speed Control: Variable Frequency Drive (VFD)
   - Magnetic flow meter on well discharge, 4-20 mA signal for VFD control
   - Pressure transducer in well for low level pump protection
   - Isolation valves to allow well to be pumped to waste

5 Methane Stripper
   - Multistage aeration stripper w/booster pump & controls (Lowrey DB63P)
   - Design flow rate: 240 gpm
   - Blower: Spencer VB-075, 10 hp regenerative blower
   - Design air flow rate: 392 scfm
   - Design methane removal: 97.3%
   - Booster pump: vertical multi-stage, 10 hp
   - Booster pump control: VFD based on level in stripper tank

6 Flow monitoring
   - Flow meter outside well building (direct reading and totalizer)

7. Standby Power System
   - None, manual transfer switch

8 Telemetry
   - Radio to WTP

PRELIMINARY

placeholder only

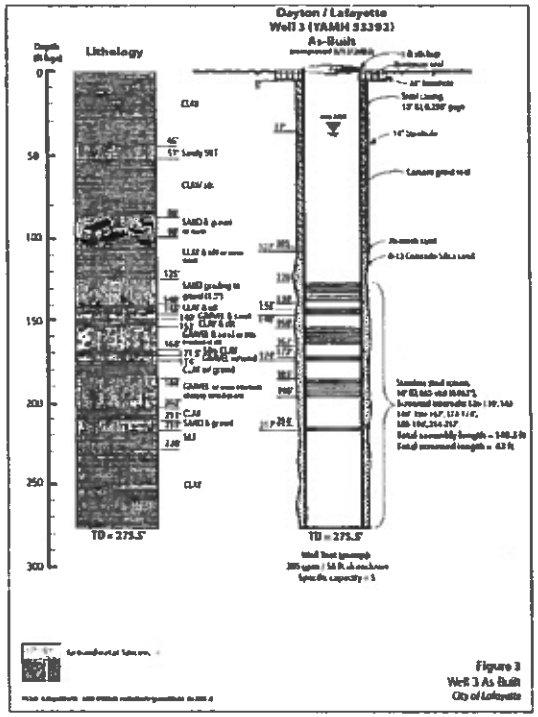
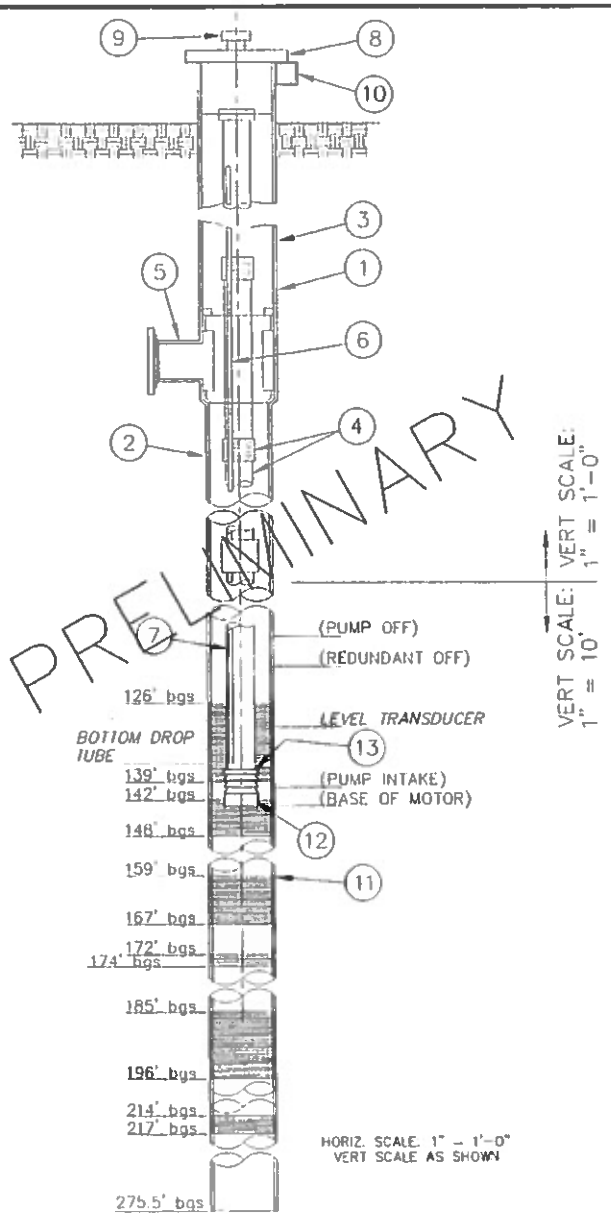



Figure 3
Well 3 As Built
City of Lafayette

KEY CALLOUTS - WELLHEAD/CASING/PUMP

1. PITLESS WELL ADAPTER UNIT.
2. LOWER BARREL, 10" DIA. STEEL
3. UPPER BARREL, 10" DIA. STEEL
4. STEEL COLUMN PIPE.
5. 6" FLANGED DISCHARGE CONNECTION
6. 1" (MIN) DROP TUBE CONNECTOR (EXTENDS THROUGH SEAL SECTION OF PITLESS ADAPTER).
7. 1" THREADED & PERFORATED PVC DROP TUBE FOR LEVEL TRANSDUCER.
8. WATERTIGHT WELL CAP W/NEOPRENE GASKET
9. 2" WELL SCREEN WITH STAINLESS STEEL SCREEN
10. JUNCTION BOX. (FOR WELL POWER CABLE & TRANSDUCER WIRE).
11. WELL SCREEN INTERVAL
12. SUBMERSIBLE WELL PUMP & MOTOR
13. PUMP COLUMN CHECK VALVE (EPOXY COATED DUCTILE IRON) MOUNTED ABOVE PUMP.




WELL NO. 3
WELL SECTION (EXTG)

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 3 VFD Improvements
WELL NO. 3
DESIGN CRITERIA & SEQUENCE OF OPERATIONS
DRAWING NO. G003
SHEET 3 OF
JOB NUMBER 2609.4065.0

**GENERAL NOTES:**

1. Contractor shall procure and conform to all construction permits required by the City of Lafayette and Yamhill County.

2. Contractor shall provide all bonds and insurance required by public and/or private agencies having jurisdiction.

3. All materials and workmanship for facilities in street right-of-way or easements shall conform to approving agencies' construction specifications wherein each has jurisdiction, including but not limited to the City, County, Oregon Health Division (OHD) and the Oregon Department of Environmental Quality (DEQ).

4. Unless otherwise approved by the Public Works Director, construction of all public facilities shall be done between 7:00 a.m. and 6:00 p.m., Monday through Friday, and between 9:00 a.m. and 6:00 p.m. Saturday.

5. The Contractor shall perform all work necessary to complete the project in accordance with the approved construction drawings including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.

6. Contractor to notify City, County, ODOT and all utility companies a minimum of 48 business hours (2 business days) prior to start of construction, and comply with all other requirements of ORS 757.541 to 757.571.

7. Any inspection by the City, County or other agencies shall not, in any way, relieve the Contractor from any obligation to perform the work in strict compliance with the applicable codes and agency requirements.

8. Contractor shall erect and maintain barricades, warning signs, traffic cones per City, County and ODOT requirements in accordance with the MUTCD (including Oregon amendments). Access to driveways shall be maintained at all times. All traffic control measures shall be approved and in place prior to any construction activity.

9. **Record Drawings.** The Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record any approved deviations in construction from the approved drawings, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the City upon request.

10. Upon completion of construction of public facilities, Contractor shall submit a clean set of field record drawings containing all as-built information to the Design Engineer for use in the preparation of As-Built drawings for submittal to the City.

11. **Address Numbers.** Per OFC 505.1, all new and existing buildings shall have approved address numbers (4" minimum number height) placed in a position that is plainly legible and visible from the fronting street. Temporary address signs shall be mounted in a visible location prior to and during any construction, and the permanent numbers mounted prior to occupancy.

**EXISTING UTILITIES & FACILITIES:**

12. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

13. The location and descriptions of existing utilities shown on the drawings are compiled from available records and/or field surveys. The engineer or utility companies do not guarantee the accuracy or the completeness of such records. Contractor shall field verify sizes and locations of all existing utilities prior to construction.

14. The Contractor shall locate and mark all existing property and street monuments prior to construction. Any monuments disturbed during construction of the project shall be replaced by a Registered Land Surveyor at the Contractor's expense. The monuments shall be replaced within a maximum of 90 days, and the County Surveyor shall be notified in writing as required by ORS 209.150.

15. Contractor shall field verify location and depth of all existing utilities where new facilities cross. All utility crossings marked or shown on the drawings shall be potholed using hand tools or other non-invasive methods prior to excavating or boring. Contractor shall be responsible for exposing potential utility conflicts far enough ahead of construction to make necessary grade modifications without delaying the work. If grade modification is necessary, Contractor shall notify the Design Engineer, and the Design Engineer shall obtain approval from the City Engineer prior to construction. All utility crossings shall be potholed as necessary prior to excavating or boring to allow the Contractor to prevent grade or alignment conflicts.

16. All existing facilities shall be maintained in place by the Contractor unless otherwise shown or directed. Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. Contractor to leave existing facilities in an equal or better than original condition and to the satisfaction of the City Engineer.

17. Utilities, or interfering portions of utilities, that are abandoned in place shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug the remaining exposed ends of abandoned utilities.

18. Contractor shall remove all existing signs, mailboxes, fences, landscaping, etc. As required to avoid damage during construction and replace them to existing or better condition.

**GRADING, PAVING & DRAINAGE:**

19. The Contractor shall be responsible for managing construction activities to insure that public streets and right-of-ways are kept clean of mud, dust or debris. Dust abatement shall be maintained by adequate watering of the site by the Contractor.

20. Unless otherwise noted, all grading, rocking and paving to conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

21. Immediately following fine grading operations, compact subgrade to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Subgrade must be inspected and approved by the City prior to placing embankments or base rock.

22. Unless otherwise shown on the drawings, straight grades shall be run between all finish grade elevations and/or finish contour lines shown.

23. Crushed rock shall conform to the requirements of OSSC (ODOT/APWA) 02630.10 (Dense Graded Base Aggregate). Compact to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Prior to placing AC pavement, written compaction test results for baserock and trench backfill must be received by the City, and a proof roll (witnessed by the City) must be performed.

24. All existing or constructed manholes, cleanouts, monuments, water valves and similar structures shall be adjusted to match finish grade of the area wherein they lie.

**PIPED UTILITIES:**

25. Contractor shall coordinate and pay all costs associated with connecting to existing water, sanitary sewer and storm sewer facilities.

26. Unless otherwise noted, materials and workmanship for water, sanitary sewer and storm sewer shall conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

27. **Bedding and Backfill.** All pipes shall be bedded with minimum 6-inches of 3/4" minus crushed rock bedding and backfilled with compacted 3/4" minus crushed rock in the pipe zone (crushed rock shall extend a minimum of 12 inches over the top of the pipe in all cases). Crushed rock trench backfill shall be used under all improved areas, including sidewalks. Granular trench backfill shall be compacted to 92% of the maximum dry density per AASHTO T-180 test method (Modified Proctor).

28. The Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade. The bottom of the trench excavation shall be shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.

29. Contractor shall provide all materials, equipment and facilities required for testing all utility piping in accordance with City construction specifications.

30. Tracer Wire. All water piping located outside of the public right of way or not laid in straight lines between structures shall have an electrically conductive insulated 12 gauge copper tracer wire the full length of the installed pipe using blue wire for water. Tracer wire shall be extended up into all valve boxes.

31. Warning Tape. Detectable or non-detectable acid and alkali resistant safety warning tape shall be provided along the full length of all water mainline segments not located under paved portions of public streets.

32. No trenches in roads or driveways shall be left in an open condition overnight. All such trenches shall be closed before the end of each work day and normal traffic flows restored.

- Water

33. City forces to operate all valves, excluding fire hydrants, on existing public mains.

34. All water mains shall be C 900 PVC (DR 18) or Class 52 ductile iron as shown. All fittings 4 inches through 24-inches in diameter shall be ductile iron fittings in conformance with AWWA C 153 or AWWA C-110. The minimum working pressure for all MJ cast iron or ductile iron fittings 4 inches through 24-inch in diameter shall be 350 psi for MJ fittings and 250 psi for flanged fittings.

35. All water mains to be installed with a minimum 36 inch cover to finish grade unless otherwise noted or directed. Service lines to be installed with a minimum 30 inches cover within the right-of-way. Deeper depths may be required as shown on the drawings or to avoid obstructions.

36. Thrust restrain shall be provided on all bends, tees and other direction changes per local jurisdiction requirements and as specified or shown on the drawings. Unless otherwise approved by the City Engineer, all valves shall be flange connected to adjacent tees or crosses.

37. Contractor shall install temporary plug and blowoff as required at the end of waterline for flushing, testing and chlorination.

38. The work shall be performed in a manner designated to maintain water service in existing waterlines. In no case shall service to any main line be interrupted form more than four (4) hours in any one day. Contractor shall notify the City a minimum of 48 hours (2 business days) prior to any interruption of service.

**FRANCHISE UTILITIES**

39. Unless otherwise shown on the drawings and approved in writing by all jurisdictions having authority, new and relocated private utilities shall be installed underground.

40. Contractor shall coordinate with power or telephone company for location of conduits in common trenches, as well as location of vaults, pedestals, etc. Installation of private utilities in a common trench with or within 3 feet horizontally of paralleling watermains is prohibited.

41. Power & telephone trenching and conduits shall be installed per utility company requirements with pull wire. Contractor shall verify with utility company for size, location and type of conduit prior to construction, and shall ensure that trenches are adequately prepared for installation per utility company requirements. All changes in direction of utility conduit runs shall have long radius steel bends.

**TESTING AND INSPECTION:**

42. The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems arising from uninspected work. Inspections shall include inspection and/or special inspection as required by any building permit.

43. Unless otherwise specified, the attached "Required Testing and Frequency" table outlines the minimum testing schedule for the project. This testing schedule is not complete, and does not relieve the Contractor of the responsibility of obtaining all necessary inspections or observations for all work performed, regardless of who is responsible for payment. Cost for retesting shall be borne by the Contractor.

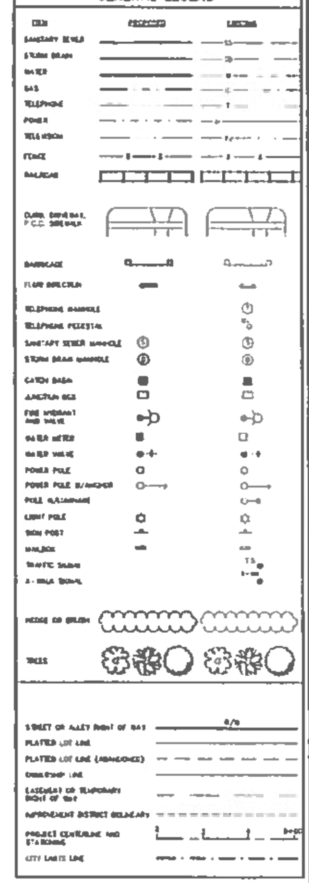
| REQUIRED TESTING AND FREQUENCY TABLE | | Party Responsible for payment | |
|---|---|---|---|
| | | Contractor | Others (see note 1) |
| Streets, Parking Lots, Pads, Fills, etc | | | |
| Subgrade | 1 Test/4000 SF/Lift (4 min) | ✓ | See note 2 |
| Baserock | 1 Test/4000 SF/Lift (4 min) | ✓ | See note 2 |
| Piped Utilities, All | | | |
| Trench Backfill | 1 Test/200 Feet Trench/Lift (4 min) | ✓ | See note 2 |
| Water | | | |
| Pressure Test | (to be witnessed by Owner's Representative or approving agency) | ✓ | See note 3 |
| Bacterial Water Test | Per Oregon Health Division | ✓ | See note 3 |
| Chlorine Residual Test | Per City Requirements | ✓ | |

Note 1: "Others" refers to Owner's authorized Representative or Approving Agency as applicable. Contractor responsible for scheduling testing. All testing must be completed prior to performing subsequent work.

Note 2: Testing must be performed by an approved independent testing laboratory.

Note 3: To be witnessed by the Owner's Representative or approving agency. The Contractor shall perform pressure prior to scheduling witnessed pressure or sanitary sewer pressure tests, or pipeline mandrel test.

## GENERAL LEGEND




| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |
| 1 | | | |

VERIFY SCALE

DSN: DM
DRN: BP
CKD: DM
DATE: SEP 2010

REVIEW

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF DAYTON, OREGON

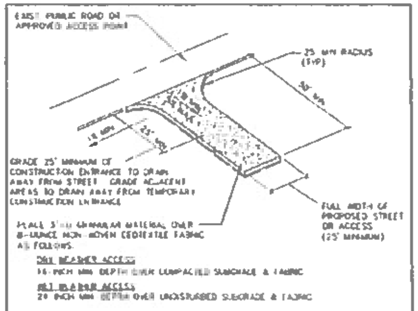
Dayton Wetfield, Well 3 VFD Improvements

# CONSTRUCTION NOTES & LEGEND

DRAWING NO. G004

SHEET 4 OF

JOB NUMBER 2609.4065.0



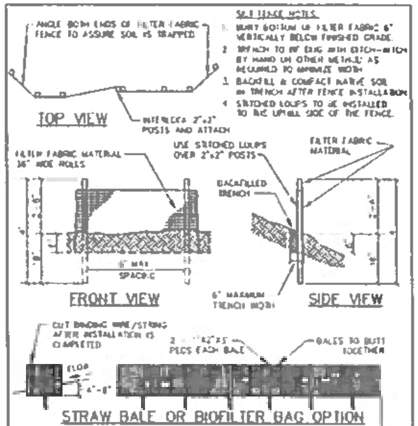

CONSTRUCTION NOTES:

1. THE AREA OF THE CONSTRUCTION ENTRANCE SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROOTS, AND OTHER NON-COMPACTABLE MATERIAL.
2. SUBGRADE SHALL BE COMPACTED AND PROOFROLLED PRIOR TO PLACEMENT OF GRANULAR MATERIAL. FAILURE TO PASS PROOFROLL WILL REQUIRE USE OF WET WEATHER SECTION.
3. FAILURE OR PUMPING OF THE DRY WEATHER SECTION WILL REQUIRE REMOVAL OF THE GRANULAR MATERIAL AND INSTALLATION OF THE WET WEATHER SECTION.

MAINTENANCE NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF STRUCTURES USED TO TRAP SEDIMENT.
2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. ALL TRUCKS TRANSPORTING SATURATED SOILS SHALL BE WELL SEALED. WATER DRIPPAGE FROM TRUCKS MUST BE REDUCED TO 1 GALLON PER HOUR PRIOR TO LEAVING THE SITE.

| JAN 2006 | | STANDARD |
|---|---|---|
| TEMPORARY CONSTRUCTION ENTRANCE (NTS) | | |
| WESTECH ENG. | | 6100 |




SILT FENCE NOTES:

1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. TRENCH TO BE DUG WITH DITCH-WITCH BY HAND OR OTHER METHOD AS REQUIRED TO MINIMIZE WIDTH.
3. BACKFILL & COMPACT NATIVE SOIL IN TRENCH AFTER FENCE INSTALLATION.
4. STITCHED LOOPS TO BE INSTALLED TO THE UPHILL SIDE OF THE FENCE.

STRAW BALE NOTES:

1. EMBED BALES 4"-6" BELOW GROUND SURFACE.
2. DRIVE STAKES MIN 12" INTO GROUND SURFACE, AND FLUSH W/ TOP OF BALES.

MAINTENANCE NOTES:

1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP-SLOPE AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND SEDIMENT FENCES, STRAW BALES OR BIOFILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

| JAN 2006 | | STANDARD |
|---|---|---|
| SEDIMENT BARRIERS (NTS) | | |
| WESTECH ENG. | | 6110 |

EROSION CONTROL NOTES:

1. Clearing and grading erosion control measures shall be in place prior to site disturbance. All other necessary erosion control measures shall be implemented prior to starting work on the portion/phase of the project to which the measures are related. Erosion control measures shall be maintained in such a manner as to ensure that sediment and sediment-laden water does not enter the drainage system, roadways, or violate applicable water quality standards.

2. The erosion control construction, maintenance, replacement and upgrading of the erosion control facilities is the responsibility of the Contractor until all construction is completed and approved, and permanent erosion control (i.e. vegetation/landscaping) is established on all disturbed areas.

3. All recommended erosion control procedures are dependent on construction methods, staging, site conditions, weather and scheduling. During the construction period, erosion control facilities shall be upgraded as necessary due to unexpected storm events and to ensure that sediment and sediment-laden water does not leave the site.

4. The Contractor is responsible for control of sediment transport within project limits. If an installed erosion control system does not adequately contain sediment on site, then the erosion control measures shall be adjusted or supplemented by the Contractor as necessary to ensure that sediment laden water does not leave the site. Additional measures shall be provided as required to ensure that all paved areas are kept clean for the duration of the project. Additional interior measures will include, at a minimum, installation of hay bale sediment barriers or silt fences in accordance with the details shown on the drawings. These measures shall be installed along all exposed embankments and cut slopes to prevent sediment transport.

5. All existing and newly constructed storm inlets and drains shall be protected until pavement surfaces are completed and/or vegetation is established.

6. Erosion control facilities and sediment fences on active sites shall be inspected by the Contractor at least daily during any period with measurable precipitation. Any required repairs or maintenance shall be completed immediately. The erosion control facilities on inactive sites shall be inspected and maintained by the Contractor a minimum of once a month or within 24 hours following the start of a storm event.

7. At no time shall sediment accumulation within a trapped catch basin exceed 1/3 of the sediment capacity. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system. The Contractor shall remove all accumulated sediment from all impacted catch basins and storm pipes prior to acceptance by the Owner.

8. The Contractor is solely responsible for protection of all adjacent property and downstream facilities from erosion and siltation during project construction. Any damage resulting from such erosion and siltation shall be corrected at the sole expense of the Contractor.

9. The Contractor shall provide site watering as necessary to prevent wind erosion of fine-grained soils.

10. Unless otherwise indicated on the drawings, all temporary erosion control facilities, including sediment fences, hay bales, silt sacks, bio-bags, etc. shall be removed by the Contractor within 30 days after permanent landscaping/vegetation is established.

11. Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to a post.

12. Sediment fence shall be installed per drawing details. Sediment fences shall have adequate support to contain all silt and sediment captured.

13. The standard strength filter fabric shall be fastened securely to stitched loops installed on the upslope side of the posts, and 6 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

14. Straw bales shall be standard 40 to 60-pound rectangular bales of cereal grain or seed straw. Straw bales shall be keyed into the ground a minimum of 4 to 6 inches, and be held in place by 1-inch x 2-inch x 36-inch wood stakes driven through the bales and into the ground a minimum of 12-inches.

15. Bio-filter bags shall be clean 100 percent wood product waste. Bags shall be 18-inch x 18-inch x 30-inch, weigh approximately 45 lbs., and be contained in a bag made of 1/2-inch plastic mesh.

16. Sediment barriers shall be maintained until the up-slope area has been permanently stabilized. At no time shall more than 10-inches of sediment be allowed to accumulate behind sediment fences and straw bales. No more than 2 inches of sediment shall be allowed to accumulate behind bio-filter bags. Sediment shall be removed prior to reaching the above stated depths. New sediment barriers shall be installed uphill as required to control sediment transport.

17. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

18. The Contractor shall verify that all trucks are well sealed when transporting saturated soils from the site. Water drippage from trucks transporting saturated soils must be reduced to less than 1 gallon per hour prior to leaving the site.

19. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto the public right-of-way or approved access point. The entrance may require periodic top dressing as conditions demand, and repair and/or cleanout of any structures used to trap sediment.

20. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately, and the Contractor shall provide protection of downstream inlets and catch basins to ensure sediment laden water does not enter the storm drain system.

21. Temporary grass cover measures must be fully established by Nov 1st, or other cover measures (i.e. erosion control blankets with anchors, 3-inches minimum of straw mulch, 6 mil HDPE plastic sheet, etc.) shall be in place over all disturbed soil areas until April 30th. To establish an adequate grass stand for controlling erosion by Nov 1st, it is recommended that seeding and mulching occur by September 1st. Straw mulch, if used, shall not leave any bare ground visible through the straw.

22. Minimum wet weather slope protection. For 3H:1V or steeper slopes use Bon Terra Type C2 or North American Green Type C125 erosion control blanket. Use a minimum of 2-inches straw mulch or North American Green Type S150 for slopes flatter than 3H:1V. Slope protection shall be placed on all disturbed areas immediately after completion of each section of construction activity, until the erosion control seeding has been established. As an option during temporary or seasonal work stoppages, a 6-mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be provided with an anchor trench at the top and bottom of the slope, and shall be sandbagged on the slopes as required to prevent damage or displacement by wind.

23. Permanent erosion control vegetation on all embankments and disturbed areas shall be re-established as soon as construction is completed.

24. Soil preparation. Topsoil should be prepared according to landscape plans, if available, or recommendations of grass seed supplier. It is recommended that slopes be textured before seeding by track walking (i.e. driving a crawling tractor up and down the slopes to leave a pattern of cleat imprints parallel to slope contours) or other method to provide stable areas for seeds to rest.

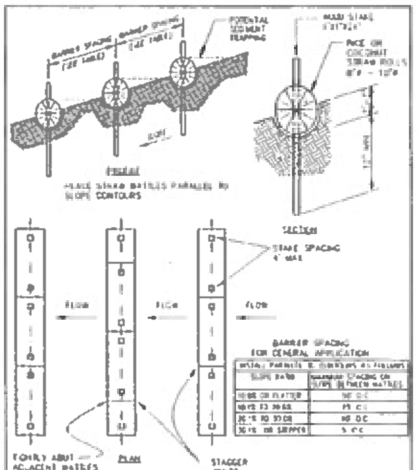
25. When used, hydroseeds shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10, or between September 1 and October 1. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.

26. When used in lieu of hydromulch, dry, loose, weed free straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat tractors, etc.). Mulch shall be spread uniformly immediately following seeding.

27. When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover.

28. Seeding. Recommended erosion control grass seed mix is as follows: Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80% by weight), creeping red fescue (20% by weight). Application rate shall be 100 lbs. per acre minimum.

29. Grass seed shall be fertilized at a rate of 10 lbs. per 1000 S.F. with 16-16-16 slow release type fertilizer. Development areas within 50 feet of water bodies and wetlands must use a non-phosphorous fertilizer.

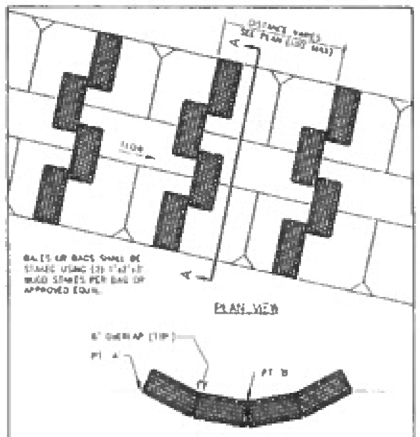



| BARRIER SPACING FOR GENERAL APPLICATION | |
|---|---|
| SLOPE RATIO | SPACING OF STRAW WATTLES |
| 10:1 OR FLATTER | 50' O.C. |
| 10:1 TO 3:1 | 25' O.C. |
| 3:1 TO 2:1 | 15' O.C. |
| 2:1 OR STEEPER | 5' O.C. |

NOTES:

1. ALL MATERIAL SHALL CONFORM TO 2000 STANDARD SPECIFICATIONS.
2. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP-SLOPE AREA IS PERMANENTLY STABILIZED.
3. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE ABOVE THE TOP OF THE STRAW WATTLE.
4. NEW SEDIMENT BARRIERS SHALL BE INSTALLED AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

| DEC. 2006 | | STANDARD |
|---|---|---|
| STRAW WATTLE SEDIMENT BARRIER (NTS) | | |
| WESTECH ENG. | | 6120 |




MAINTENANCE NOTES:

1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP-SLOPE AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND STRAW BALES OR BIOFILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.
4. PT. 'A' SHALL BE 6" MIN. HIGHER THAN PT. 'B'.

| JAN 2006 | | STANDARD |
|---|---|---|
| DITCH AND SWALE EROSION PROTECTION (NTS) | | |
| WESTECH ENG. | | 6140 |

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | REVISIONS | |

VERIFY SCALE

DSN: DM
DRN: BIP
CKD: DM
DATE: MAY 2010

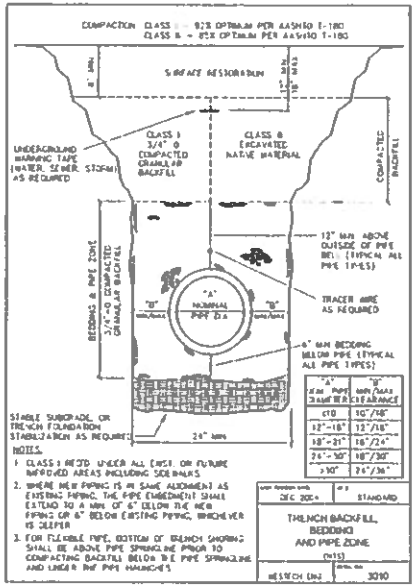
REVIEW

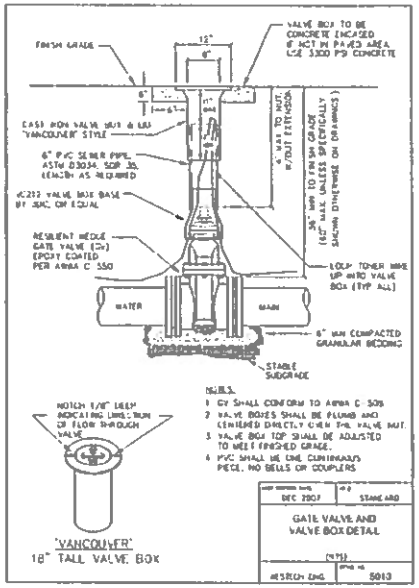
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986

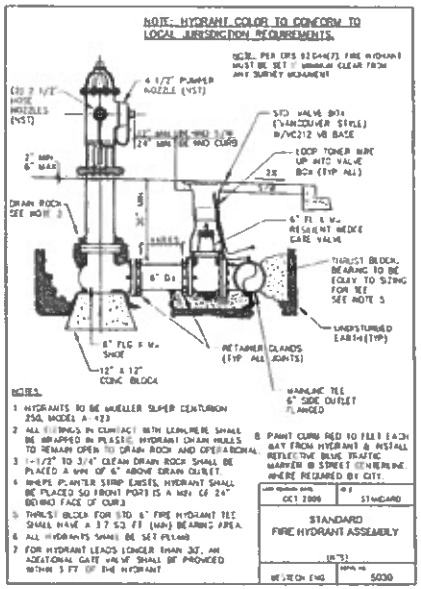
CITY OF DAYTON, OREGON
Dayton Wellfield, Well 3 VFD Improvements

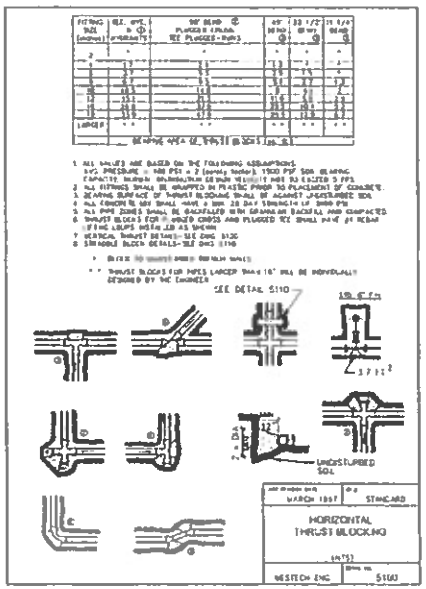
EROSION CONTROL
NOTES & DETAILS

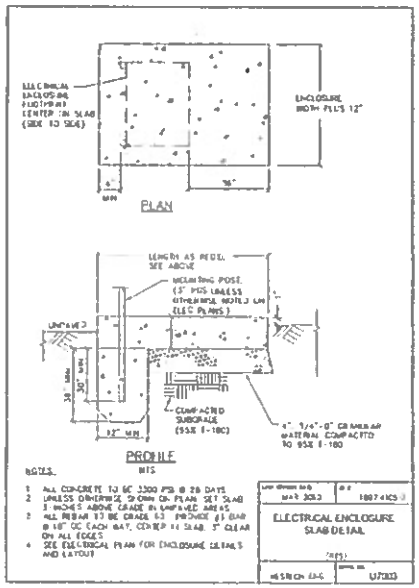
DRAWING NO. G005
SHEET 5 OF
JOB NUMBER 2609.4065.0



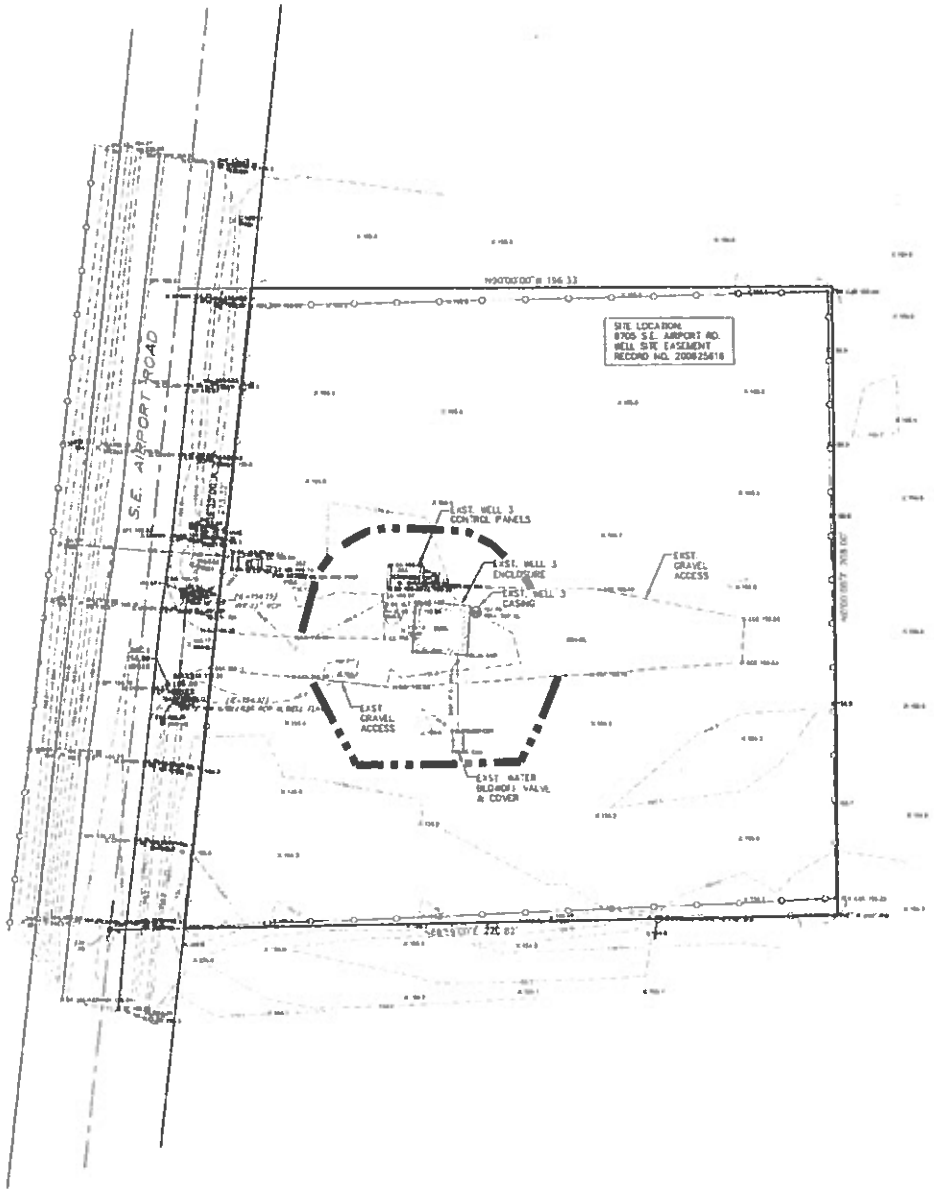






VERIFY SCALES
REVIEW
WESTECH ENGINEERING, INC. CIVIL & STRUCTURAL ENGINEERS AND PLANNERS

CITY OF DAYTON, OREGON
Dayton Westfield, Ward 3 YFD Improvements
CIVIL DETAILS
DRAWING NO. C001
SHEET 6 OF
JOB NUMBER 2609.4065.0




REVIEW

CITY OF DAYTON, OREGON

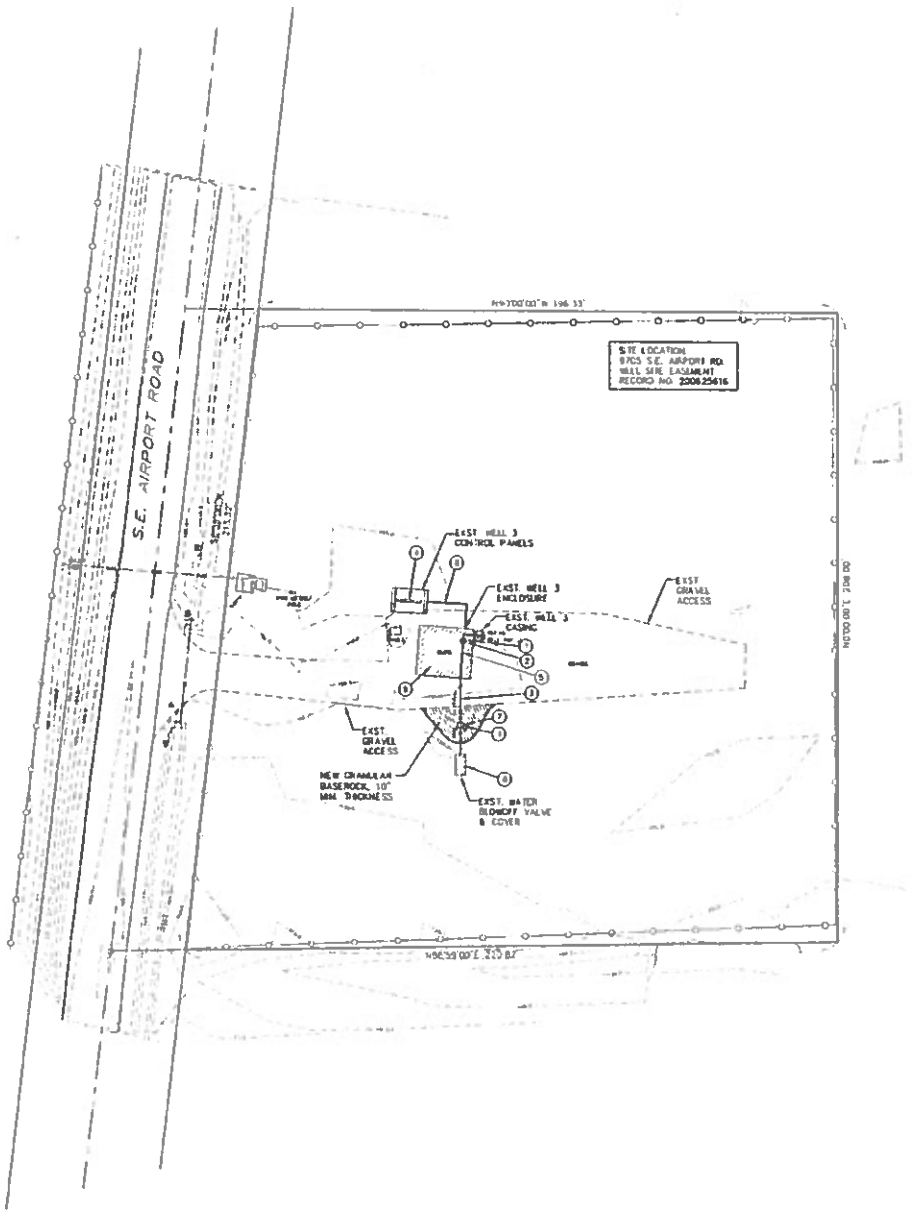
Dayton Wellfield Well 3 VFD Improvements

WELL NO. 3
EXISTING CONDITIONS/
EROSION CONTROL PLAN

DRAWING NO. C101

SHEET 7 OF

JOB NUMBER 2609 4065.0



SCALE: 1" = 20'

## KEY CALLOUTS - SITE & SITE PIPING

1. PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL POTHOLE WATER LINE & VERIFY ALIGNMENT, DEPTH AND DETERMINE IF WATER LINE CONFLICTS WITH DESIGN. IF CONFLICT EXISTS CONTACT ENGINEER.
2. 4" RESILIENT SEAT GATE VALVE (FLEX.) W/RETAINER GLAND
3. 4" DI PIPE W/FIELD LOK GASKETS
4. SHELTER W/ EXIS POWER/CONTROL PANELS
5. WELL BUILDING & METHANE STRIPPER PIPING. SEE DWG M102
6. REMOVE BLOWOFF VALVE & COVER
7. CUT 4" DI W/L & INSTALL FIRE HYDRANT, KENNEDY GUARDIAN K81A W/(2) 2½" PORTS & 4-INCH MJ SHOE W/RETAINER GLAND. INSTALL 6" MIN. THICK CRUSHED ROCK TO PROVIDE 3' MIN. WORKING AREA AROUND HYDRANT & CONNECTED TO EXIS GRAVEL PAD. PROVIDE CUT-OF-SERVICE BAG FOR HYDRANT AS SPECIFIED.
8. CONTRACTOR TO INSTALL CONDUITS. SEE ELECTRICAL FOR CONDUIT SIZE, # OF CONDUITS, & WIRE SIZE.
9. EXIS WELL & METHANE STRIPPER BUILDING TO REMAIN. (CONTRACTOR TO PROTECT)

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | | | |

DSM DLM
DRN BP
CKD DJU
DATE 10-1-2009

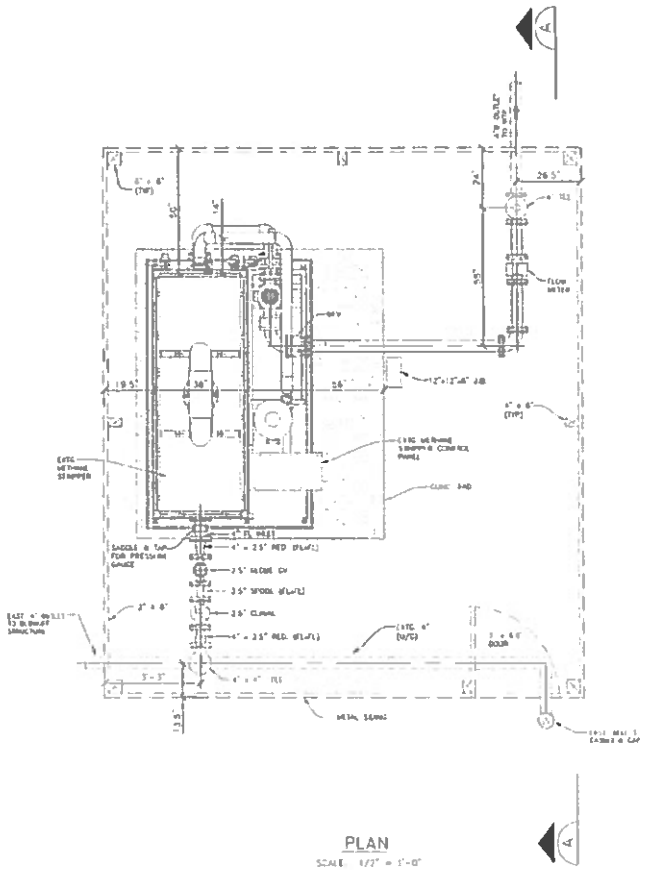
VERIFY SCALE

REVIEW

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 3 VFD Improvements

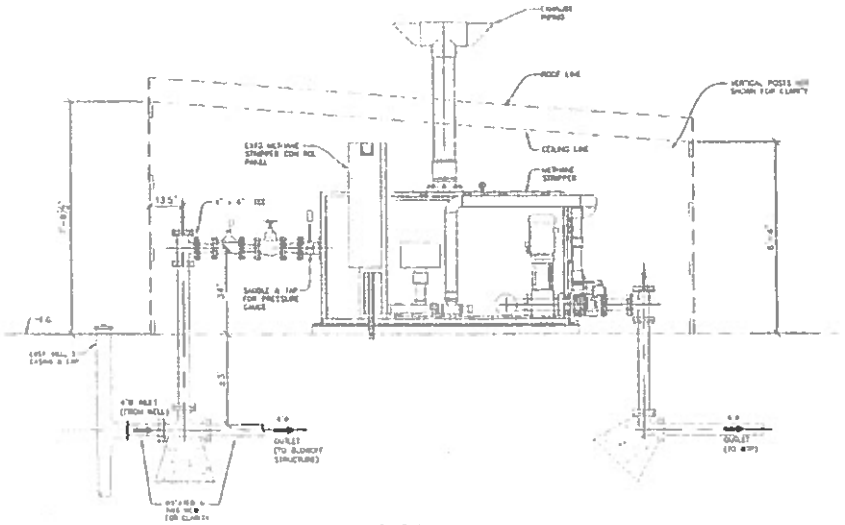
WELL NO. 3
SITE PIPING PLAN

DRAWING NO. C102
SHEET 8 OF
JOB NUMBER 2609.4065.0



PLAN

SCALE: 1/2" = 1'-0"



SECTION A-A

SCALE: 1/2" = 1'-0"

NOTE: ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS, AND ARE BELIEVED TO BE ACCURATE. HOWEVER, PRIOR TO STARTING CONSTRUCTION, CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. IF CONFLICT EXISTS-CONTACT ENGINEER

CITY OF DAYTON, OREGON

Dayton Wellfield, Well 3 VFD Improvements

WELL 3, EXISTING MECHANICAL PIPING PLAN & SECTIONS

DRAWING NO. M101

SHEET 9 OF

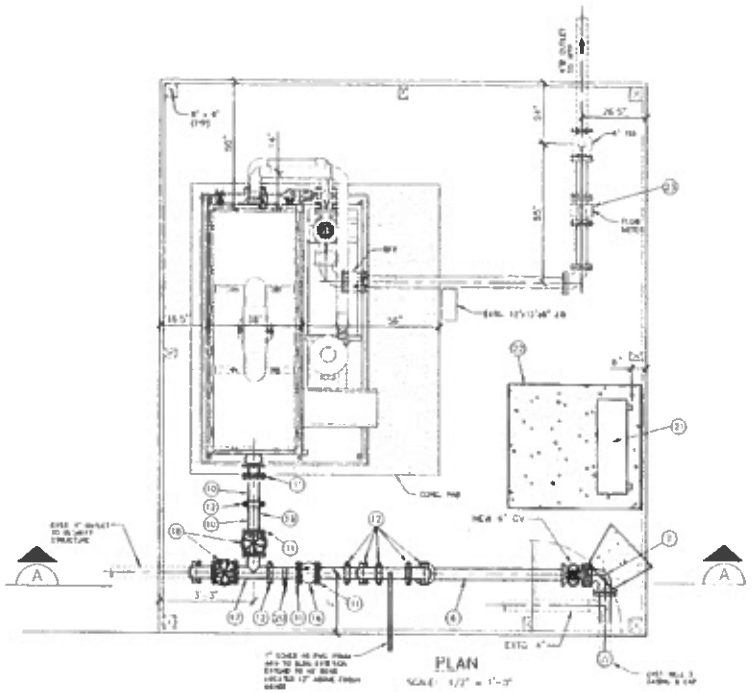
JOB NUMBER 2609.4065.0

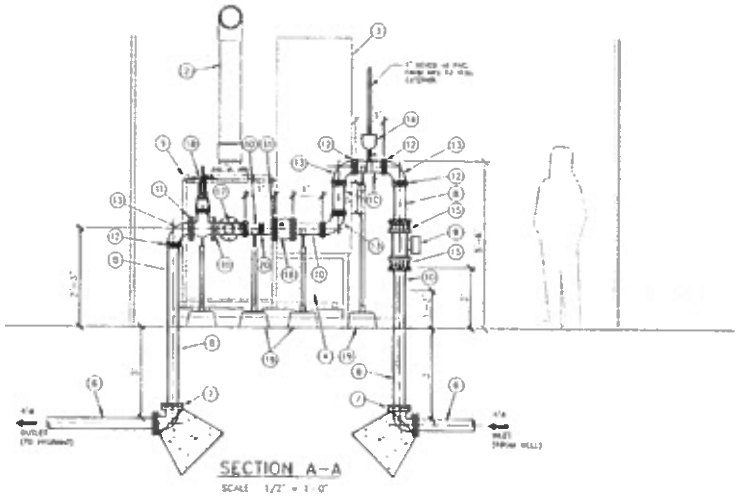
WEST COAST ENGINEERING, INC. CIVIL, STRUCTURAL, SURVEYING, PLANNING

REVIEW

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | REVISIONS |

DSN TJP
DRW BJT
CKD TMW
DATE 12-21-21

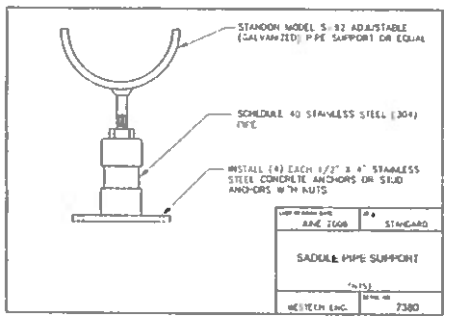



## KEY CALLOUTS - WELL BUILDING PIPING

1. EXISTING METHANE STRIPPER AS SPECD. LOWRY SYSTEMS DB63P MULTI-STAGE AERATION SYSTEM
2. EXISTING METHANE STRIPPER AIR EXHAUST STACK
3. EXISTING METHANE STRIPPER CONTROL PANEL
4. EXISTING METHANE STRIPPER BLOWER
5. EXISTING METHANE STRIPPER DISCHARGE BOOSTER PUMP 4" DISCHARGE, VFD SPEED CONTROL
6. 4" CLASS 52 DI PIPE
7. 4" DI 90° BEND (MJxMJ) W/ (2) RETAINER GLANDS & THRUST BLOCK
8. 4" DI PIPE (FExGRV) OR (PExPE) AS SHOWN, CL 53 MIN
9. 4" MAG FLOW METER W/FLOW TRANSMITTER AS SPECD. UNIMAG DS-M W/4411e TRANSMITTER (FLxFL)
10. 4" DI PIPE (GRVxGRV), CL 53 MIN
11. 4" VICTAULIC 341 LB FLANGE ADAPTER
12. 4" VICTAULIC 31 DI COUPLING
13. 4" VICTAULIC 10-C 90° BEND (GRVxGRV)
14. ARI D-040 OR APPROVED EQUAL w/ SCREEN PROVIDE VALVE WITH STAINLESS STEEL ISOLATION RING VALVE & HANDLE MOUNTED TO EPOXY COATED DI SERVICE SADDLE AS SPECD. INSTALL 1" SCHED 40 PVC FROM ARV OUTLET TO BUILDING EXTERIOR, EXTEND DOWN TO 45° BEND 12" ABOVE FINISH GRADE
15. 4" MEGA-FLANGE ADAPTOR
16. 4" FLANGED DI BODY SILENT CHECK VALVE, VAL-MATIC 1804 OR EQUAL
17. 4" VICTAULIC 20-C "EE" (GRVxGRV)
18. 4" RESILIENT SEAT WEDGE GATE VALVE AS SPECD. OS&Y STEM W/HANDWHEEL
19. ADJUSTABLE PIPE SUPPORT (FLANGE OR SADDLE STYLE AS SHOWN), STANDON OR EQUAL. SEE DETAIL 7380. MOUNT ON 12" x 12" CONCRETE PIER BLOCK
20. 3/4" SAMPLING PORT, BRASS VALVE W/HOSE BIB OUTLET. MOUNT TO EPOXY COATED DI SERVICE SADDLE
21. NEW VFD & PANEL (SEE ELECTRICAL FOR DETAILS) MOUNTED TO POSTS. SEE DT. 7003, DWG C001
22. NEW CONC. PAD SEE DTL 7003, DWG C001
23. CONTRACTOR TO REMOVE EXIST FLOW METER & REPLACE W/ 6" SPOOL. FLOW METER TO BE DELIVERED TO LAFAYETTE PUBLIC WORKS

NOTE: ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS AND ARE BELIEVED TO BE ACCURATE HOWEVER, PRIOR TO STARTING CONSTRUCTION CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & CONFLICT EXISTS-CONTACT ENGINEER




DESIGN: DM
DRAWN: BF
CHKD: DM
DATE: SEP 2009

| NO. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| | REVISIONS | | |

REVIEW

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF DAYTON, OREGON
Dayton Wellfield, Well 3 VFD Improvements

WELL 3 PROPOSED MECHANICAL PIPING PLAN & SECTIONS

DRAWING NO. M102
SHEET 10 OF
JOB NUMBER 2609.4065.0

DRAWINGS FOR:

# 1 - DAYTON WELLFIELD WELL DEVELOPMENT

(8925 SE Airport Road)

## Well No. 4 VFD Improvements

# 2 - LAFAYETTE WATERSHED IMPROVEMENTS

## Well No. 10/Bluebird Valve House Improvements

FOR: The City of Lafayette
P.O. Box 55
486 Third Street
Lafayette, Oregon 97127
503-864-2451

WELL 4 IS OWNED & OPERATED BY THE CITY OF LAFAYETTE.

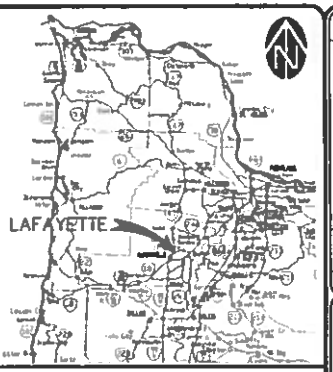
SHEET INDEX


| Sheet | Dwg. | Title |
|---|---|---|
| **GENERAL** | | |
| 1 | G001 | Cover Sheet, Vicinity & Location Maps, and Sheet Index |
| 2 | G002 | Well No. 4, Generalized Equipment & Process Schematic |
| 3 | G003 | Design Criteria & Sequence of Operations |
| 4 | G004 | Construction Notes & Legend |
| 5 | G005 | Erosion Control Notes & Details |
| **COMMON CIVIL DETAILS** | | |
| 6 | C001 | Civil Details |
| **CIVIL SITEWORK** | | |
| 7 | C101 | Well No. 4, Existing Conditions, Erosion Control & Demolition Plans |
| 8 | C102 | Well No. 4 Site Piping Plan |
| **MECHANICAL** | | |
| 9 | M101 | Well No. 4, Existing Mechanical Piping Plan & Sections |
| 10 | M102 | Well No. 4, Proposed Mechanical Piping Plan & Sections |
| **ELECTRICAL** | | |
| 11 | E101 | Electrical Site Plan & Legend |
| 12 | E102 | Control Building Electrical Plan |
| 13 | E103 | One-Line Diagrams & Schedules |
| 14 | E104 | Motor Control Schematic |
| **INSTRUMENTATION & CONTROL** | | |
| 15 | I100 | Instrument & Control, Legend and Schedules |
| 16 | I101 | 120VAC Power Distribution |
| 17 | I102 | Discrete Input Wiring Diagram |
| 18 | I103 | Discrete Input Wiring Diagram |
| 19 | I104 | Discrete Output Wiring Diagram |
| 20 | I105 | Analog Input Wiring Diagram |
| 21 | I106 | Analog Output Wiring Diagram |
| **WELL 10 VALVE HOUSE (ADDENDUM #1)** | | |
| 22 | | SHEET LAYOUT INDEX |
| 23 | | WELL 10 VALVE HOUSE - PLAN & PROFILE |
| 24 | | WELL 10 VALVE HOUSE - PLANS & SECTIONS |

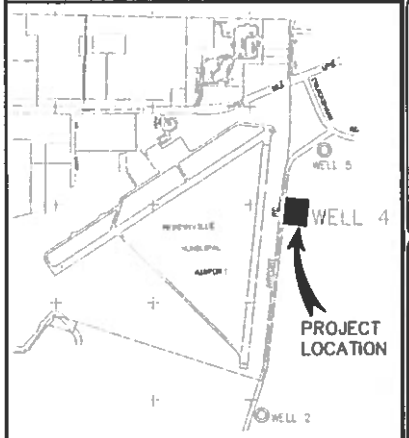

**RECORD DRAWINGS**

Revisions Drawn By: BR Date: 9/13/10

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.




VICINITY MAP




PROJECT LOCATION MAP

BENCHMARK INFORMATION
ELEVATIONS ARE BASED ON
CH2MHILL'S WATER SYSTEM IMPROVEMENT

DESCRIPTION / REVISIONS / BY / DATE / NO.

SCALE: AS NOTED

DES. JW
DRN. TT/DDP
CHD. JW
DATE: SEPT 2010

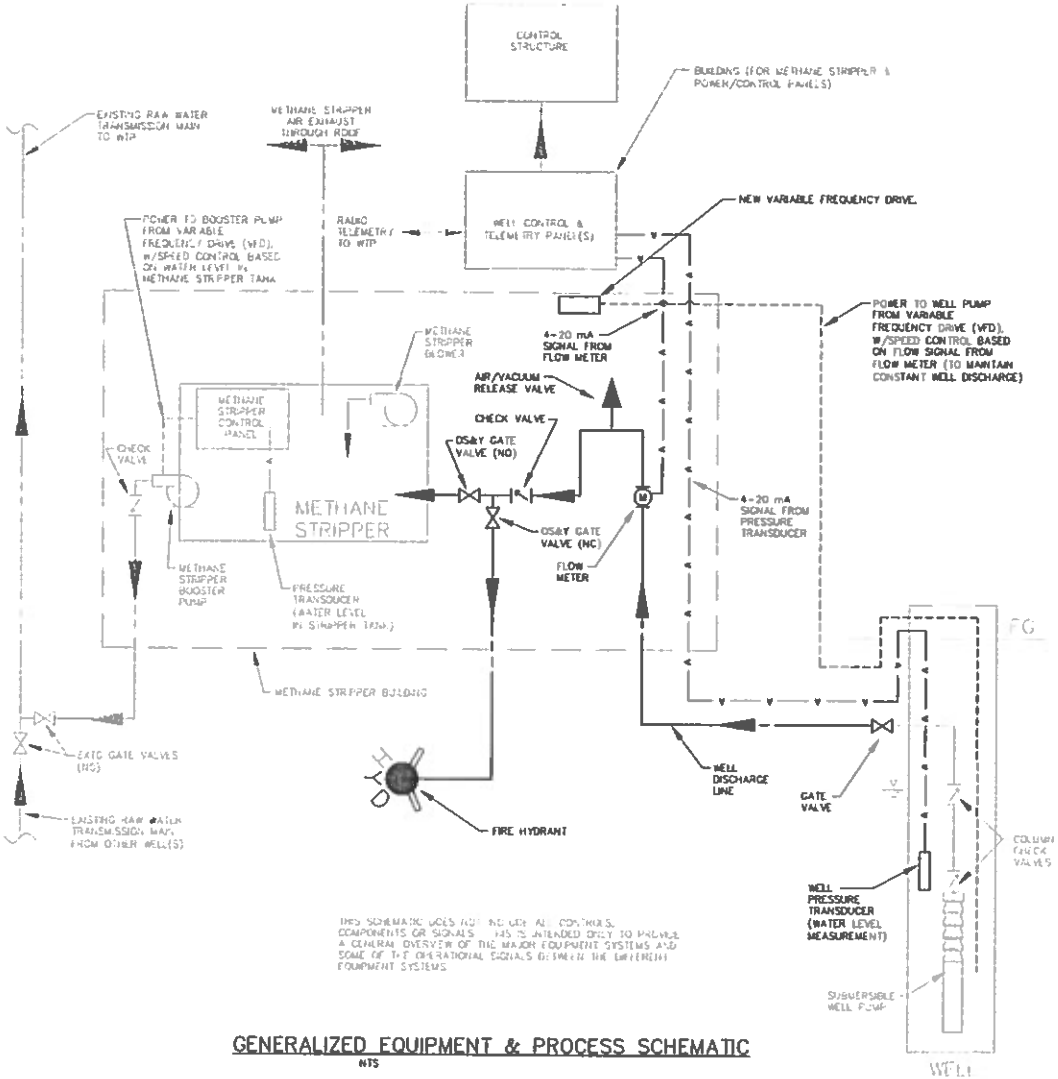
AS-CONSTRUCTED

WESTECH ENGINEERING, INC.

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 4 VFD Development

COVER SHEET
VICINITY & LOCATION MAPS, and SHEET INDEX

DRAWING NO. G001
SHEET 1 OF 21
JOB NUMBER 1897.4105.0




GENERALIZED EQUIPMENT & PROCESS SCHEMATIC
NTS

## GENERAL SEQUENCE OF OPERATIONS Well 4

1. The following sequence of operations does not include all steps and is intended only to outline a general framework of construction that meets the project sequencing requirements and maintains sewer service during the course of the work. In addition to the issues outlined herein, the Contractor shall conform to all City, County, and State conditions and directives concerning the work wherein each has jurisdiction. The Contractor can propose alternate construction sequencing, but such alternate sequencing must address the issues noted below.

2. The work will likely be completed in phases. Some of the work under these phases may simultaneously. The phases are:
   a. Phase I - Coordination and Equipment Procurement
   b. Phase II - VFD, Site & Mechanical Piping, & Control Panel
   c. Phase III - New Well System Performance Testing & Startup
   d. Phase IV - Place Well in Operation, Final Sitework

3. Phase I - Coordination, Submittals, Equipment Procurement, Site Preparation
   a. Submit schedule, equipment and material submittals, shop drawings and sequence of operations (if different than contained herein) to City and Engineer for review and approval.
   b. Coordinate procurement of materials and equipment.
   c. Notify utilities and coordinate activities as required.
   d. Obtain needed building and construction permits.
   e. Install erosion control measures.
   f. Pothole existing utilities, existing force main at connection point, etc. Notify Engineer of any conflicts or discrepancies

4. Phase II - VFD, Site & Mechanical Piping, & Control Panel
   a. Construct new site waterlines.
   b. Install process piping in new building.
   c. Install variable frequency drive (VFD) on well control panel.
   d. Submit draft equipment O&M manuals.

5. Phase III - New Well System Performance Testing & Startup
   a. Startup up and test booster pump, control panels, and other system components prior to placing system in operation. Contractor shall provide all equipment required for testing.
   b. Submit final O&M manuals. Final O&M manuals must be submitted and approved by the City prior to placing the new well in operation.

6. Phase IV - Place Well in Operation, Final Sitework
   a. Place well system in operation, provide final operator training.
   b. Complete remaining site surface restoration.
   c. Clean up and demobilize from the site.

**RECORD DRAWINGS**
Revisions Drawn By: BF Date: 9/13/10
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| NO | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | REVISIONS | |

VERIFY SCALE
If this bar does not measure 1" then adjust your plot scale accordingly
DSN: JWP
DRN: MDP
CHK: JW
DATE: JWP 8/10

AS-CONSTRUCTED
OREGON
WILLIAM F. WEBER
RENEWS 6/30/2011

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
phone: (503) 585-2474 fax: (503) 585-3986
e-mail: mail@westech-eng.com

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 4 VFD Development

WELL 4
GENERALIZED EQUIPMENT & PROCESS SCHEMATIC

DRAWING NO. G002
SHEET 2 OF 21
JOB NUMBER 1897.4105.0

GENERAL DESIGN CRITERIA (Well No. 4)

1. Well
   - Date drilled: 08/2002
   - Well Log #: Yamh 55101
   - Ground elevation @ casing after drilling: 158.7 ft
   - Well depth: 276 ft bgs (elev. -119.3')
   - Well diameter
   - 14" borehole
   - 10" casing grouted to 103' bgs
   - Filter pack below 105' bgs
   - Screen: 0.065" slot, 10" ID
   - Screen intervals: See As-built
   - 136-170' bgs
   - 216-217' bgs
   - 258-264' bgs
   - Static Water Level 37' bgs (11/02)

2. Design Discharge Conditions
   - Summer (assumes 90 day continuous pumping)
   - Pump rate: 180 gpm
   - Drawdown: 50 ft
   - Max. pump lift: ±185 ft (ie. pump shutoff level bgs)
   - Winter (assumes 90 day continuous pumping)
   - Pump rate: 260 gpm
   - Drawdown: 81 ft
   - Max. pump lift: ±270 ft (ie. pump shutoff level)

3. Well Pump
   - Type: Grundfos 300S150 (4 stage)
   - Pump design point: 300 gpm @145' TDH
   - Pump diameter: 6"
   - Pump motor fully shrouded for cooling
   - Motor size: 15 hp (new 2006)
   - Motor speed: 3450 rpm full speed
   - Pump setting: ±173 ft bgs (intake)
   - Column pipe: 5" dia.
   - Column check valves: top of pump & ±100' above pump
   - Well Discharge: Pitless adapter w/3' bury

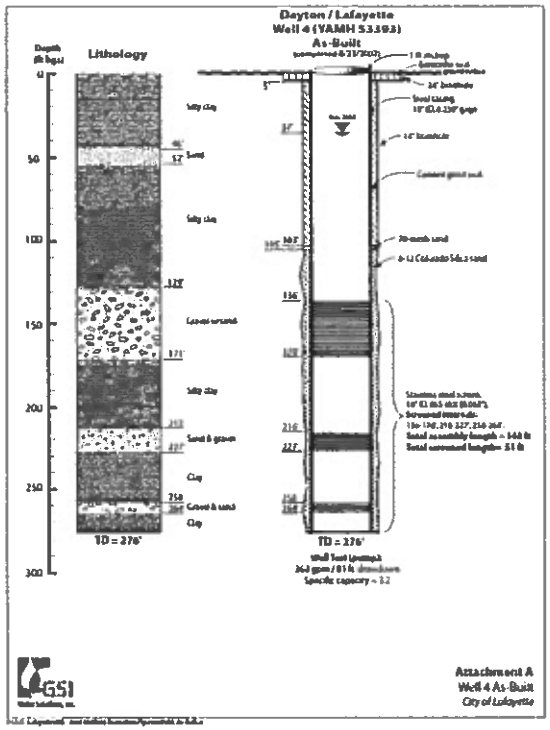
4. Well Pump Operational & Hydraulic Control
   - On/Off telemetry signal from WTP, local manual over-ride
   - Well Pump Speed Control: Variable Frequency Drive (VFD)
   - Magnetic flow meter on well discharge, 4-20 mA signal for VFD control
   - Pressure transducer in well for low level pump protection
   - Isolation valves to allow well to be pumped to waste

5. Methane Stripper
   - Multistage aeration stripper w/booster pump & controls (Lowrey D663P)
   - Design flow rate: 240 gpm
   - Blower: Spencer VB-075, 10 hp regenerative blower
   - Design air flow rate: 392 scfm
   - Design methane removal: 97.3%
   - Booster pump: vertical multi-stage, 10 hp
   - Booster pump control: VFD based on level in stripper tank

6. Flow monitoring
   - Flow meter outside well building (direct reading and totalizer)

7. Standby Power System
   - None, manual transfer switch

8. Telemetry
   - Radio to WTP




KEY CALLOUTS - WELLHEAD/CASING/PUMP

1. PITLESS WELL ADAPTER UNIT.
2. LOWER BARREL, 10" DIA. STEEL
3. UPPER BARREL, 10" DIA. STEEL
4. STEEL COLUMN PIPE.
5. 6" FLANGED DISHARGE CONNECTION
6. 1" (MIN) DROP TUBE CONNECTOR (EXTENDS THROUGH SEAL SECTION OF PITLESS ADAPTER).
7. 1" THREADED & PERFORATED PVC DROP TUBE AS SPECIFIED FOR LEVEL TRANSDUCER.
8. WATERTIGHT WELL CAP W/NEOPRENE GASKET
9. 2" WELL SCREEN WITH STAINLESS STEEL SCREEN
10. JUNCTION BOX (FOR WELL POWER CABLE & TRANSDUCER WIRE).
11. WELL SCREEN INTERVAL
12. SUBMERSIBLE WELL PUMP & MOTOR.
13. PUMP COLUMN CHECK VALVE (EPOXY COATED DUCTILE IRON) MOUNT @ 1ST JOINT ABOVE PUMP

**RECORD DRAWINGS**

Revisions Drawn By: BF Date: 9/13/10

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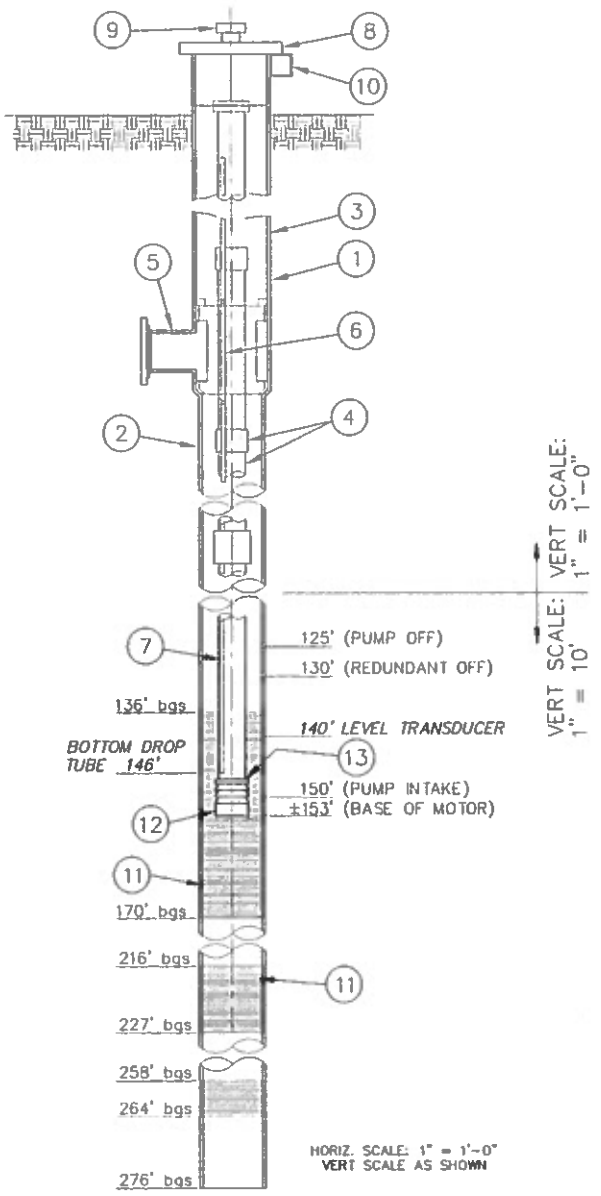


WELL NO. 2
WELL SECTION (EXTG)

AS-CONSTRUCTED

WESTRICK ENGINEERING, INC.

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 4 VFD Development

WELL NO. 4
DESIGN CRITERIA & SEQUENCE OF OPERATIONS

DRAWING NO. G003
SHEET 3 OF 21
JOB NUMBER 1897.4105.0

**GENERAL NOTES:**

1 Contractor shall procure and conform to all construction permits required by the City of Lafayette and Yamhill County.

2 Contractor shall provide all bonds and insurance required by public and/or private agencies having jurisdiction.

3 All materials and workmanship for facilities in street right-of-way or easements shall conform to approving agencies' construction specifications wherein each has jurisdiction, including but not limited to the City, County, Oregon Health Division (OHD) and the Oregon Department of Environmental Quality (DEQ).

4 Unless otherwise approved by the Public Works Director, construction of all public facilities shall be done between 7:00 a.m. and 6:00 p.m., Monday through Friday, and between 9:00 a.m. and 6:00 p.m. Saturday.

5 The Contractor shall perform all work necessary to complete the project in accordance with the approved construction drawings including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.

6 Contractor to notify City, County, ODOT and all utility companies a minimum of 48 business hours (2 business days) prior to start of construction, and comply with all other requirements of ORS 757.541 to 757.571.

7 Any inspection by the City, County or other agencies shall not, in any way, relieve the Contractor from any obligation to perform the work in strict compliance with the applicable codes and agency requirements.

8 Contractor shall erect and maintain barricades, warning signs, traffic cones per City, County and ODOT requirements in accordance with the MUTCD (including Oregon amendments). Access to driveways shall be maintained at all times. All traffic control measures shall be approved and in place prior to any construction activity.

9 Record Drawings: The Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record any approved deviations in construction from the approved drawings, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the City upon request.

10 Upon completion of construction of public facilities, Contractor shall submit a clean set of field record drawings containing all as-built information to the Design Engineer for use in the preparation of As-Built drawings for submittal to the City.

11 Address Numbers: Per OFC 505.1, all new and existing buildings shall have approved address numbers (4" minimum number height) placed in a position that is plainly legible and visible from the fronting street. Temporary address signs shall be mounted in a visible location prior to and during any construction, and the permanent numbers mounted prior to occupancy.

**EXISTING UTILITIES & FACILITIES:**

12. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

13 The location and descriptions of existing utilities shown on the drawings are compiled from available records and/or field surveys. The engineer or utility companies do not guarantee the accuracy or the completeness of such records. Contractor shall field verify sizes and locations of all existing utilities prior to construction.

14 The Contractor shall locate and mark all existing property and street monuments prior to construction. Any monuments disturbed during construction of the project shall be replaced by a Registered Land Surveyor at the Contractor's expense. The monuments shall be replaced within a maximum of 90 days, and the County Surveyor shall be notified in writing as required by ORS 209.150.

15 Contractor shall field verify location and depth of all existing utilities where new facilities cross. All utility crossings marked or shown on the drawings shall be potholed using hand tools or other non-invasive methods prior to excavating or boring. Contractor shall be responsible for exposing potential utility conflicts far enough ahead of construction to make necessary grade modifications without delaying the work. If grade modification is necessary, Contractor shall notify the Design Engineer, and the Design Engineer shall obtain approval from the City Engineer prior to construction. All utility crossings shall be potholed as necessary prior to excavating or boring to allow the Contractor to prevent grade or alignment conflicts.

16. All existing facilities shall be maintained in place by the Contractor unless otherwise shown or directed. Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. Contractor to leave existing facilities in an equal or better-than-original condition and to the satisfaction of the City Engineer.

17 Utilities, or interfering portions of utilities, that are abandoned in place shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug the remaining exposed ends of abandoned utilities.

18 Contractor shall remove all existing signs, mailboxes, fences, landscaping, etc., as required to avoid damage during construction and replace them to existing or better condition.

**GRADING, PAVING & DRAINAGE:**

19 The Contractor shall be responsible for managing construction activities to insure that public streets and right of ways are kept clean of mud, dust or debris. Dust abatement shall be maintained by adequate watering of the site by the Contractor.

20 Unless otherwise noted, all grading, rocking and paving to conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

21 Immediately following fine grading operations, compact subgrade to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Subgrade must be inspected and approved by the City prior to placing embankments or base rock.

22 Unless otherwise shown on the drawings, straight grades shall be run between all finish grade elevations and/or finish contour lines shown.

23 Crushed rock shall conform to the requirements of OSSC (ODOT/APWA) 02630.10 (Dense Graded Base Aggregate). Compact to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor). Prior to placing AC pavement, written compaction test results for baserock and trench backfill must be received by the City, and a proof-roll (witnessed by the City) must be performed.

24 All existing or constructed manholes, cleanouts, monuments, water valves and similar structures shall be adjusted to match finish grade of the area wherein they lie.

**PIPED UTILITIES:**

25 Contractor shall coordinate and pay all costs associated with connecting to existing water, sanitary sewer and storm sewer facilities.

26 Unless otherwise noted, materials and workmanship for water, sanitary sewer and storm sewer shall conform to OSSC (ODOT/APWA) Specifications, 2008 edition.

27. Bedding and Backfill: All pipes shall be bedded with minimum 6-inches of 3/4" minus crushed rock bedding and backfilled with compacted 3/4" minus crushed rock in the pipe zone (crushed rock shall extend a minimum of 12-inches over the top of the pipe in all cases). Crushed rock trench backfill shall be used under all improved areas, including sidewalks. Granular trench backfill shall be compacted to 92% of the maximum dry density per AASHTO T-180 test method (Modified Proctor).

28 The Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade. The bottom of the trench excavation shall be shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.

29 Contractor shall provide all materials, equipment and facilities required for testing all utility piping in accordance with City construction specifications.

30. Tracer Wire: All water piping located outside of the public right-of-way or not laid in straight lines between structures shall have an electrically conductive insulated 12 gauge copper tracer wire the full length of the installed pipe using blue wire for water. Tracer wire shall be extended up into all valve boxes.

31. Warning Tape: Detectable or non-detectable acid and alkali resistant safety warning tape shall be provided along the full length of all water mainline segments not located under paved portions of public streets.

32 No trenches in roads or driveways shall be left in an open condition overnight. All such trenches shall be closed before the end of each work day and normal traffic flows restored.

• Water

33 City forces to operate all valves, including fire hydrants, on existing public mains.

34 All water mains shall be C-900 PVC (DR 18) or Class 52 ductile iron as shown. All fittings 4-inches through 24-inches in diameter shall be ductile iron fittings in conformance with AWWA C-153 or AWWA C-110. The minimum working pressure for all MJ cast iron or ductile iron fittings 4-inches through 24-inch in diameter shall be 350 psi for MJ fittings and 250 psi for flanged fittings.

35 All water mains to be installed with a minimum 36-inch cover to finish grade unless otherwise noted or directed. Service lines to be installed with a minimum 30 inches cover within the right-of-way. Deeper depths may be required as shown on the drawings or to avoid obstructions.

36 Thrust restraint shall be provided on all bends, tees and other direction changes per local jurisdiction requirements and as specified or shown on the drawings. Unless otherwise approved by the City Engineer, all valves shall be flange connected to adjacent tees or crosses.

37 Contractor shall install temporary plug and blowoff as required at the end of waterline for flushing, testing and chlorination.

38 The work shall be performed in a manner designated to maintain water service in existing waterlines. In no case shall service to any main line be interrupted for more than four (4) hours in any one day. Contractor shall notify the City a minimum of 48 hours (2 business days) prior to any interruption of service.

**FRANCHISE UTILITIES**

39 Unless otherwise shown on the drawings and approved in writing by all jurisdictions having authority, new and relocated private utilities shall be installed underground.

40 Contractor shall coordinate with power or telephone company for location of conduits in common trenches, as well as location of vaults, pedestals, etc. Installation of private utilities in a common trench with or within 3 feet horizontally of paralleling watermains is prohibited.

41 Power & telephone trenching and conduits shall be installed per utility company requirements with pull wire. Contractor shall verify with utility company for size, location and type of conduit prior to construction, and shall ensure that trenches are adequately prepared for installation per utility company requirements. All changes in direction of utility conduit runs shall have long radius steel bends.

**TESTING AND INSPECTION:**

42 The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems arising from uninspected work. Inspections shall include inspection and/or special inspection as required by any building permit.

43 Unless otherwise specified, the attached "Required Testing and Frequency" table outlines the minimum testing schedule for the project. This testing schedule is not complete, and does not relieve the Contractor of the responsibility of obtaining all necessary inspections or observations for all work performed, regardless of who is responsible for payment. Cost for retesting shall be borne by the Contractor.

**RECORD DRAWINGS**

Revisions Drawn By: BF Date: 9/13/10

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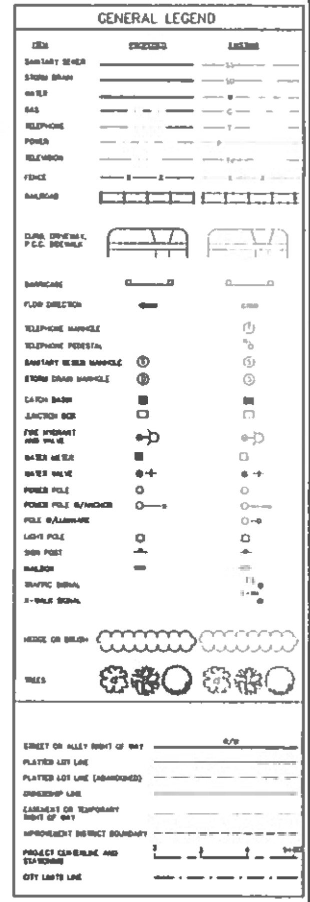
| REQUIRED TESTING AND FREQUENCY TABLE | | Party Responsible for payment: Contractor | | Others (see note 1) |
|---|---|---|---|---|
| **Streets, Parking Lots, Pads, Fills, etc.** | | | | |
| Subgrade | 1 Test/4000 S.F./Lift (4 min) | ✓ | See note 2 | |
| Baserock | 1 Test/4000 S.F./Lift (4 min) | ✓ | See note 2 | |
| **Piped Utilities, All** | | | | |
| Trench Backfill | 1 Test/200 Foot Trench/Lift (4 min) | ✓ | See note 2 | |
| **Water** | | | | |
| Pressure Test | (to be witnessed by Owner's Representative or approving agency) | ✓ | See note 3 | |
| Bacterial Water Test | Per Oregon Health Division | ✓ | See note 2 | |
| Chlorine Residual Test | Per City Requirements | ✓ | | |

Note 1: "Others" refers to Owner's authorized Representative or Approving Agency as applicable. Contractor responsible for scheduling testing. All testing must be completed prior to performing subsequent work.

Note 2: Testing must be performed by an approved independent testing laboratory.

Note 3: To be witness by the Owner's Representative or approving agency. The Contractor shall perform pretests prior to scheduling witnessed waterline or sanitary sewer pressure tests, or pipeline [illegible] test.

## GENERAL LEGEND




| NO | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | REVISIONS | |

VERIFY SCALE

DSN: JW DWN: MDP CKD: JW DATE: APR 2010

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF LAFAYETTE, OREGON

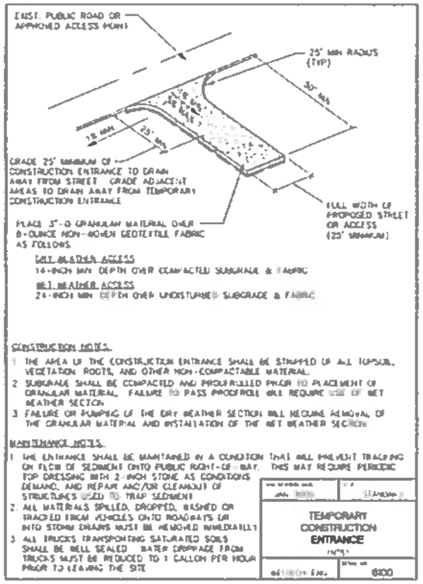
Dayton Wallfield, Well 4 FVD Development

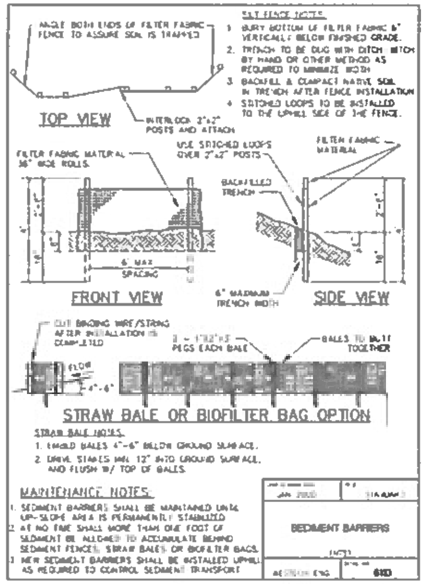
CONSTRUCTION NOTES & LEGEND

DRAWING NO. G004

SHEET 4 OF 21

JOB NUMBER 1897.4105.0




**EROSION CONTROL NOTES:**

1. Clearing and grading erosion control measures shall be in place prior to site disturbance. All other necessary erosion control measures shall be implemented prior to starting work on the portion/phase of the project to which the measures are related. Erosion control measures shall be maintained in such a manner as to ensure that sediment and sediment-laden water does not enter the drainage system, roadways, or violate applicable water quality standards.

2. The erosion control construction, maintenance, replacement and upgrading of the erosion control facilities is the responsibility of the Contractor until all construction is completed and approved, and permanent erosion control (i.e. vegetation/landscaping) is established on all disturbed areas.

3. All recommended erosion control procedures are dependent on construction methods, staging, site conditions, weather and scheduling. During the construction period, erosion control facilities shall be upgraded as necessary due to unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.

4. The Contractor is responsible for control of sediment transport within project limits. If an installed erosion control system does not adequately contain sediment on site, then the erosion control measures shall be adjusted or supplemented by the Contractor as necessary to ensure that sediment laden water does not leave the site. Additional measures shall be provided as required to ensure that all paved areas are kept clean for the duration of the project. Additional interim measures will include, at a minimum, installation of hay bale sediment barriers or silt fences in accordance with the details shown on the drawings. These measures shall be installed along all exposed embankments and cut slopes to prevent sediment transport.

5. All existing and newly constructed storm inlets and drains shall be protected until pavement surfaces are completed and/or vegetation is established.

6. Erosion control facilities and sediment fences on active sites shall be inspected by the Contractor at least daily during any period with measurable precipitation. Any required repairs or maintenance shall be completed immediately. The erosion control facilities on inactive sites shall be inspected and maintained by the Contractor a minimum of once a month or within 24 hours following the start of a storm event.

7. At no time shall sediment accumulation within a trapped catch basin exceed 80% of the sediment capacity. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system. The Contractor shall remove all accumulated sediment from all impacted catch basins and storm pipes prior to acceptance by the Owner.

8. The Contractor is solely responsible for protection of all adjacent property and downstream facilities from erosion and siltation during project construction. Any damage resulting from such erosion and siltation shall be corrected at the sole expense of the Contractor.

9. The Contractor shall provide site watering as necessary to prevent wind erosion of fine-grained soils.

10. Unless otherwise indicated on the drawings, all temporary erosion control facilities, including sediment fences, hay bales, silt sacks, bio-bags, etc. shall be removed by the Contractor within 30 days after permanent landscaping/vegetation is established.

11. Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to a post.

12. Sediment fence shall be installed per drawing details. Sediment fences shall have adequate support to contain all silt and sediment captured.

13. The standard strength filter fabric shall be fastened securely to stitched loops installed on the upslope side of the posts, and 6 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

14. Straw bales shall be standard 40 to 80-pound rectangular bales of cereal grain or seed straw. Straw bales shall be keyed into the ground a minimum of 4 to 6 inches, and be held in place by 1-inch x 2-inch x 36-inch wood stakes driven through the bales and into the ground a minimum of 12-inches.

15. Bio-filter bags shall be clean 100 percent wood product waste. Bags shall be 18-inch x 18-inch x 30-inch, weigh approximately 45 lbs., and be contained in a bag made of 1/2-inch plastic mesh.

16. Sediment barriers shall be maintained until the up-slope area has been permanently stabilized. At no time shall more than 10-inches of sediment be allowed to accumulate behind sediment fences and straw bales. No more than 2 inches of sediment shall be allowed to accumulate behind bio-filter bags. Sediment shall be removed prior to reaching the above stated depths. New sediment barriers shall be installed uphill as required to control sediment transport.

17. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

18. The Contractor shall verify that all trucks are well sealed when transporting saturated soils from the site. Water drippage from trucks transporting saturated soils must be reduced to less than 1 gallon per hour prior to leaving the site.

19. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto the public right-of-way or approved access point. The entrance may require periodic top dressing as conditions demand, and repair and/or cleanout of any structures used to trap sediment.

20. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately, and the Contractor shall provide protection of downstream inlets and catch basins to ensure sediment laden water does not enter the storm drain system.

21. Temporary grass cover measures must be fully established by Nov 1st, or other cover measures (ie. erosion control blankets with anchors, 3-inches minimum of straw mulch, 6 mil HDPE plastic sheet, etc.) shall be in place over all disturbed soil areas until April 30th. To establish an adequate grass stand for controlling erosion by Nov. 1st, it is recommended that seeding and mulching occur by September 1st. Straw mulch, if used, shall not leave any bare ground visible through the straw.

22. Minimum wet weather slope protection. For 3H:1V or steeper slopes use Bon Terra Type C2 or North American Green Type C125 erosion control blanket. Use a minimum of 2-inches straw mulch or North American Green Type S150 for slopes flatter than 3H:1V. Slope protection shall be placed on all disturbed areas immediately after completion of each section of construction activity, until the erosion control seeding has been established. As an option during temporary or seasonal work stoppages, a 6-mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be provided with an anchor trench at the top and bottom of the slope, and shall be sandbagged on the slopes as required to prevent damage or displacement by wind.

23. Permanent erosion control vegetation on all embankments and disturbed areas shall be re-established as soon as construction is completed.

24. Soil preparation. Topsoil should be prepared according to landscape plans, if available, or recommendations of grass seed supplier. It is recommended that slopes be textured before seeding by track walking (ie. driving a crawling tractor up and down the slopes to leave a pattern of cleat imprints parallel to slope contours) or other method to provide stable areas for seeds to rest.

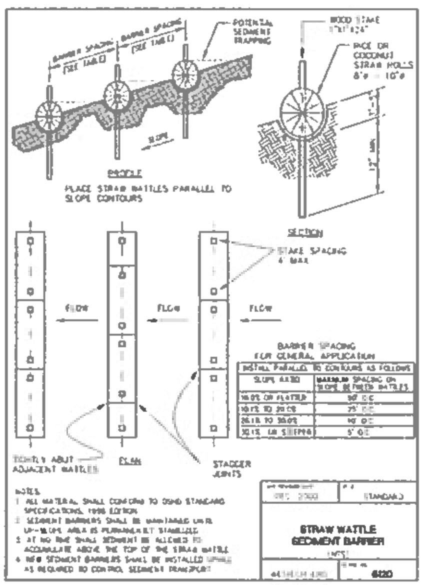
25. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10, or between September 1 and October 1. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.

26. When used in lieu of hydromulch, dry, loose, weed free straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.

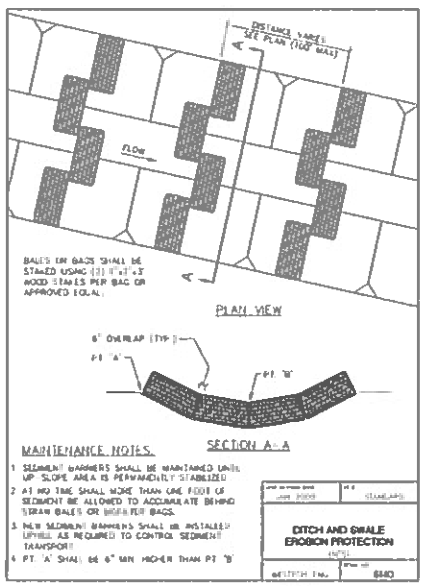
27. When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover.

28. Seeding. Recommended erosion control grass seed mix is as follows. Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80% by weight), creeping red fescue (20% by weight). Application rate shall be 100 lbs. per acre minimum.

29. Grass seed shall be fertilized at a rate of 10 lbs. per 1000 S.F. with 16-16-16 slow release type fertilizer. Development areas within 50 feet of water bodies and wetlands must use a non-phosphorous fertilizer.




| INSTALL PARALLEL TO CONTOURS AS FOLLOWS | |
|---|---|
| SLOPE RATIO | MAXIMUM SPACING ON SLOPE BETWEEN WATTLES |
| 10:1 OR FLATTER | 50' O.C. |
| 10:1 TO 20:1 | 25' O.C. |
| 2H:1 TO 3H:1 | 10' O.C. |
| 2H:1 OR STEEPER | 5' O.C. |




**RECORD DRAWINGS**

Revisions Drawn by: BF Date: 8/13/10

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| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | | | |

REVISIONS

VERIFY SCALE

DSN: JW
DRN: MDP
CKD: JW
DATE: APR 2010

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

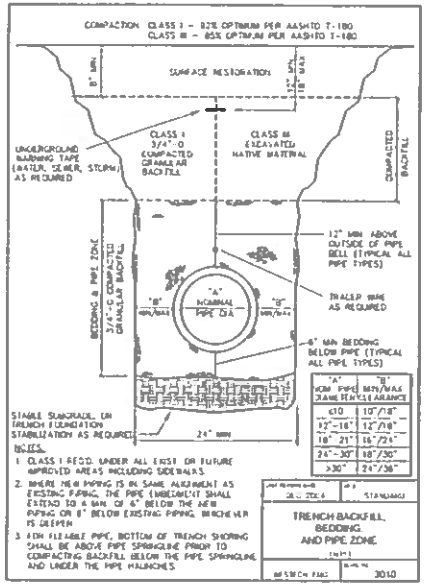
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 4 VFD Development

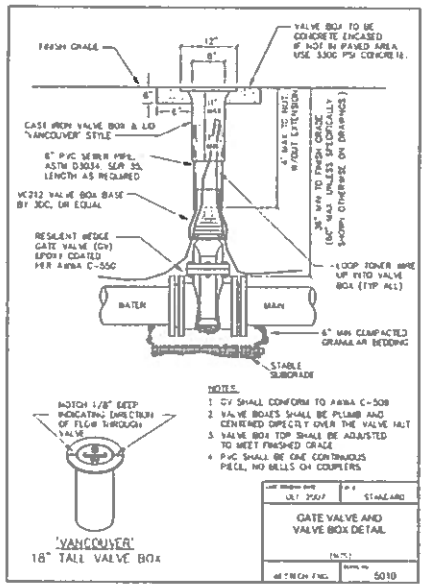
EROSION CONTROL NOTES & DETAILS

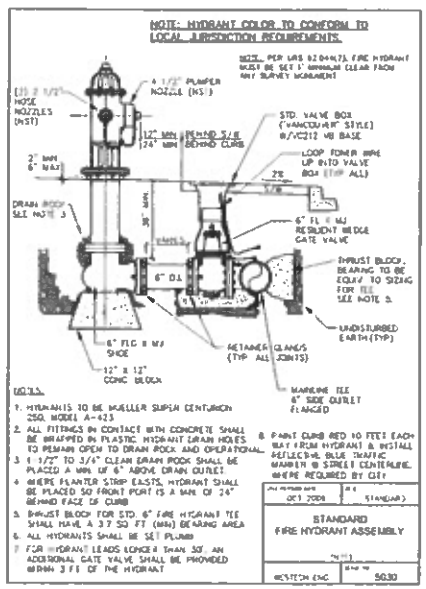
DRAWING NO. G005

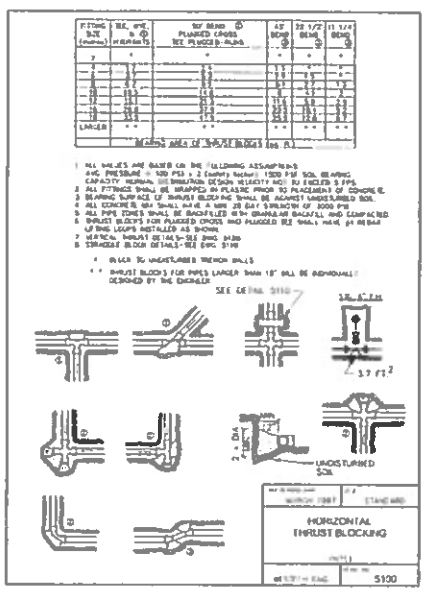
SHEET 5 OF 21

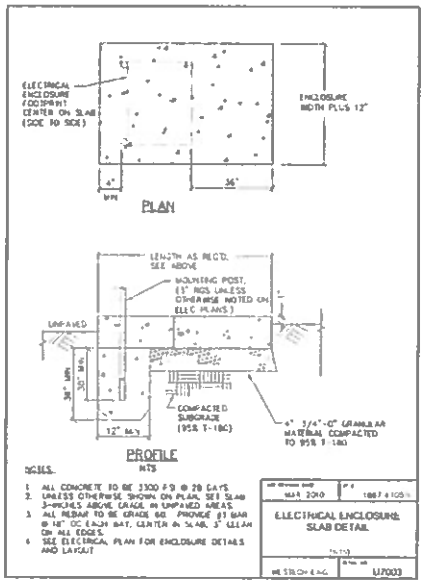
JOB NUMBER 1897.4105.0




**RECORD DRAWINGS**

Reviewed/Drawn By BF Date 9/13/10

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| NO. | DESCRIPTION | BY |
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| 1 | REVISIONS | |

DSN: JAY
DRN: TMT
CHK: JW
DATE: APR 2010

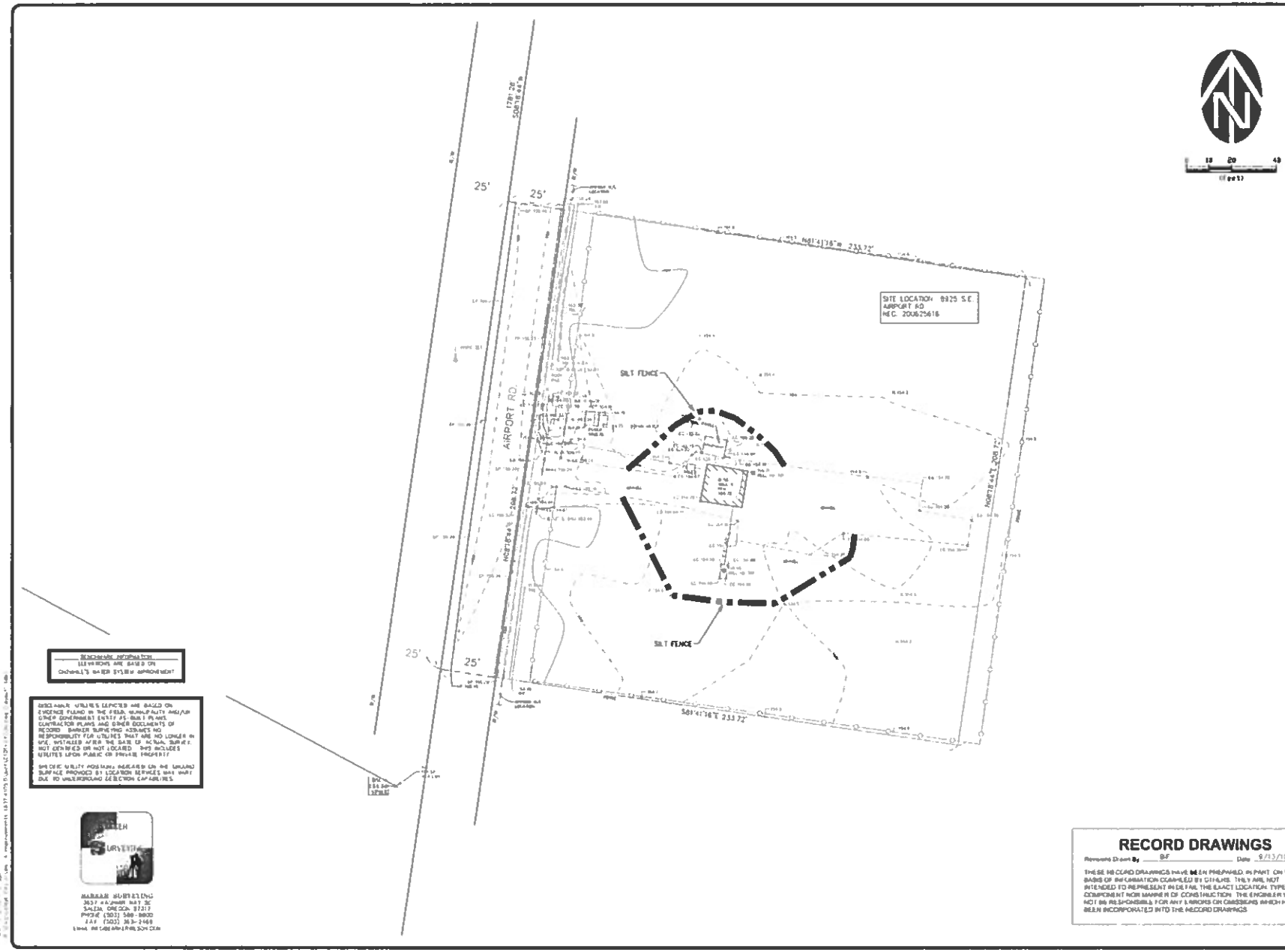
VERIFY SCALE

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-2488
E-mail: mail@westech-eng.com

CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 4 WD Development
CIVIL DETAILS

DRAWING NO.
C001
SHEET
6 OF 21
JOB NUMBER
1897.4105.0


25'
25'
AIRPORT RD.
SITE LOCATION: 8925 S.E. AIRPORT RD REC. 200625618
SILT FENCE
SILT FENCE
25'
25'
N01°41'16"W 233.72'
S01°41'16"E 233.72'
NORTH 447.20'
NORTH 447.20'
BENCHMARK INFORMATION
ELEVATIONS ARE BASED ON
ODOT/MILL'S BASIS SYSTEM IMPROVEMENT
BENCHMARK UTILITIES DEPICTED ARE BASED ON EVIDENCE FOUND IN THE FIELD DURING AN AS-BUILT AND/OR OTHER CONVENIENT SURVEY AS-BUILT PLANS CONTRACTOR PLANS AND OTHER DOCUMENTS OF RECORD BARKER SURVEYING ASSUMES NO RESPONSIBILITY FOR UTILITIES THAT ARE NO LONGER IN USE INSTALLED AFTER THE DATE OF ACTUAL SURVEY NOT DEPICTED OR NOT LOCATED THIS INCLUDES UTILITIES UPON PUBLIC OR PRIVATE PROPERTY
SOME UTILITY POSITIONS INDICATED ON THE GROUND SURFACE PROVIDED BY LOCATION SERVICES MAY VARY DUE TO UNDERGROUND DETECTION CAPABILITIES
BARKER SURVEYING
3657 KASHMIR WAY SE
SALEM, OREGON 97317
PHONE (503) 588-8800
FAX (503) 363-2469
EMAIL INFO@BARKERSURVEYING.COM
RECORD DRAWINGS
Reviewed Drawn By BF Date 9/13/10
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NO. DATE DESCRIPTION BY
REVISIONS
DRN JW
DSN RDP
CHK JW
DATE MAR 2010
VERIFY SCALE
AS CONSTRUCTED
DEVELOPMENT ENGINEERING, INC.
CIVIL SURVEYING PLANNING
CITY OF LAFAYETTE, OREGON
Dayton Westfield, Well 4 WFD Development
WELL NO. 4
EXISTING CONDITIONS/
EROSION CONTROL PLAN
DRAWING NO.
C101
SHEET
7 OF 21
JOB NUMBER
1897.4105.0

## KEY CALLOUTS - SITE & SITE PIPING

1. PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL POTHOLE UTILITY LINE & VERIFY ALIGNMENT, DEPTH AND DETERMINE IF UTILITY LINE CONFLICTS WITH DESIGN. IF CONFLICT EXISTS CONTACT ENGINEER.
2. 4" RESILIENT SEAT GATE VALVE (FLXMJ) W/RETAINER GLAND
3. 4" DI PIPE W/FIELD LOK GASKETS
4. SHELTER W/ EXTG POWER/CONTROL PANELS
5. WELL BUILDING PIPING & METHANE STRIPPER, SEE DWG W102
6. REMOVE SPLASH PAD & 4" D.I. PIPING TO NEW HYDRANT CONNECTION.
7. CUT 4" D.I. W/L & INSTALL FIRE HYDRANT, KENNEDY GUARDIAN K81A W/(2) 2½" PORTS & 4-INCH MJ SHOE W/RETAINER GLAND. INSTALL 6" MIN. THICK CRUSHED ROCK TO PROVIDE 3' MIN. WORKING AREA AROUND HYDRANT & CONNECTED TO EXTG GRAVEL PAD.
8. CONTRACTOR TO REMOVE EXTG FLOW METER & REPLACE W/ D.I. SPOOL. FLOW METER TO BE DELIVERED TO LAFAYETTE PUBLIC WORKS.
9. CONTRACTOR TO INSTALL CONDUITS. SEE ELECTRICAL FOR CONDUIT SIZE, # OF CONDUITS, & WIRE SIZE.
10. EXTG WELL & METHANE STRIPPER BUILDING TO REMAIN. (CONTRACTOR TO PROTECT).
11. WELL NO. 4 PIPING:
    - 6" FLANGE OUTLET WEST (EXTG)
    - 6" FLxMJ ADAPTER (EXTG)
    - 6" FLx4" MY REDUCER (EXTG)
    - 4" MJ 90° BEND (EXTG)
    - 4" MJ GV INSIDE DOOR (NEW)
    - 4" PER SHEET 10

**RECORD DRAWINGS**

Revisions Drawn By: BF Date: 9/13/10

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| NO | DATE | DESCRIPTION / REVISIONS | BY |
|---|---|---|---|

DSN: JW
DRN: MDP
CKD: JW
DATE: JUNE 2010

AS CONSTRUCTED

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
Phone (503) 585-2474 Fax (503) 585-3986
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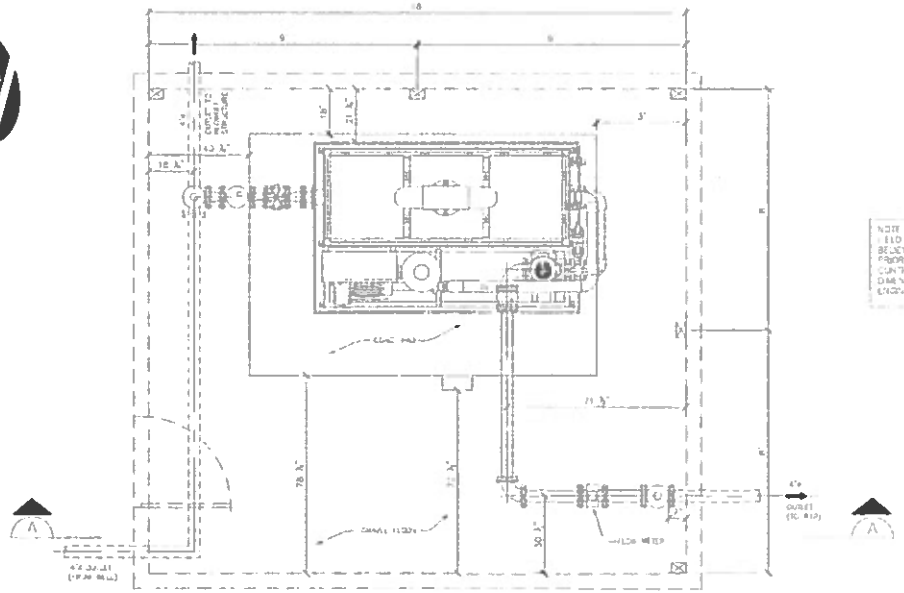
CITY OF LAFAYETTE, OREGON
Dayton Wellfield, Well 4 VFD Development

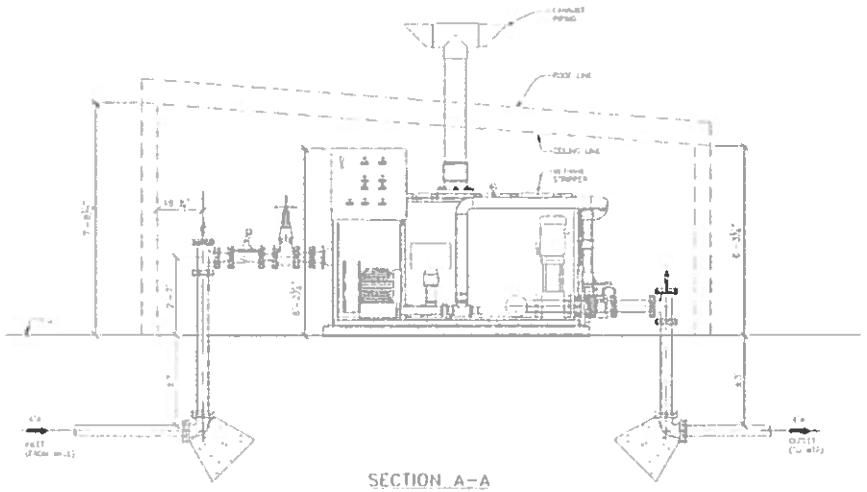
# WELL NO. 4
# SITE PIPING PLAN

DRAWING NO. C102
SHEET 8 OF 21
JOB NUMBER 1897.4105.0



NOTE: ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS AND ARE BELIEVED TO BE ACCURATE. HOWEVER PRIOR TO STARTING CONSTRUCTION CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & CONFLICT EXISTS CONTACT ENGINEER

PLAN



SECTION A-A

**RECORD DRAWINGS**

Revisions Drawn By: BF Date: 9/13/10

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | INITIATED | |

DSN: JW
DWN: MDP/BF
CKD: JW
DATE:

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

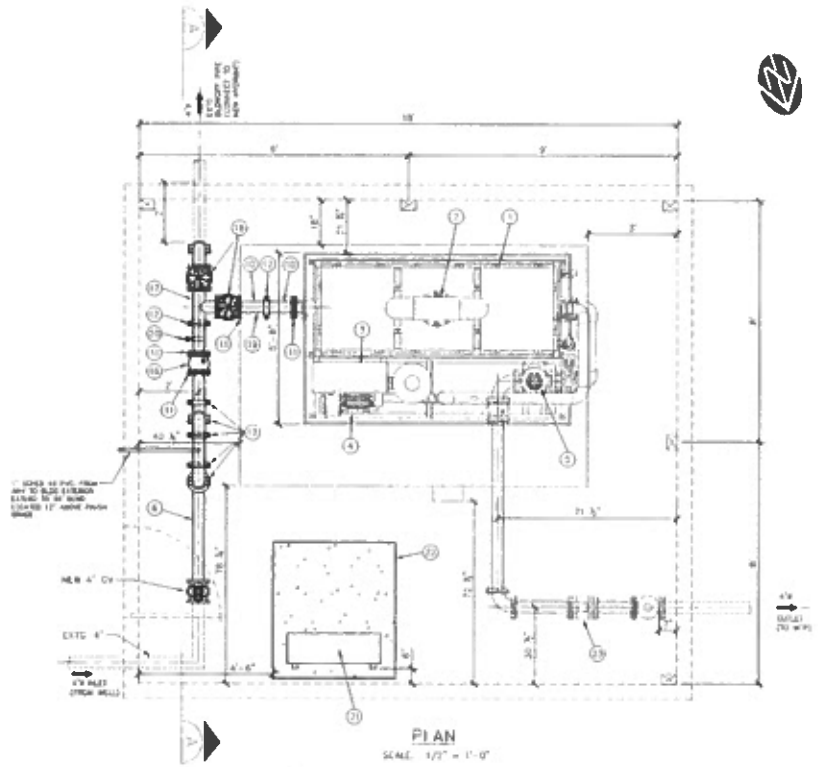
CITY OF LAFAYETTE, OREGON
Well Nos. 4 Improvements

WELL NO 4, EXISTING MECHANICAL PIPING PLAN & SECTIONS

DRAWING NO.
M101

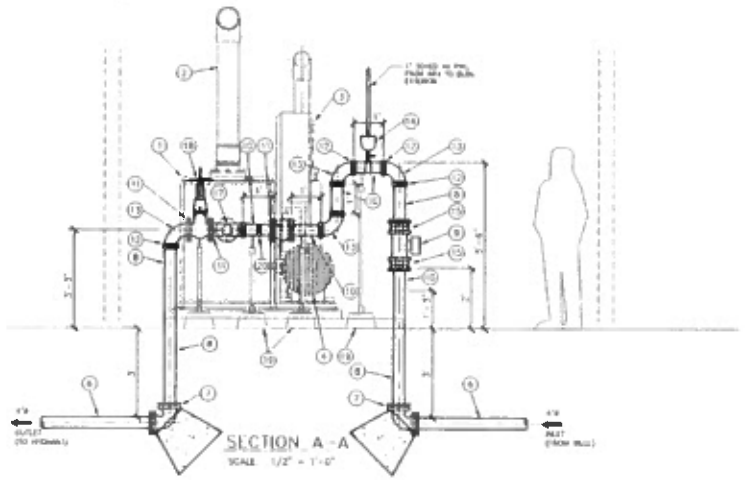
SHEET
9 OF 21

JOB NUMBER
1897.4105.0



PLAN

SCALE: 1/2" = 1'-0"



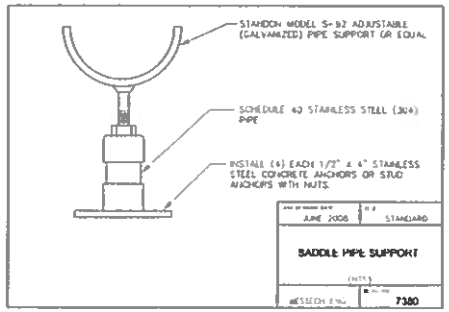
SECTION A-A

SCALE: 1/2" = 1'-0"

## KEY CALLOUTS - WELL BUILDING PIPING

1. EXISTING METHANE STRIPPER AS SPEC'D. (GAW SYSTEMS DB63P MULTI-STAGE AERATION SYSTEM
2. EXISTING METHANE STRIPPER AIR EXHAUST STACK.
3. EXISTING METHANE STRIPPER CONTROL PANEL.
4. EXISTING METHANE STRIPPER BLOWER
5. EXISTING METHANE STRIPPER DISCHARGE BOOSTER PUMP 4" DISCHARGE, VFD SPEED CONTROL.
6. 4" CLASS 52 DI PIPE.
7. 4" DI 90° BEND (MJxMJ) W/ (2) RETAINER GLANDS & THRUST BLOCK
8. 4" DI PIPE (PExGRV) OR (PExPE) AS SHOWN, CL 53 MIN
9. 4" MAG FLOW METER W/FLOW TRANSMITTER AS SPEC'D. UNIMAG US-M W/4411e TRANSMITTER (FLxFL)
10. 4" DI PIPE (GRVxGRV), CL 53 MIN
11. 4" VICTAULIC 341 DI FLANGE ADAPTER
12. 4" VICTAULIC 31 DI COUPLING
13. 4" VICTAULIC 10-C 90° BEND (GRVxGRV).
14. A.R.I. D-040 OR APPROVED EQUAL W/ SCREEN. PROVIDE VALVE WITH STAINLESS STEEL ISOLATION BALL VALVE & HANDLE MOUNTED TO EPOXY COATED DI SERVICE SADDLE AS SPEC'D. INSTALL 1" SCHED 40 PVC FROM AIR OUTLET TO BUILDING EXTENSION, EXTEND DOWN TO 45° BEND 12" ABOVE FINISH GRADE.
15. 4" MEGA-FLANGE ADAPTOR
16. 4" FLANGED DUAL BODY SILENT CHECK VALVE VAL-MATIC 1804 OR EQUAL.
17. 4" VICTAULIC 20-C TEE (GRVxGRV)
18. 4" RESILIENT SEAT WEDGE GATE VALVE AS SPEC'D, OS&Y STEM W/HANDWHEEL.
19. ADJUSTABLE PIPE SUPPORT (FLANGE ON SADDLE STYLE AS SHOWN), STANDON OR EQUAL, SEE DETAIL 7380. MOUNT ON 12" x 12" CONCRETE PIER BLOCK.
20. 3/4" SAMPLING PORT, BRASS VALVE W/HOSE BIB OUTLET & VACUUM BREAKER. MOUNT TO EPOXY COATED DI SERVICE SADDLE
21. NEW VFD & PANEL (SEE ELECTRICAL FOR DETAILS) MOUNTED TO POSTS. SEE DTL 7003, DWG C001
22. NEW CONC. PAD SEE DTL 7003, DWG C001
23. CONTRACTOR TO REMOVE EXIST'G FLOW METER & REPLACE W/ D.I. SPOOL. FLOW METER TO BE DELIVERED TO LAFAYETTE PUBLIC WORKS.

NOTE: ALL DIMENSIONS ARE BASED ON FIELD MEASUREMENTS, AND ARE BELIEVED TO BE ACCURATE. HOWEVER, PRIOR TO STARTING CONSTRUCTION CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & CONFLICT EXISTS-CONTACT ENGINEER




## RECORD DRAWINGS

Revisions Drawn By: BF Date: 6/13/10

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| BY | DATE | DESCRIPTION |
|---|---|---|
| BF | 6/13/10 | AS-CONSTRUCTED |

REVISIONS

DESIGNED: JW
DRAWN: MDP/BF
CHECKED: JW
DATE: APR 2010

REGISTERED PROFESSIONAL ENGINEER — OREGON — 71 JAMES WHITTLE — EXPIRES: 6/30/2010

AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CIVIL ENGINEERS, PLANNERS AND SURVEYORS

CITY OF LAFAYETTE, OREGON
Well Nos. 4 Improvements

WELL NO. 4 PROPOSED MECHANICAL PIPING PLAN & SECTIONS

DRAWING NO. M102

SHEET 10 OF 21

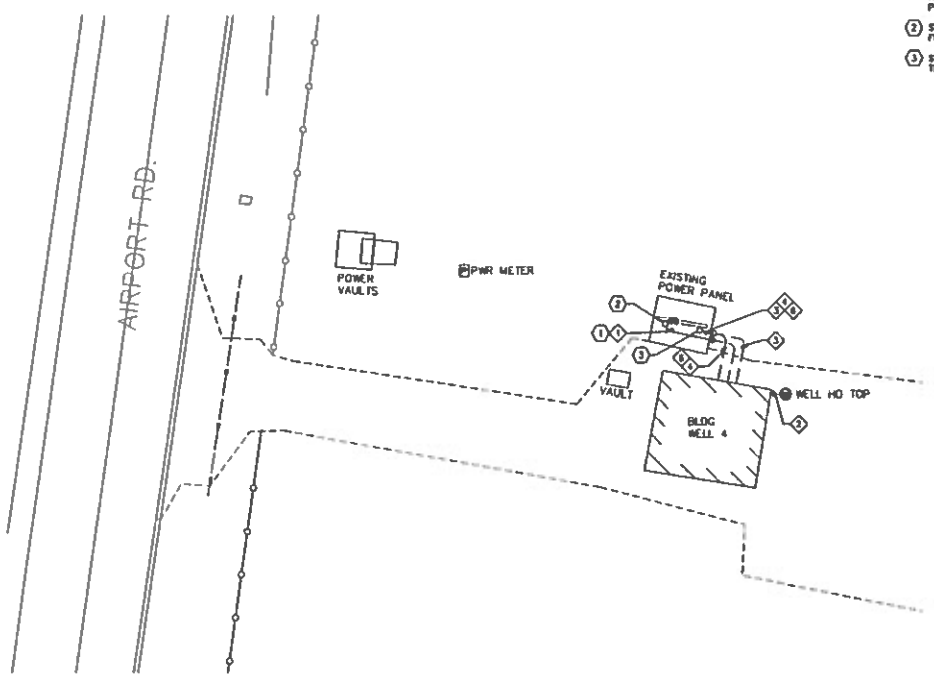
JOB NUMBER 1897.4105.0

## ELECTRICAL LEGEND

- ELECTRICAL EQUIPMENT
- WALL SWITCH
- GFI DUPLEX RECEPTACLE–NORMAL, GROUND FAULT INTERRUPTING
- CONNECTION TO SPECIAL EQUIPMENT OR OUTLET AS SHOWN
- P4 HOME RUN, ELECTRICAL PANEL DESTINATION SHOWN.
- * CONDUIT CONCEALED UNDERFLOOR OR UNDERGROUND.
- * CONDUIT CONCEALED IN WALL OR ABOVE CEILING IN FINISHED AREAS, EXPOSED IN PROCESS AND EQUIPMENT AREAS.
  - * NOTE: ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO.12 CONDUCTORS IN CONDUIT. RUNS MARKED WITH CROSS–HATCHES INDICATE NUMBER OF NO.12 WIRE. LARGER GAUGES ARE SHOWN. REVERSE SLANT INDICATES GREEN GROUND WIRE. SIZE CONDUIT ACCORDING TO ELECTRICAL SPECIFICATIONS AND APPLICABLE CODE. LONG CROSS HATCH INDICATES NEUTRAL.
- JUNCTION BOX
- GROUND CONNECTION PER NEC ARTICLE 250
- TRANSFORMER
- 400AF THERMAL MAGNETIC CIRCUIT BREAKER, FRAME SIZE AND TRIP SETTING SHOWN
- MOTOR, HORSEPOWER SHOWN
- CURRENT TRANSFORMER
- MOTOR THERMAL OVERLOAD RELAY
- OR MOTOR STARTER CONTACTOR, NEMA OR IEC SIZE RATING SHOWN
- IEC 115kW
- THERMAL MAGNETIC CIRCUIT BREAKER
- 15MC MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUITS ONLY) CONTINUOUS CURRENT RATING AND TRIP SETTINGS SHOWN
- 400AF FUSE
- DRAWING NOTE
- ELECTRICAL CIRCUIT IDENTIFICATION
- MULTIPLE ELECTRICAL CIRCUITS, SEPARATE CONDUITS
- 1"C MULTIPLE ELECTRICAL CIRCUITS, COMMON CONDUIT (SIZE SHOWN)

## ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| ASD | ADJUSTABLE SPEED DRIVE (VFD) |
| ATS | AUTOMATIC TRANSFER SWITCH |
| CB | CIRCUIT BREAKER |
| CU | COPPER |
| GND | GROUND |
| MH | MANDHOLE |
| KW | KILOWATT |
| LP | LIGHTING PANEL |
| MCB | MAIN CIRCUIT BREAKER |
| MTS | MANUAL TRANSFER SWITCH |
| PGE | PORTLAND GENERAL ELECTRIC |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |
| RGS | RIGID GALVANIZED STEEL |
| SSTL | STAINLESS STEEL |
| VFD | VARIABLE FREQUENCY DRIVE |
| WP | WEATHERPROOF |
| XDCR | TRANSDUCER |
| XFMR | TRANSFORMER |




SITE PLAN
SCALE: 1" = 15'-0"

## KEYED NOTES

1. MAINTAIN SEPARATION OF CONTROL CONDUIT FROM POWER CONDUIT (24" HORIZONTALLY AND VERTICALLY). CONDUITS SHALL BE PVC–RGS.
2. STUB CONDUIT UP INTO 480V WIRE GUTTER FOR CONNECTION OF VFD POWER.
3. STUB CONDUITS UP INTO EXISTING TELEMETRY PANEL 04FP1.

### RECORD DRAWING

ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY FARRAR ELECTRIC.
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VERIFY SCALE

| BY | DESCRIPTION | NO. | DATE |
|---|---|---|---|
| DSN: | MKD | | |
| DWN: | CJD | | |
| CHK: | DHS | | |
| DATE: | NOV '08 | | |

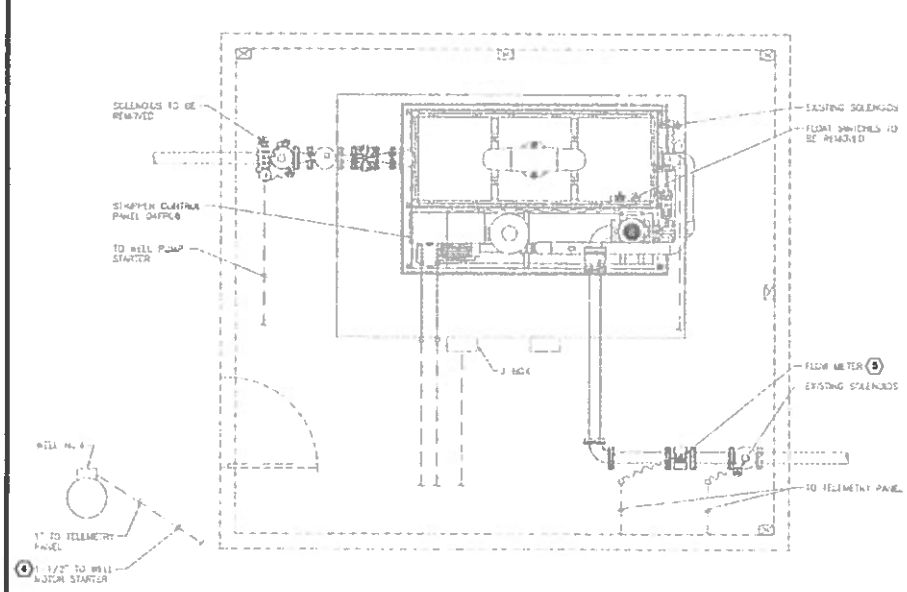
R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

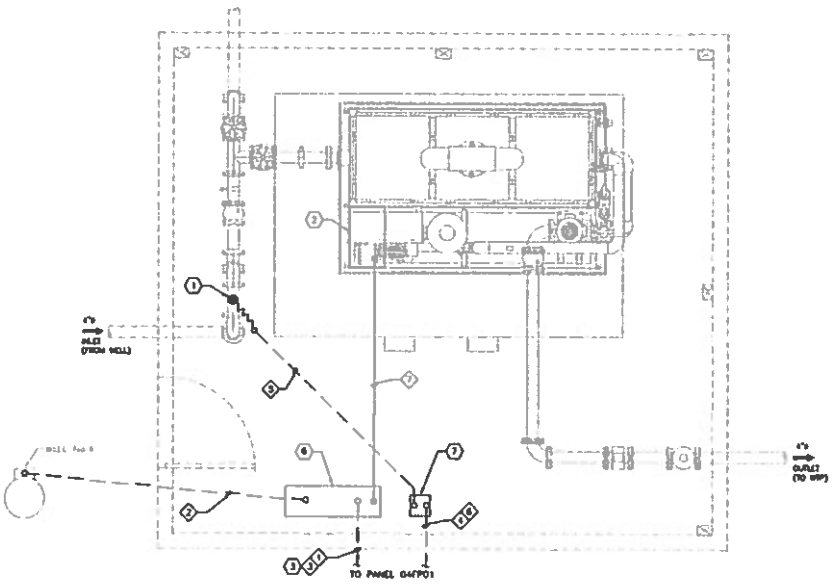
CITY OF DAYTON – LAFAYETTE, OREGON
Water System Improvements, Site No. 4, Well No. 4

# WELL 4, ELECTRICAL SITE PLAN AND LEGEND

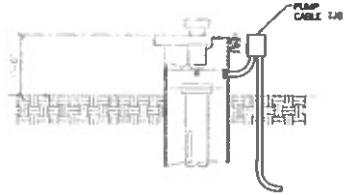
DRAWING NO. E101
SHEET 11 OF 21
JOB NUMBER 1897.4105.0



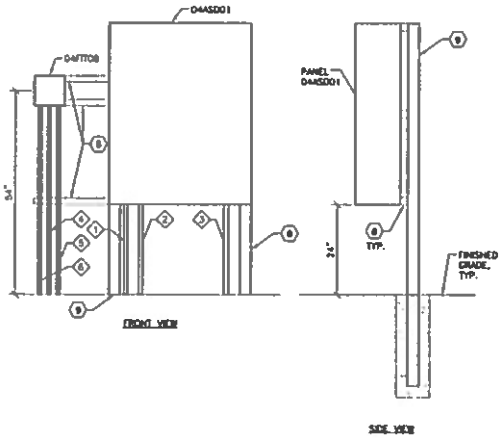

DEMOLITION PLAN
SCALE: 1/2" = 1'-0"




POWER AND SIGNAL PLAN
SCALE: 1/2" = 1'-0"




(1) E102 WELLHEAD DETAIL
NOT TO SCALE




(2) E102 04ASD01 PANEL MOUNTING FRAME DETAIL
NOT TO SCALE

## KEYED NOTES

1. 04FL08, FLOW METER TUBE.
2. 04FP08 METHANE STRIPPER PACKAGE CONTROL PANEL.
3. MAINTAIN 24" SEPARATION, MINIMUM, BETWEEN POWER AND SIGNAL CIRCUITS HORIZONTALLY AND VERTICALLY.
4. REMOVE MOTOR CONDUCTORS AND ABANDON CONDUIT IN PLACE.
5. DISCONNECT AND REMOVE EXISTING FLOW METER CONDUCTORS.
6. 04ASD01 MOTOR STARTER PANEL, SEE DETAIL 2/E102 FOR MOUNTING.
7. NEW FLOW METER TRANSMITTER 04FT08, SEE DETAIL 2/E102 FOR MOUNTING.
8. 1-5/8"x1-5/8" 12-GAUGE GALVANIZED STEEL CHANNEL STRUT.
9. 3" GRS, SEE DETAIL 7003 ON CIVIL DRAWINGS.

**RECORD DRAWING**

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R&W ENGINEERING, INC.

VERIFY SCALES

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | AS BUILTS |

DSN: BRD
DRN: CJD
CHK: GKS
DATE: RIGHT OF

WESTECH ENGINEERING, INC.
CIVIL/STRUCTURAL/MECHANICAL/ELECTRICAL

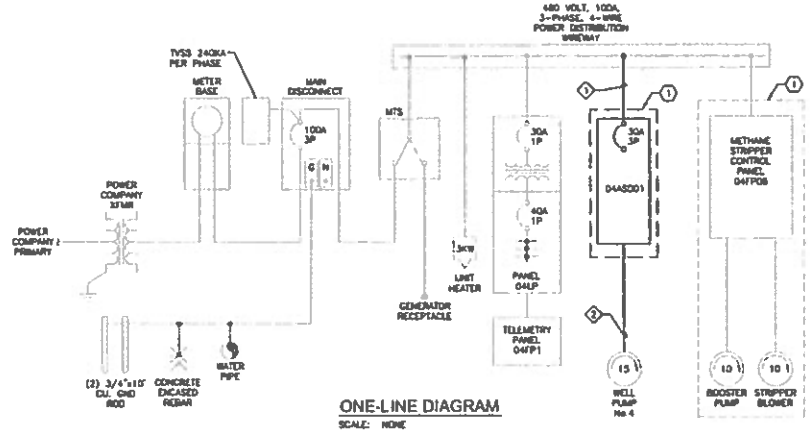
CITY OF DAYTON – LAFAYETTE, OREDON
Water System Improvements, Site No. 4, Well No. 4

WELL 4, ELECTRICAL
CONTROL BUILDING
ELECTRICAL PLAN

DRAWING NO.
E102

SHEET
12 OF 21

JOB NUMBER
1897.4105.0




## ONE-LINE DIAGRAM

SCALE: NONE

## LOAD SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| LARGEST MOTOR LOAD | | | | | |
| Well Pump | 15 HP | 21.0 x 1.25 | 26.3 | 21.0 | |
| OTHER MOTOR LOADS | | | | | |
| Booster Pump | 10 HP | 14.0 x 1.00 | 14.0 | 11.0 | |
| Stripper Blower | 10 HP | 14.0 x 1.00 | 14.0 | 11.0 | |
| TOTAL MOTOR LOAD | 35 HP | 69 A | 54.3 A | 43.1 | |
| NON-MOTOR CONTINUOUS LOADS | | | | | |
| Transformer | 5 kVA | 13.4 x 1.25 | 13.0 | 10.8 | |
| Unit Heater | 3.75 kVA | 4.5 x 1.25 | 5.6 | 4.7 | |
| Subtotal Cont. Load | 9 kVA | 16.9 A | 18.7 A | 15.5 | |
| TOTAL CONNECTED LOAD | | 85.9 A | 73.0 A | 58.6 | |

## KEYED NOTES

(1) EQUIPMENT LOCATED IN WELL BUILDING.

## RACEWAY SCHEDULE

ALL CIRCUITS ARE IDENTIFIED ON THE PLANS WITH THE DIAMOND SYMBOL. CONDUCTOR SIZES ARE BASED ON COPPER CONDUCTORS. CONDUIT SIZES ARE SHOWN FOR CASES WHEN CIRCUIT CONDUCTORS ARE RUN WITHOUT OTHER CIRCUITS. MULTIPLE CIRCUITS RUN IN COMMON CONDUITS ARE SHOWN ON PLANS AND SUPERSEDE THE BASIC CONDUIT SIZE SHOWN.

RACEWAY SIZES ARE IN INCHES WITH QUANTITIES IN EXCESS OF (1) SHOWN IN ADJACENT PARENTHESIS. CONDUCTOR CONFIGURATIONS ARE CODED AS FOLLOWS: P – FOR POWER CONDUCTORS, G – FOR GROUND CONDUCTORS, N – FOR NEUTRAL CONDUCTORS, C – FOR CONTROL CONDUCTORS, TSP – TWISTED SHIELDED PAIR, AND SP – FOR SPARE CONDUCTORS.

CIRCUITS REVISED SINCE LAST ISSUE ARE INDICATED BY AN ASTERISK(*).

| CIRCUIT NUMBER | FROM | TO | CONDUCTORS | RACEWAY | NOTES |
|---|---|---|---|---|---|
| 1 | POWER DISTRIBUTION BLOCK ENCLOSURE | 04ASD01 | (3) #10 P<br>(1) #10 G | 1" | |
| 2 | 04ASD01 | EXISTING WELL HEAD T-B | (3) #10 P<br>(1) #10 G | 1" | |
| 3 | 04FP01 | 04ASD01 | (1) #18 TSP<br>(6) #14 C<br>(4) #14 SP<br>(1) #12 G | 1.25" | |
| 4 | 04FP1<br>(TELEMETRY PANEL) | 04FT08<br>(FLOW METER TRANSMITTER) | (1) #12 P<br>(1) #12 N<br>(1) #12 G | 3/4" | |
| 5 | 04FE08<br>(FLOW METER TUBE) | 04FT08<br>(FLOW METER TRANSMITTER) | 4/WIRE CABLE | 3/4" | |
| 6 | 04FP01<br>(TELEMETRY PANEL) | 04FT08<br>(FLOW METER TRANSMITTER) | (1)#18TSP<br>(1)#12G | 3/4" | |
| 7 | 04ASD01 | 04FP08 | (4) #14 C<br>(1) #12 G | 3/4" | |

## PANEL SCHEDULE

PANEL: "04LP" (EXISTING) BUS: 60A VOLTAGE: 120/240V, 1PH, 3 WIRE

FEEDER: SEE POWER RISER MAIN BREAKER: 40A MOUNTING: (SURFACE)

| CKT NO | CIRCUIT DESCRIPTION | CKT BREAKER POLES/AMPS | LOAD Type | LOAD Volt-Amps | PHASE | LOAD Volt-Amps | LOAD Type | CKT BREAKER POLES/AMPS | CIRCUIT DESCRIPTION | CKT NO |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING | 1-20 | L | 248 | A | | | 2-30 | SECONDARY 120V | 2 |
| 3 | RECEPTACLES | 1-20 | R | 180 | B | | | | | 4 |
| 5 | 04FP1 TELEMETRY PANEL | 1-30 | T | 800 | A | | | 1-20 | SPARE | 6 |
| 7 | HEAT TRACE | 1-20 | H | | B | | | | SPACE | 8 |

| | CONNECTED LOAD | TOTAL LOAD | NOTES |
|---|---|---|---|
| LOAD PER PHASE (VA) | A= 1048<br>B= 180 | A= 1202<br>B= 334 | 1.<br>2. |
| LOAD PER PHASE (AMPS) | A= 8.73<br>B= 1.50 | A= 10.01<br>B= 2.78 | 3.<br>4. |
| TOTAL LOAD (KVA) | 1.33 | 1.54 | 5. |
| SPARE CAPACITY | 25.00% | 0.31 | DATE 08-Mar-10 |

RECORD DRAWING

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CITY OF DAYTON – LAFAYETTE, OREGON
Water System Improvements, Site No. 4, Well No. 4

WELL 4, ELECTRICAL ONE-LINE DIAGRAMS AND SCHEDULES

DRAWING NO. E103

SHEET 13 OF 21

JOB NUMBER 1897.4105.0

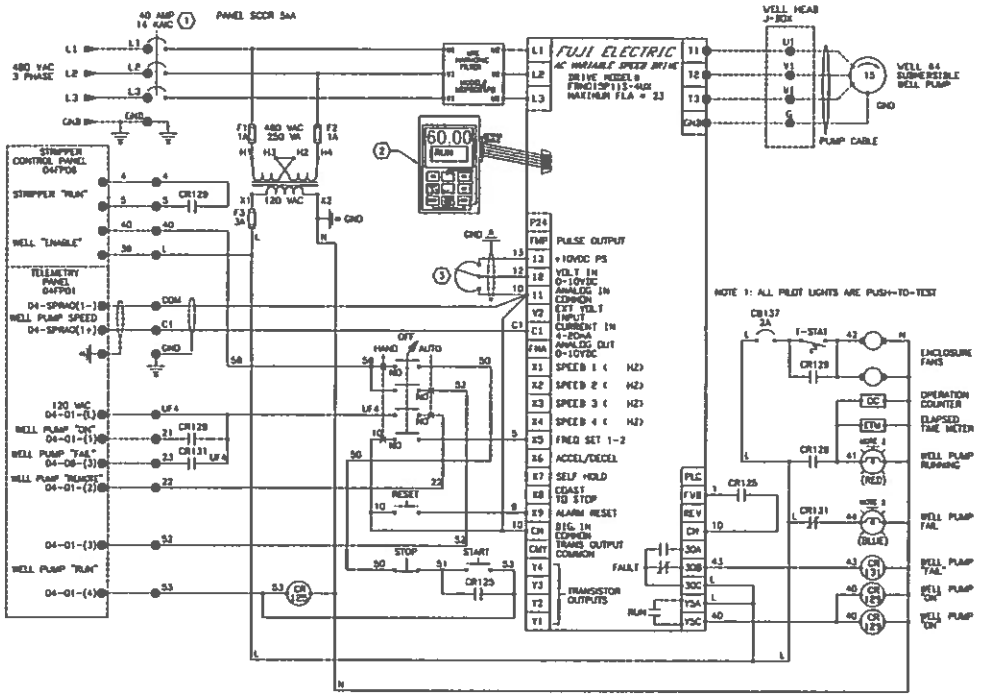
R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC.

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | AS-BUILT | |

DSN: MKO
DRN: MKO
CHK: GHS
DATE: NOV '09

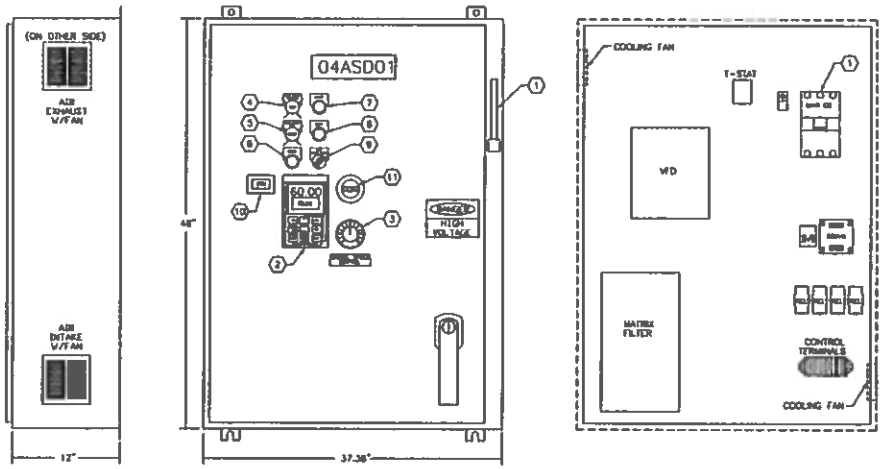
VERIFY SCALE
0 1"
IF NOT 1" ADJUST SCALE ACCORDINGLY




## KEYED NOTES

1. THERMAL MAGNETIC CIRCUIT BREAKER WITH FLANGE MOUNTED OPERATOR.
2. KEYPAD LOCATED ON THE ENCLOSURE DOOR. PROVIDE REMOTE MOUNTING KIT AND CABLE. THE VFD COMMISSIONING AGENT SHALL CONFIGURE THE KEYPAD FOR DISPLAY ONLY.
3. 5K OHM SPEED POT ON ENCLOSURE DOOR.
4. RED RUN LIGHT.
5. BLUE FAIL LIGHT.
6. RESET PUSHBUTTON.
7. START PUSHBUTTON.
8. STOP PUSHBUTTON.
9. H-O-A SWITCH.
10. OPERATION COUNTER.
11. ELAPSED TIME METER.

NOTE:
LOCATION OF DOOR MOUNTED DEVICES AND INTERNAL EQUIPMENT ARE APPROX AS SHOWN AND MAY VARY DEPENDING ON PHYSICAL PLACEMENT OF PARTS AT TIME OF MANUFACTURE. ALL DIMENSIONS ARE APPROXIMATE. ALL DIMENSIONS ARE IN INCHES(")




## 04ASD01 PANEL ELEVATION DETAIL

NOT TO SCALE

RECORD DRAWING

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R&W ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

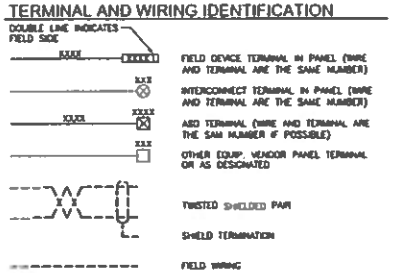
WELL 4, ELECTRICAL
MOTOR CONTROL
SCHEMATIC

DRAWING NO.
E104

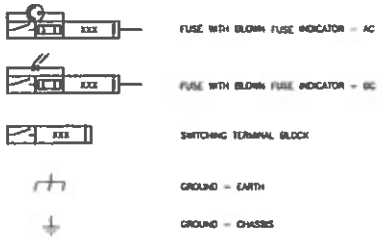
SHEET
14
OF

JOB NUMBER

## TERMINAL AND WIRING IDENTIFICATION




## DRAWING SYMBOLS




## KEYED NOTES

1. MANUFACTURER'S AND PART NUMBERS LISTED ARE CITY OF DAYTON STANDARD. NO SUBSTITUTES.
2. QUANTITIES INCLUDE SPARE PARTS AND ITEMS NOT SHOWN ON THE DRAWINGS.

## INSTRUMENT LIST

| ITEM NO. | (2) QTY. | TAG NO. | (1) MFR. PART NO. | DESCRIPTION | SPECIFICATION SECTION | (1) MANUFACTURER | VENDOR | P.O. NO. |
|---|---|---|---|---|---|---|---|---|
| 53 | 1 | CB3 | 1492-SPA1C150 | CIRCUIT BREAKER, SINGLE POLE DIN RAIL MOUNT, 15A | 16463 | ALLEN-BRADLEY | | |
| 69 | TBD | | 1492-H4 | TERMINAL BLOCK, GENERAL PURPOSE, 30A @ 600VAC RATED, GRAY | 16463 | ALLEN-BRADLEY | | |
| 70 | TBD | | 1492-HG4 | TERMINAL BLOCK, GROUNDING, GREEN/YELLOW | 16463 | ALLEN-BRADLEY | | |
| 71 | TBD | | 1492-HK63 | TERMINAL BLOCK, KNIFE TYPE DISCONNECT, 15A 6A/1W | 16463 | ALLEN-BRADLEY | | |
| 72 | TBD | | 1492-EB1 | TERMINAL END BARRIER, GRAY | 16463 | ALLEN-BRADLEY | | |
| 73 | TBD | | 1492-EBY | TERMINAL END BARRIER, YELLOW | 16463 | ALLEN-BRADLEY | | |
| 74 | TBD | | 1492-EA35 | TERMINAL END ANCHOR, GRAY | 16463 | ALLEN-BRADLEY | | |
| 75 | TBD | | 1492-GX35 | TERMINAL, GROUP MARKER, GRAY, WRITING AREA 1-1/2" x 3/8" | 16463 | ALLEN-BRADLEY | | |
| 76 | TBD | | 1492-H5 | FUSIBLE TERMINAL BLOCK WITH LED BLOWN FUSE INDICATOR, 15A, 300V, 10-87VDC | 16463 | ALLEN-BRADLEY | | |
| 77 | TBD | | 1492-H4 | FUSIBLE TERMINAL BLOCK WITH NEON BLOWN FUSE INDICATOR, 15A, 300V, 100-300VAC | 16463 | ALLEN-BRADLEY | | |
| 78 | TBD | | ACC-6A | FUSE, 6A, FAST ACTING | 16463 | BUSSMANN | | |
| 79 | TBD | | ACC-3A | FUSE, 3A, FAST ACTING | 16463 | BUSSMANN | | |
| 81 | TBD | | ACC-1/3A | FUSE, 1/3A, FAST ACTING | 16463 | BUSSMANN | | |
| 85 | 1 | 041E08 | 8154A-SBA-HSJ-CU | 4" MAGNETIC FLOWTUBE, ANSI CLASS 150, CARBON STEEL FLANGE, ASI TYPE 304SS FUSE WITH NEOPRENE LINING, 316SS ELECTRODES, REMOTE MOUNTED TRANSMITTER, CALIBRATE @ 0-100 GPM | 11307 | FOXBORO | | |
| 86 | 1 | 041T08 | IMT25-S04B1BCM | I/A SERIES INTELLIGENT MAGNETIC FLOW TRANSMITTER, 4-20mA OUTPUT, 120VAC | 11307 | FOXBORO | | |

RECORD DRAWING

ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY FAIRMAN ELECTRIC

R&W ENGINEERING, INC. CAN NOT VERIFY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS INCORPORATED HEREIN AS A RESULT

CITY OF DAYTON - LAFAYETTE, OREGON
Water System Improvements, Site No. 4, Well No. 4

INSTRUMENT & CONTROL LEGEND AND SCHEDULES

DRAWING NO. I100

SHEET 15 OF 21

JOB NUMBER 1897.4105.0

DESIGN: MKD
DRAWN: CJD
CHK'D: CRS
DATE: NOV '06

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | REVISIONS | |

R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS

CITY OF DAYTON - LAFAYETTE, OREGON

Water System Improvements, Site No. 4, Well No. 4

# 120VAC POWER DISTRIBUTION

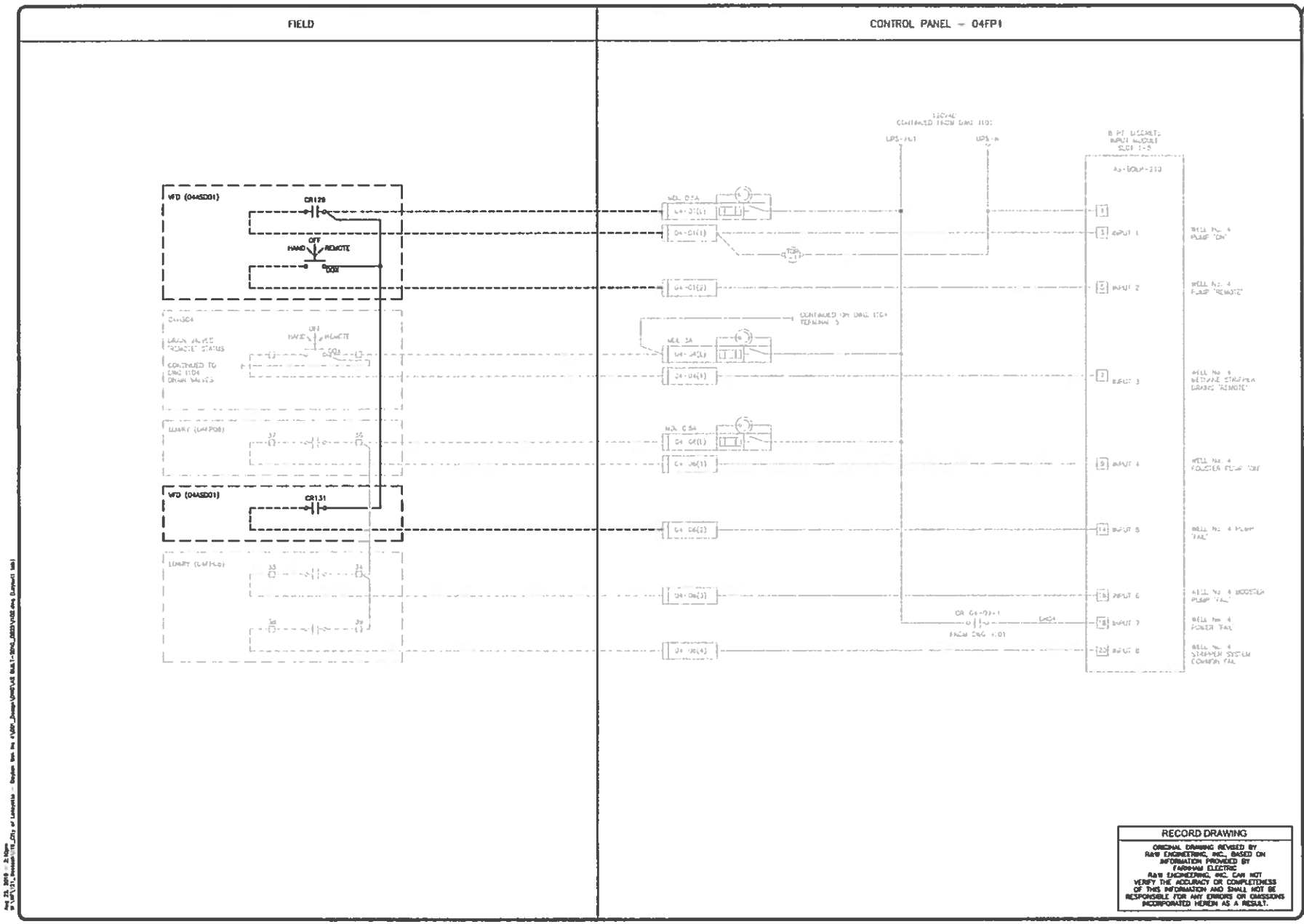
DRAWING NO. 1101

SHEET 16 OF 21

JOB NUMBER 1897.4105.0

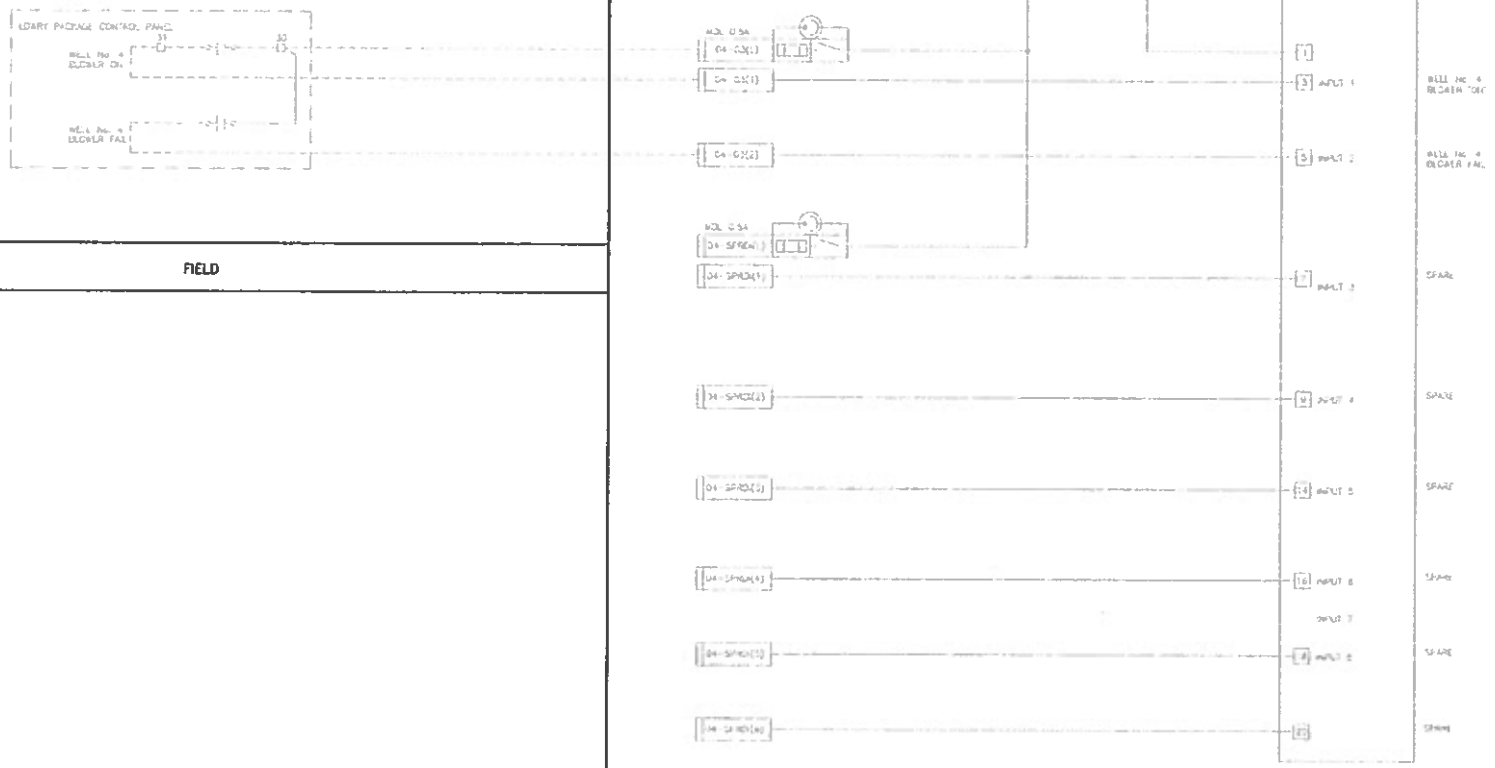
RECORD DRAWING

ORIGINAL DRAWING REVISED BY RAY ENGINEERING, INC. BASED ON INFORMATION PROVIDED BY CONTRACTOR, OTHERS, AND FIELD OBSERVATIONS BY RAY ENGINEERING, INC. RAY ENGINEERING, INC. CAN NOT VERIFY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY DEVIATIONS INCORPORATED HEREIN AS A RESULT.


FIELD
CONTROL PANEL – 04FP1
VFD (04ASD01)
CR129
OFF
HAND
REMOTE
CR131
CONTINUED TO DWG 1104 DRAIN VALVES
CONTINUED FROM DWG 1104 TERMINAL 5
LOCAL CONTINUED FROM DWG 1101
UPS-1N1
UPS-A
8 PT DISCRETE INPUT MODULE SLOT 1-5
WELL NO. 4 PUMP "ON"
WELL NO. 4 PUMP "REMOTE"
WELL NO. 4 METHANE STRIPPER DRAINS "REMOTE"
WELL NO. 4 FOUNTAIN PUMP "ON"
WELL NO. 4 PUMP "FAIL"
WELL NO. 4 BOOSTER PUMP "FAIL"
WELL No. 4 POWER "FAIL"
WELL No. 4 STRIPPER SYSTEM COMMON FAIL
CR 04-03-1
FROM DWG 1101
RECORD DRAWING
ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY FARMANN ELECTRIC
R&W ENGINEERING, INC. CAN NOT VERIFY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS INCORPORATED HEREIN AS A RESULT.
CITY OF DAYTON – LAFAYETTE, OREGON
Water System Improvements, Site No. 4, Well No. 4
DISCRETE INPUT WIRING DIAGRAM
DRAWING NO. 1102
SHEET 17 OF 21
JOB NUMBER 1897.4105.0

LOWRY CONTROL PANEL (04FP06)

CONTROL PANEL – 04FP1




FIELD

RECORD DRAWING

ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY FARNHAM ELECTRIC

R&W ENGINEERING, INC. CAN NOT VERIFY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS INCORPORATED HEREIN AS A RESULT.

| NO. | DATE | DESCRIPTION REVISIONS | BY |
|---|---|---|---|
| | | | |

VERIFY SCALE

R&W ENGINEERING, INC.

WESTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS

CITY OF DAYTON – LAFAYETTE, OREGON

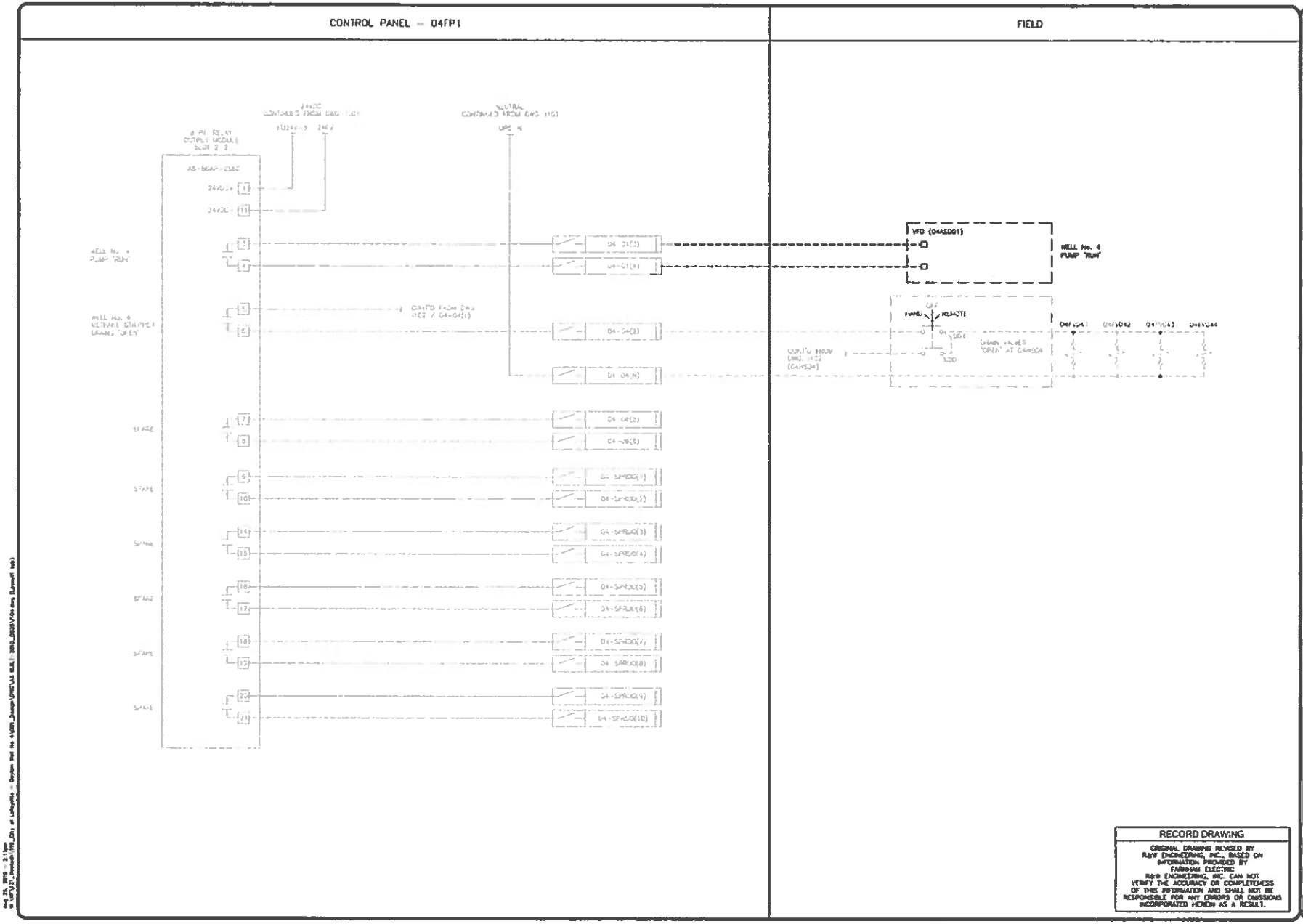
Water System Improvements, Site No. 4, Well No. 4

DISCRETE INPUT WIRING DIAGRAM

DRAWING NO. 1103

SHEET 18 OF 21

JOB NUMBER 1897.4105.0




RECORD DRAWING

ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY Fallbrook ELECTRIC

R&W ENGINEERING, INC. CAN NOT VERIFY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS INCORPORATED HEREON AS A RESULT.

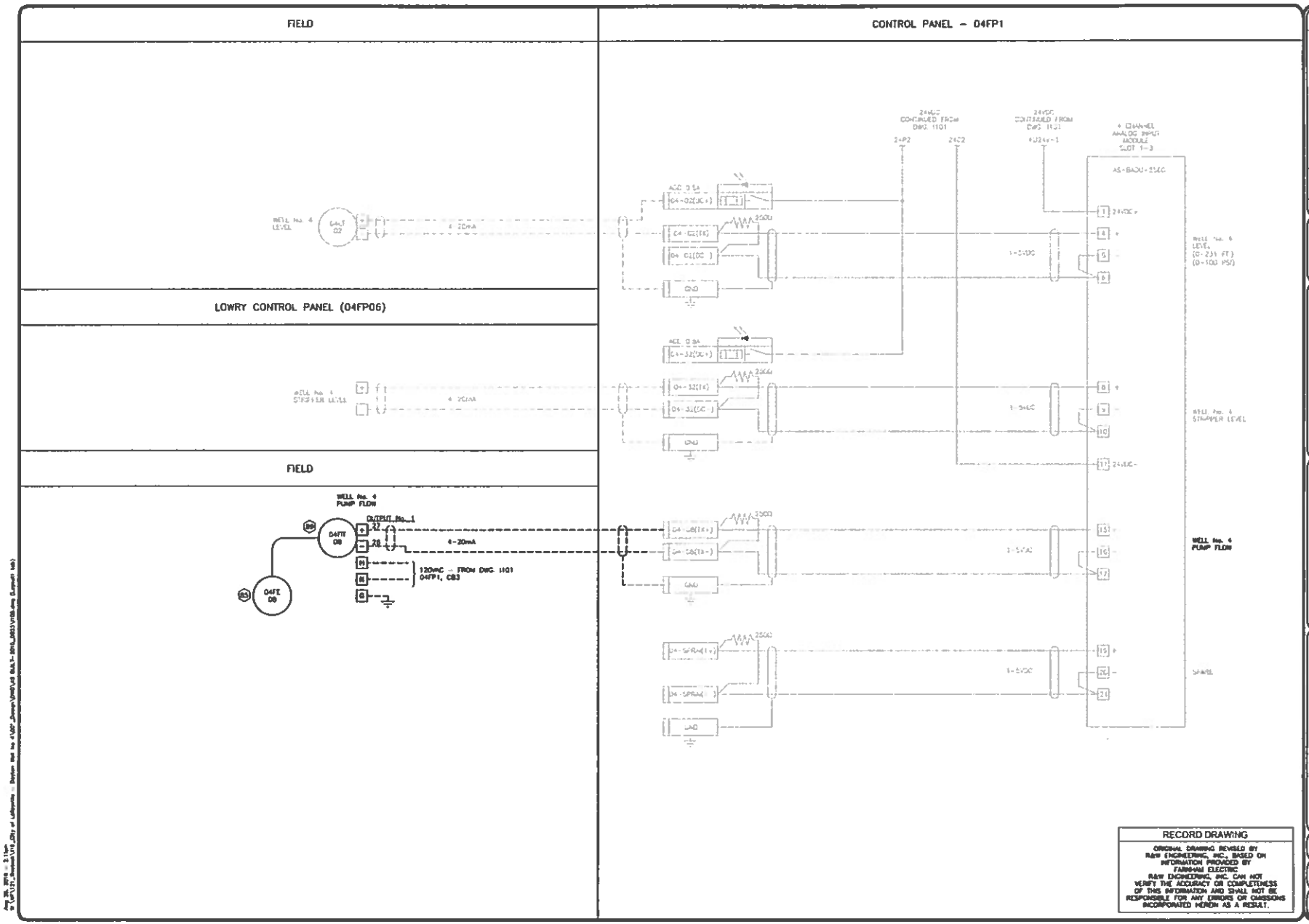
CITY OF DAYTON – LAFAYETTE, OREGON
Water System Improvements, Site No. 4, Well No. 4

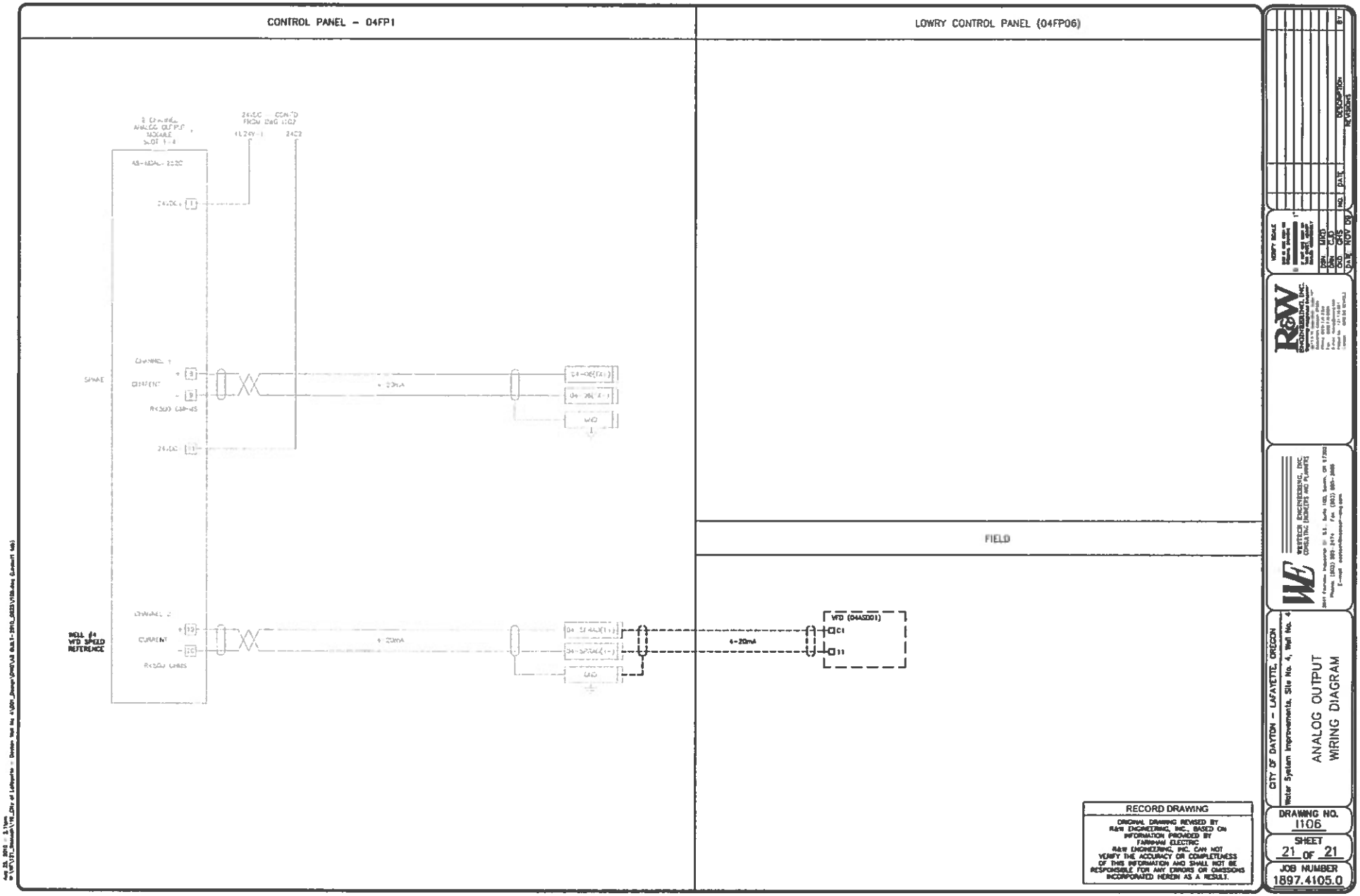
# DISCRETE OUTPUT WIRING DIAGRAM

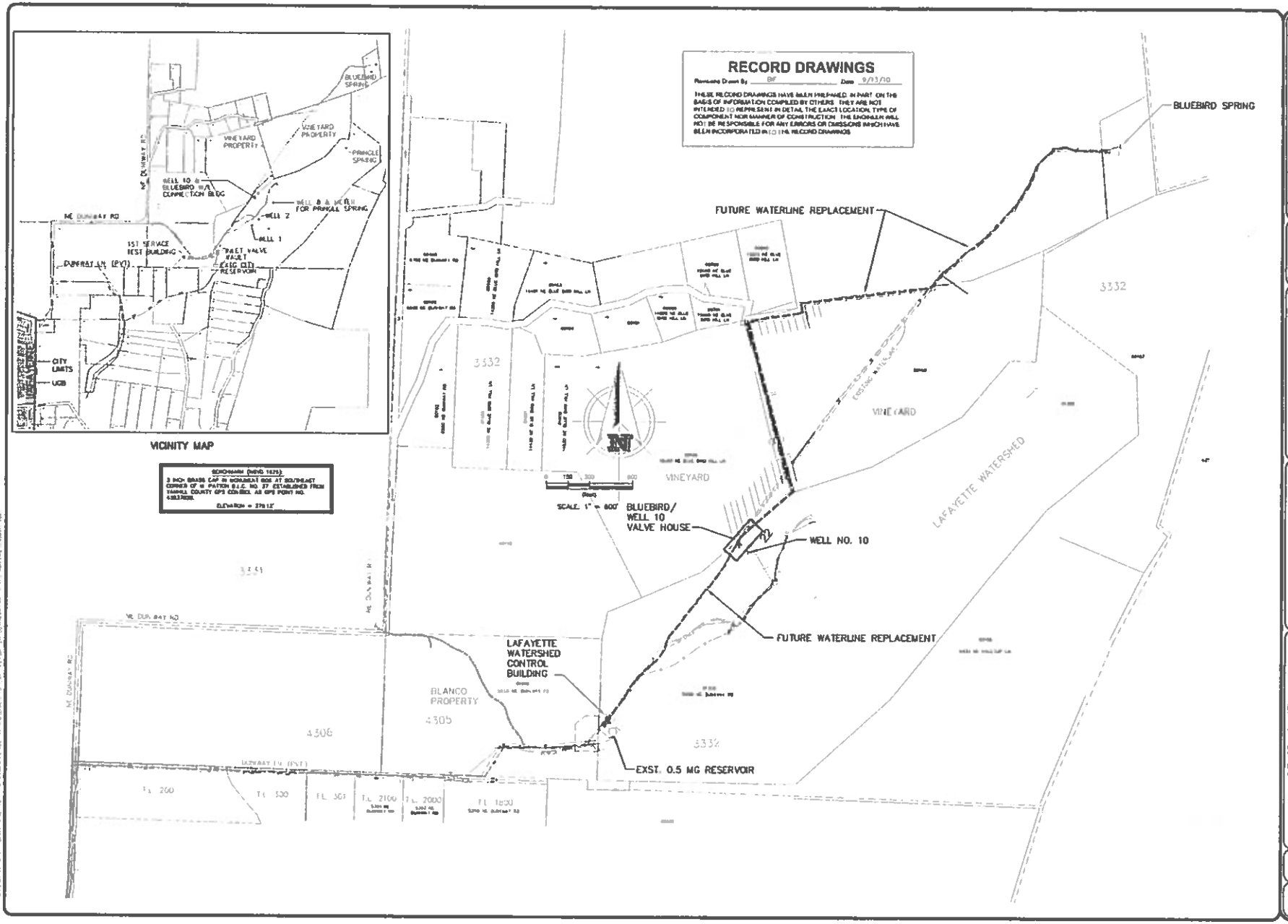
DRAWING NO. 1104

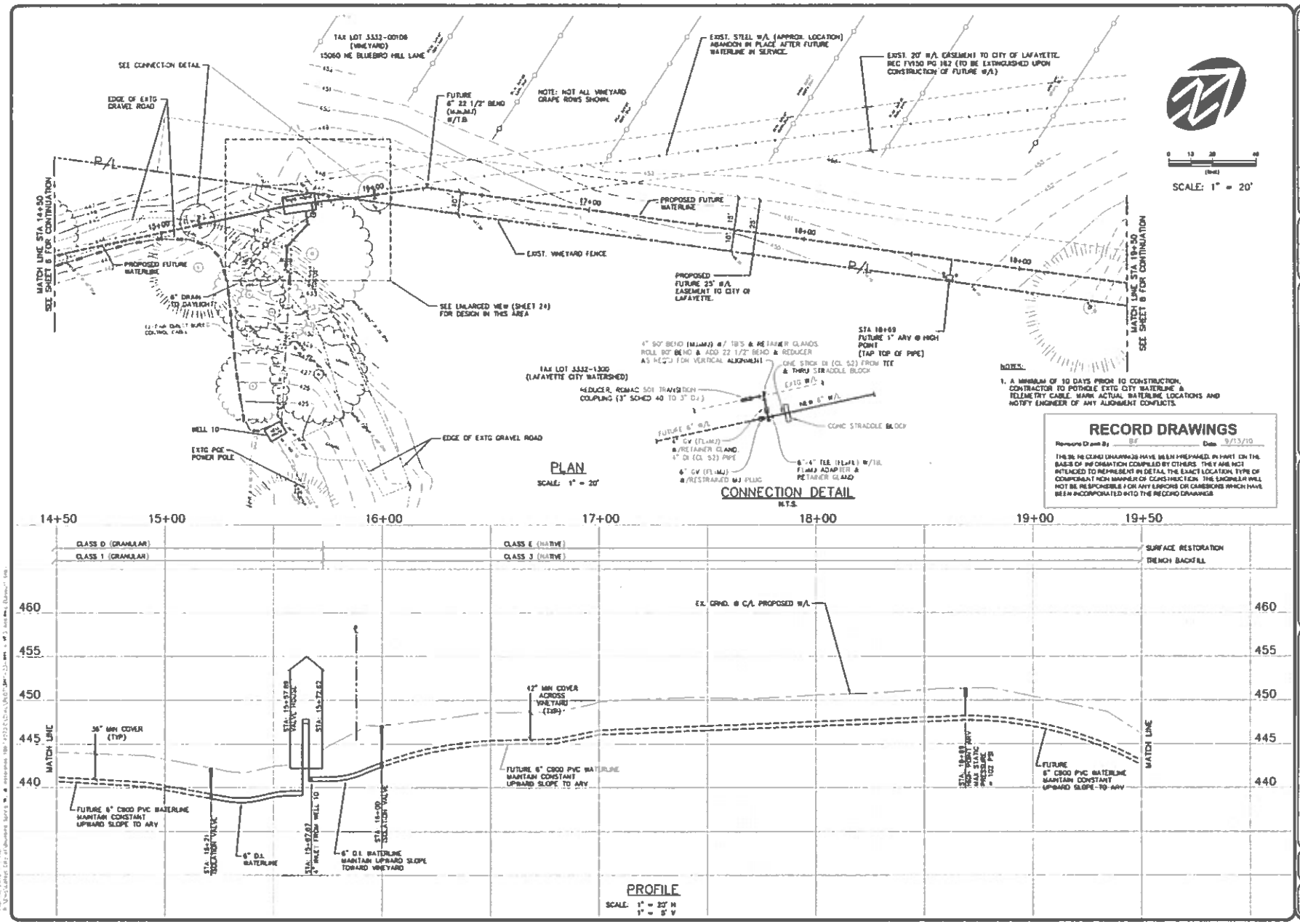
SHEET 19 OF 21

JOB NUMBER 1897.4105.0


FIELD
CONTROL PANEL – 04FP1
LOWRY CONTROL PANEL (04FP06)
FIELD
WELL No. 4 PUMP FLOW
4-20mA
120VAC – FROM DWG. 1101 04FP1, CB3
24VDC CONTINUED FROM DWG. 1101
24VDC CONTINUED FROM DWG. 1101
4 CHANNEL ANALOG INPUT MODULE SLOT 1-3
AS-BAIU-2140
WELL No. 4 LEVEL (0-231 FT.) (0-100 PSI)
WELL No. 4 STRAPPER LEVEL
WELL No. 4 PUMP FLOW
SPARE
1-5VDC
250Ω
24VDC-
RECORD DRAWING
ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY FAIRMAN ELECTRIC
R&W ENGINEERING, INC. CAN NOT VERIFY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS INCORPORATED HEREIN AS A RESULT.
CITY OF DAYTON – LAFAYETTE, OREGON
Water System Improvements, Site No. 4, Well No. 4
ANALOG INPUT WIRING DIAGRAM
DRAWING NO. 1105
SHEET 20 OF 21
JOB NUMBER 1897.4105.0


CONTROL PANEL – 04FP1
LOWRY CONTROL PANEL (04FP06)
FIELD
VFD (04ASD01)
4-20mA
RECORD DRAWING
ORIGINAL DRAWING REVISED BY R&W ENGINEERING, INC., BASED ON INFORMATION PROVIDED BY FAIRMAN ELECTRIC
R&W ENGINEERING, INC. CAN NOT VERIFY THE ACCURACY OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS INCORPORATED HEREIN AS A RESULT.
CITY OF DAYTON – LAFAYETTE, OREGON
Water System Improvements, Site No. 4, Well No. 4
ANALOG OUTPUT WIRING DIAGRAM
DRAWING NO. 1106
SHEET 21 OF 21
JOB NUMBER 1897.4105.0


RECORD DRAWINGS
Reviewed Drawn By BF Date 9/13/10
THESE RECORD DRAWINGS HAVE BEEN PREPARED IN PART ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS
BLUEBIRD SPRING
FUTURE WATERLINE REPLACEMENT
VINEYARD PROPERTY
PRINGLE SPRING
WELL 10 & BLUEBIRD W/L CONNECTION BLDG
WELL 8 & MAIN FOR PRINGLE SPRING
WELL 2
WELL 1
1ST SERVICE REST BUILDING
TRACT VALVE VAULT
EXIST OLD RESERVOIR
DUNBAR LN (PVT)
CITY LIMITS
UGB
VICINITY MAP
BENCHMARK (NAVD 1929)
3 INCH BRASS CAP IN MONUMENT BOX AT SOUTHEAST CORNER OF W PATTON B.L.C. NO. 27 ESTABLISHED FROM TAMPHIL COUNTY GPS CONTROL AS GPS POINT NO.
ELEVATION = 378.12'
3332
VINEYARD
LAFAYETTE WATERSHED
SCALE: 1" = 600'
BLUEBIRD/ WELL 10 VALVE HOUSE
WELL NO. 10
FUTURE WATERLINE REPLACEMENT
LAFAYETTE WATERSHED CONTROL BUILDING
BLANCO PROPERTY
4305
4306
EXST. 0.5 MG RESERVOIR
MT. DUNBAR RD
DUNBAR LN (PVT)
T.L. 200
T.L. 500
T.L. 303
T.L. 2100
T.L. 2000
T.L. 1800
AS-CONSTRUCTED
CITY OF LAFAYETTE
WELL 10 VALVE HOUSE PIPING IMPROVEMENTS
SHEET LAYOUT INDEX
SHEET 22 OF 24
JOB NUMBER 1897.4070.0




| NO. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| | REVISIONS | | |

VERIFY SCALE
IF BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE
DSN: DM
DRN: DM
CHK: DM
DATE: JANUARY 2010

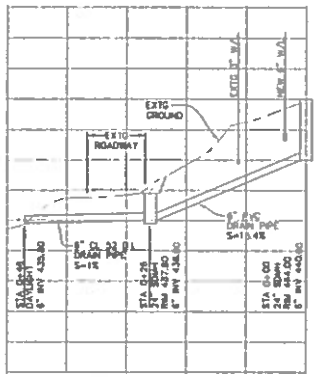
AS-CONSTRUCTED

WESTECH ENGINEERING, INC.
CIVIL ENGINEERS AND PLANNERS

CITY OF LAFAYETTE
WELL 10 VALVE HOUSE PIPING IMPROVEMENTS
WELL 10 VALVE HOUSE
PLAN & PROFILE

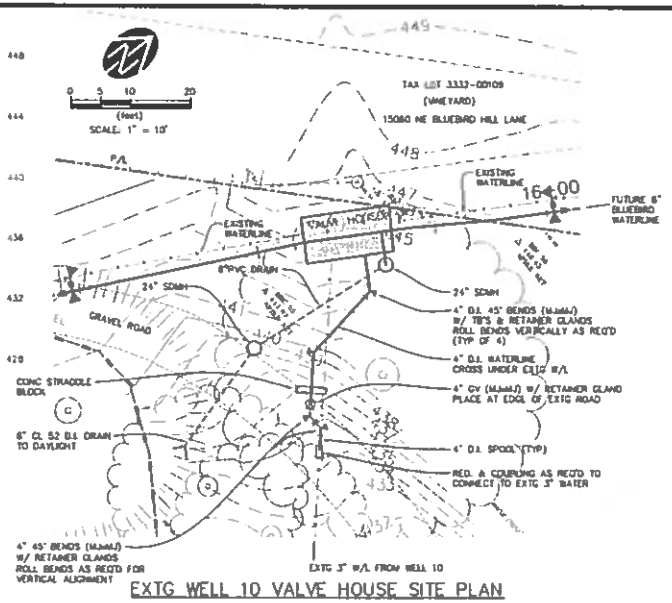
SHEET
23 OF 24

JOB NUMBER
1897.4070.0




## DRAIN LINE PROFILE

SCALE: 1" = 10' H
1" = 4' V

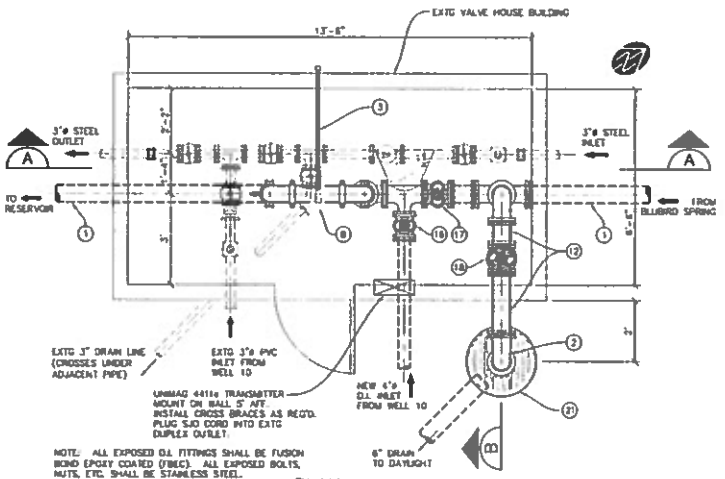



## EXTG WELL 10 VALVE HOUSE SITE PLAN

SCALE: 1" = 10'

## SEQUENCING & DEMOLITION NOTES

1. CONSTRUCT NEW WATER PIPING THROUGH BUILDING AS SHOWN, AND EXTENDED TO NEW VALVES AT CONNECTIONS TO EXISTING WATERLINES. MAINTAIN EXISTING PIPING IN SERVICE AT ALL TIMES DURING CONSTRUCTION.
2. AFTER NEW WATERLINE HAS BEEN TESTED, DISINFECTED AND NEW DRAIN LINE IS READY FOR SERVICE, MAKE CONNECTIONS TO EXISTING MAINLINE & TO WELL 10 WATERLINE PER THIS SHEET AND SHEET 7.
3. AFTER NEW WATERLINES ARE IN SERVICE, REMOVE EXISTING PIPING & VALVES INSIDE WELL BUILDING, AND INSTALL GRAVEL FLOOR AS SHOWN.




NOTE: ALL EXPOSED D.I. FITTINGS SHALL BE FUSION BOND EPOXY COATED (FBEC). ALL EXPOSED BOLTS, NUTS, ETC. SHALL BE STAINLESS STEEL.

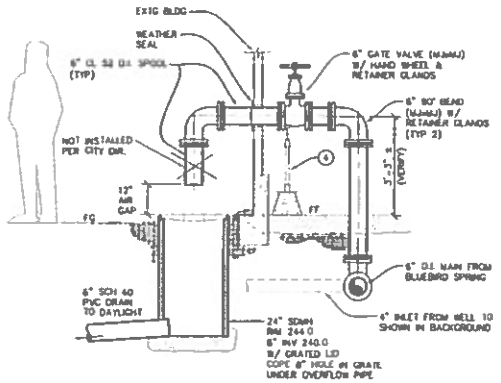
## PLAN

SCALE: 1/2" = 1'-0"

## RECORD DRAWINGS

Revisions Drawn By: BHF Date: 9/13/10

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

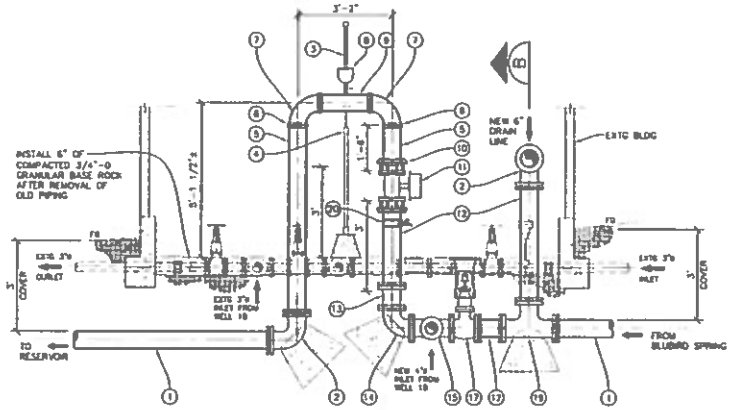



## SECTION B-B

SCALE: 1/2" = 1'-0"

## KEY CALLOUTS

1. NEW 6" D.I. PIPE.
2. 6" D.I. 90° BEND (M.J.xM.J.) W/ RETAINER GLANDS & THRUSTBLOCK AS SHOWN.
3. ARV VENT/DRAIN PIPING (SCHED 80 PVC W/UNION). ROUTE TO BLDG. EXTERIOR & TERMINATE ±12" ABOVE GRADE W/45° BEND.
4. ADJUSTABLE PIPE SUPPORT (SADDLE STYLE). STANDON OR EQUAL. SEE DTL 7380, DWG W102 MOUNT ON 12"x12" PIER BLOCK.
5. 6" CL 52 D.I. PIPE SPOOL (PExGRV).
6. 6" VICTAULIC 31 D.I. COUPLING, TYP.
7. 6" VICTAULIC 10-C 90° BEND (GRVxGRV).
8. 1" AIR/VACUUM VALVE, A.R.I. D-040 OR APPROVED EQUAL w/SCREEN. PROVIDE W/ STAINLESS STEEL ISOLATION BALL VALVE & HANDLE, MOUNTED TO EPOXY COATED D.I. SERVICE SADDLE AS SPEC'D.
9. 6" CL 52 D.I. SPOOL (GRVxGRV).
10. 6" MEGA-FLANGE ADAPTER, (TYP OF 2).
11. 6" MAG FLOW METER (FLxFL) W/ FLOW TRANSMITTER AS SPEC'D, UNIMAG DS-N W/4411e TRANSMITTER.
12. 6" CL 52 D.I. PIPE SPOOL (PExPE)
13. 6" D.I. FLxMJ ADAPTER W/ RETAINER GLAND.
14. 6" D.I. 90° BEND (FLxFL) W/ THRUSTBLOCK.
15. 8"x6" D.I. TEE (FLxFL) W/ THRUSTBLOCK.
16. 6" GATE VALVE (FLxMJ) W/ RETAINER GLAND, IN STANDARD VALVE BOX.
17. 6" GATE VALVE (FLxMJ) W/ RETAINER GLAND, IN STANDARD VALVE BOX.
18. 6" GATE VALVE (M.J.xM.J) W/ HAND WHEEL & RETAINER GLANDS.
19. 6"x6" D.I. TEE (M.J.xM.J) W/ THRUSTBLOCK & RETAINER GLANDS.
20. 3/4" SAMPLE PORT, BRASS VALVE W/ HOSE BIBB OUTLET & VACUUM BREAKER. MOUNT TO EPOXY COATED D.I. SERVICE SADDLE.
21. 24"ø SDMH PER DETAIL 350, CENTERED UNDER OVERFLOW PIPE. PROVIDE WITH FRP GRATE LID (FIBERGRATE 1" THICK X 1½" SQUARE OPENINGS) WITH 6"ø HOLE COPED UNDER OVERFLOW PIPE.




## SECTION A-A

SCALE: 1/2" = 1'-0"

| NO. | DESCRIPTION / REVISIONS | BY |
|---|---|---|
| 1 | 60% | |
| 2 | 100% | |

DSN: DM
DWN: TGT/BF
CKD: DM
DATE: FEB 2010

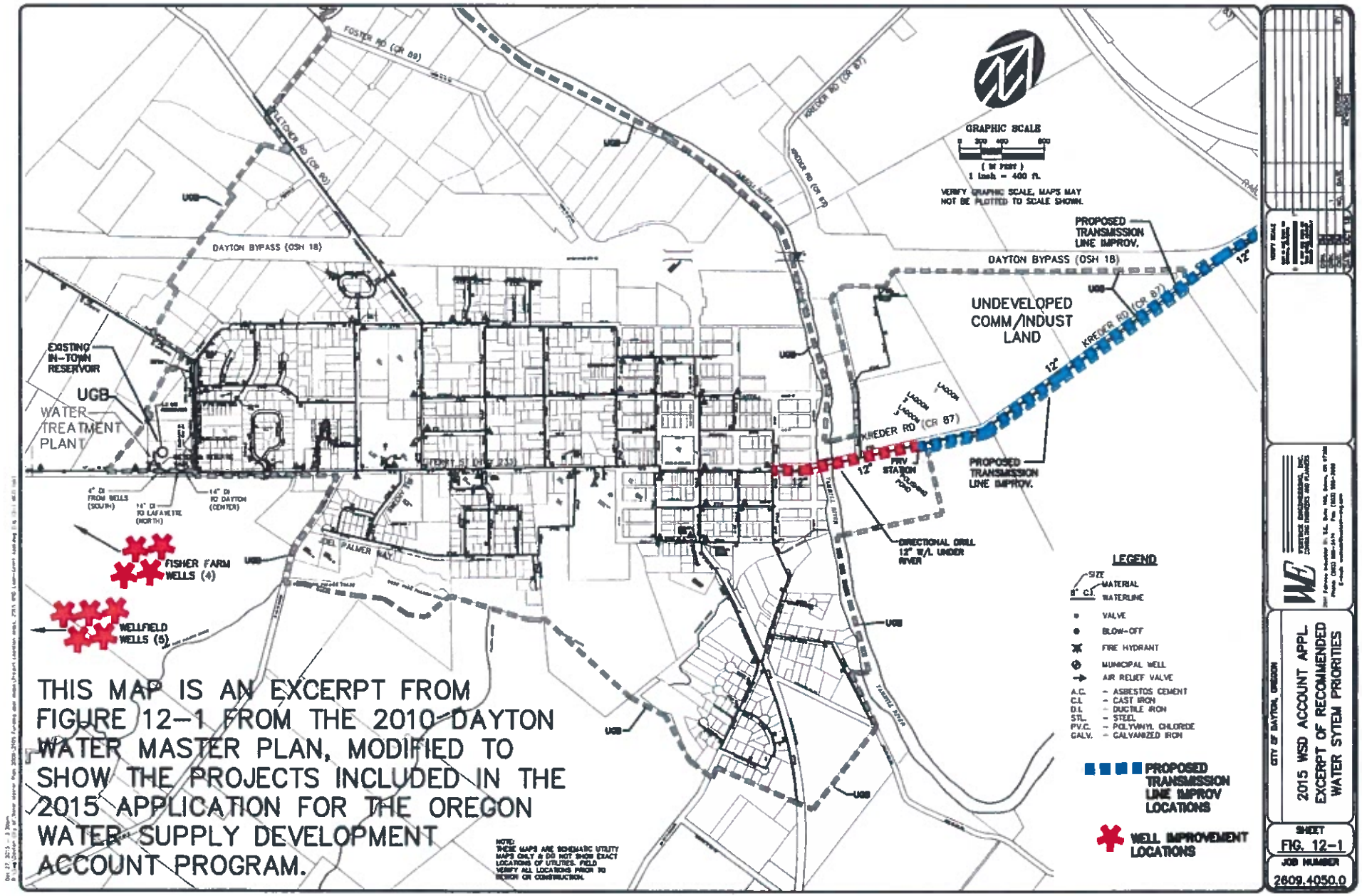
CONSTRUCTED

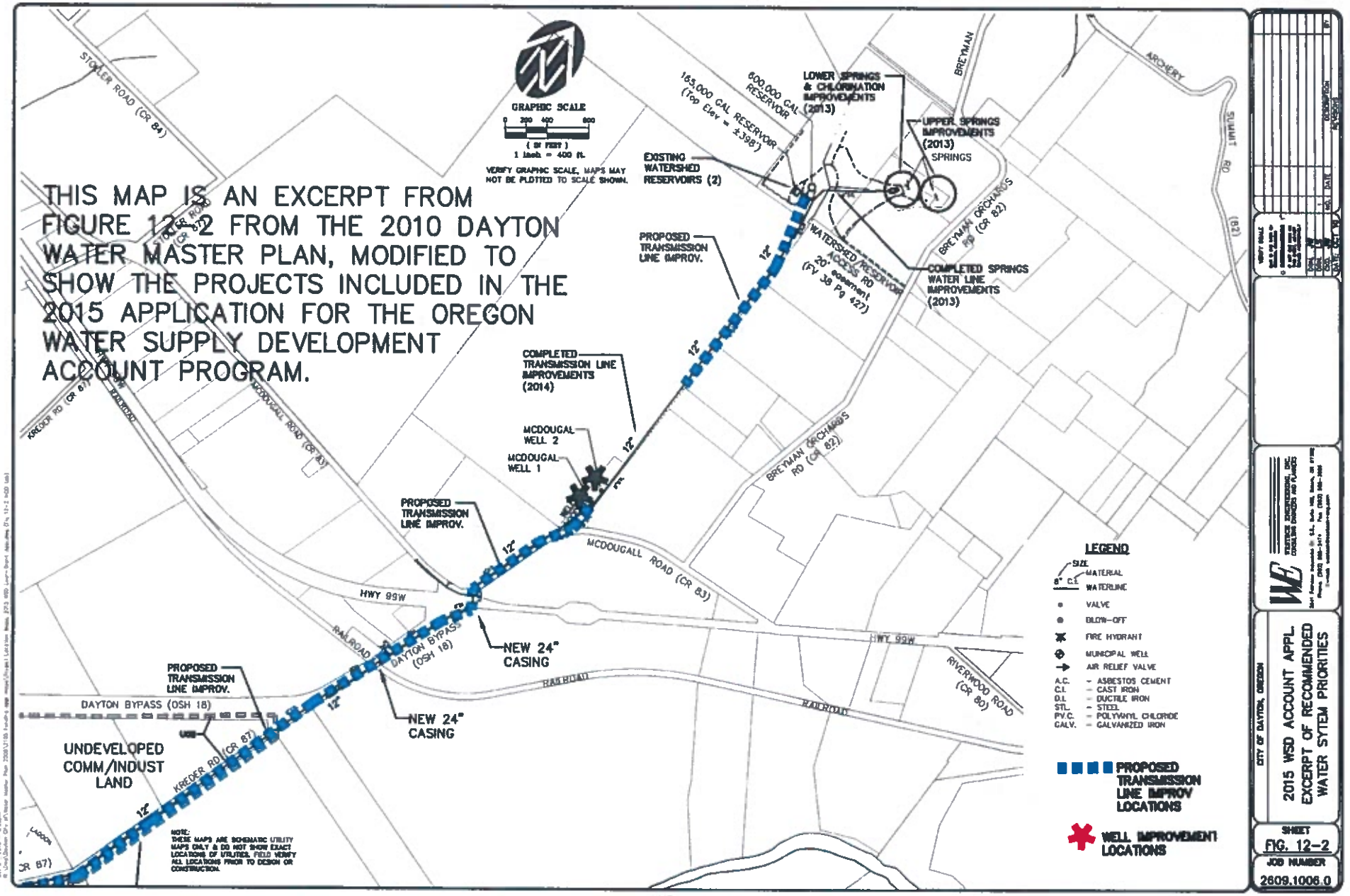
WESTECH ENGINEERING, INC.
CIVIL ENGINEERS AND SURVEYORS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 fax: (503) 585-3986
e-mail: westech@westech-eng.com

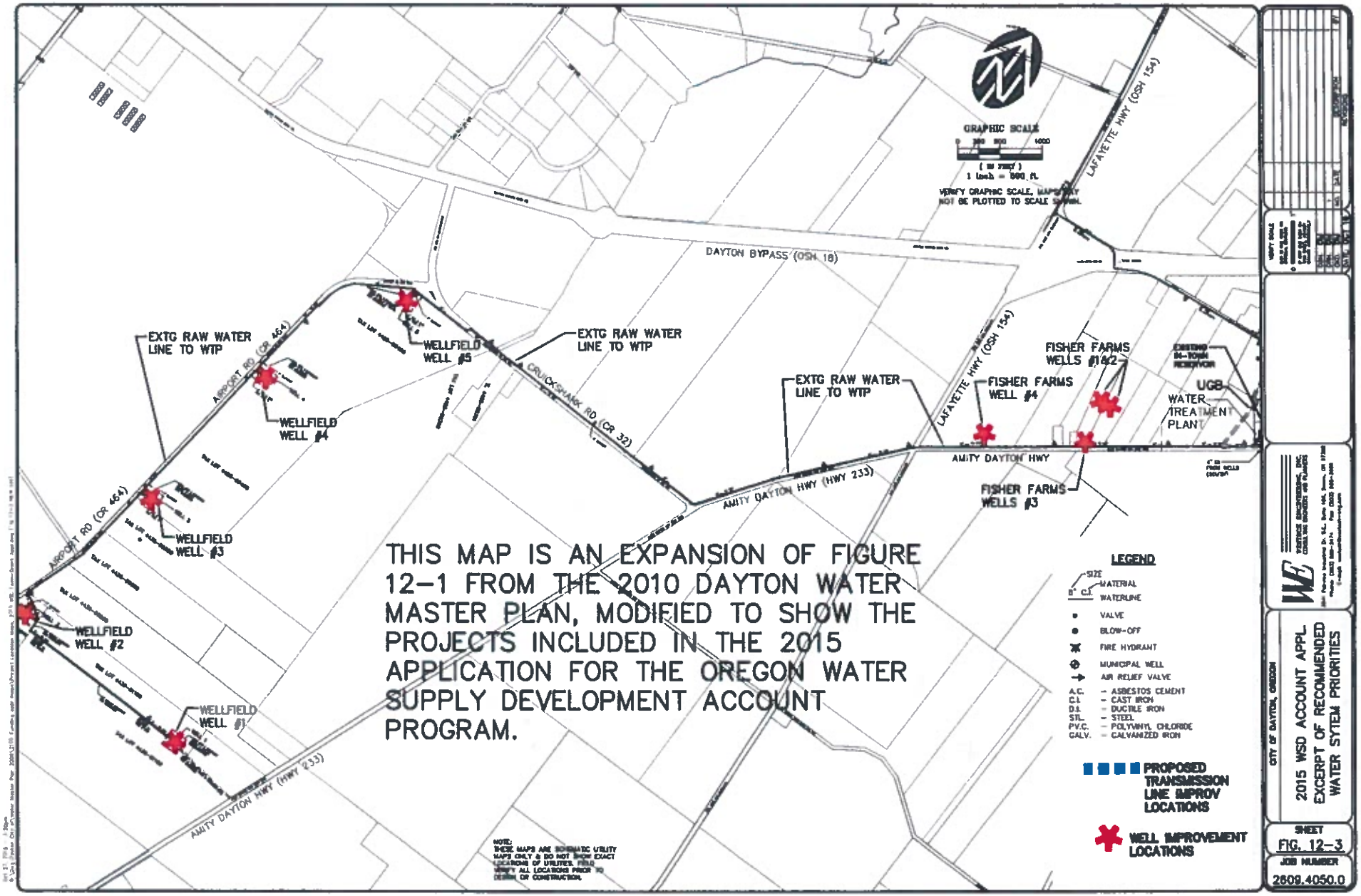
CITY OF LAFAYETTE
WELL 10 VALVE HOUSE PIPING IMPROVEMENTS

# WELL 10 VALVE HOUSE PLANS & SECTIONS

SHEET 24 OF 24
JOB NUMBER 1897.4070.0


FOSTER RD (CR 89)
FULTON RD (CR 90)
KREDER RD (CR 87)
DAYTON BYPASS (OSH 18)
UGB
EXISTING IN-TOWN RESERVOIR
WATER TREATMENT PLANT
4" DI FROM WELLS (SOUTH)
16" DI TO LAFAYETTE (NORTH)
14" DI TO DAYTON (CENTER)
FISHER FARM WELLS (4)
WELLFIELD WELLS (5)
JOEL PALMER WAY
YAMHILL RIVER
GRAPHIC SCALE
1 inch = 400 ft.
VERIFY GRAPHIC SCALE, MAPS MAY NOT BE PLOTTED TO SCALE SHOWN.
PROPOSED TRANSMISSION LINE IMPROV.
UNDEVELOPED COMM/INDUST LAND
LAGOON
PRV STATION
DIRECTIONAL DRILL 12" W/L UNDER RIVER
LEGEND
SIZE
MATERIAL
WATERLINE
VALVE
BLOW-OFF
FIRE HYDRANT
MUNICIPAL WELL
AIR RELIEF VALVE
A.C. - ASBESTOS CEMENT
C.I. - CAST IRON
D.I. - DUCTILE IRON
STL. - STEEL
P.V.C. - POLYVINYL CHLORIDE
GALV. - GALVANIZED IRON
PROPOSED TRANSMISSION LINE IMPROV LOCATIONS
WELL IMPROVEMENT LOCATIONS
NOTE: THESE MAPS ARE SCHEMATIC UTILITY MAPS ONLY & DO NOT SHOW EXACT LOCATIONS OF UTILITIES. FIELD VERIFY ALL LOCATIONS PRIOR TO DESIGN OR CONSTRUCTION.
THIS MAP IS AN EXCERPT FROM FIGURE 12-1 FROM THE 2010 DAYTON WATER MASTER PLAN, MODIFIED TO SHOW THE PROJECTS INCLUDED IN THE 2015 APPLICATION FOR THE OREGON WATER SUPPLY DEVELOPMENT ACCOUNT PROGRAM.
CITY OF DAYTON, OREGON
2015 WSD ACCOUNT APPL.
EXCERPT OF RECOMMENDED WATER SYSTEM PRIORITIES
SHEET
FIG. 12-1
JOB NUMBER
2609.4050.0


THIS MAP IS AN EXCERPT FROM FIGURE 12-2 FROM THE 2010 DAYTON WATER MASTER PLAN, MODIFIED TO SHOW THE PROJECTS INCLUDED IN THE 2015 APPLICATION FOR THE OREGON WATER SUPPLY DEVELOPMENT ACCOUNT PROGRAM.
GRAPHIC SCALE
1 inch = 400 ft.
VERIFY GRAPHIC SCALE, MAPS MAY NOT BE PLOTTED TO SCALE SHOWN.
STOLLER ROAD (CR 84)
KREDER RD (CR 87)
MCDOUGALL ROAD (CR 83)
BRETMAN ORCHARDS RD (CR 82)
ARCHERY
SUMMIT RD (82)
RIVERWOOD ROAD (CR 80)
HWY 99W
RAILROAD
DAYTON BYPASS (OSH 18)
183,000 GAL RESERVOIR (Top Elev = 1,398')
600,000 GAL RESERVOIR
LOWER SPRINGS & CHLORINATION IMPROVEMENTS (2013)
UPPER SPRINGS IMPROVEMENTS (2013)
SPRINGS
EXISTING WATERSHED RESERVOIRS (2)
WATERSHED RESERVOIRS ACCESS RD 20' easement (FV 39 Pg 427)
COMPLETED SPRINGS WATER LINE IMPROVEMENTS (2013)
PROPOSED TRANSMISSION LINE IMPROV.
COMPLETED TRANSMISSION LINE IMPROVEMENTS (2014)
MCDOUGAL WELL 2
MCDOUGAL WELL 1
NEW 24" CASING
UNDEVELOPED COMM/INDUST LAND
LAGOON
NOTE: THESE MAPS ARE SCHEMATIC UTILITY MAPS ONLY & DO NOT SHOW EXACT LOCATIONS OF UTILITIES. FIELD VERIFY ALL LOCATIONS PRIOR TO DESIGN OR CONSTRUCTION.
LEGEND
SIZE
MATERIAL
WATERLINE
VALVE
BLOW-OFF
FIRE HYDRANT
MUNICIPAL WELL
AIR RELIEF VALVE
A.C. - ASBESTOS CEMENT
C.I. - CAST IRON
D.I. - DUCTILE IRON
STL. - STEEL
PV.C. - POLYVINYL CHLORIDE
GALV. - GALVANIZED IRON
PROPOSED TRANSMISSION LINE IMPROV LOCATIONS
WELL IMPROVEMENT LOCATIONS
CITY OF DAYTON, OREGON
2015 WSD ACCOUNT APPL.
EXCERPT OF RECOMMENDED WATER SYTEM PRIORITIES
SHEET
FIG. 12-2
JOB NUMBER
2609.1006.0




THIS MAP IS AN EXPANSION OF FIGURE 12-1 FROM THE 2010 DAYTON WATER MASTER PLAN, MODIFIED TO SHOW THE PROJECTS INCLUDED IN THE 2015 APPLICATION FOR THE OREGON WATER SUPPLY DEVELOPMENT ACCOUNT PROGRAM.

CITY OF DAYTON, OREGON

2015 WSD ACCOUNT APPL.
EXCERPT OF RECOMMENDED WATER SYSTEM PRIORITIES

SHEET
FIG. 12-3

JOB NUMBER
2609.4050.0

Attachment 28 - Dayton Prairie Letter of Support

# Dayton Prairie Groundwater Management Advisory Board

January 6, 2016

City of Dayton
PO Box 339
Dayton OR 97114

To whom it may concern,

The Dayton Prairie Groundwater Management Advisory Board supports your effort to make improvements to the City's water system. Any such efficiency improvement will lessen the burden on the aquifer that serves as its water source.

Warm regards,

Stephen Sagmiller

Dayton Prairie Groundwater Management Advisory Board

December 27, 2015

Mr. Jon Unger, Water Resources Grant Administrator
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301

Re: City of Dayton Water Supply Development Account Funding Application

This letter expresses the support and recommendation of the Dayton Community Development Association (DCDA) for the City of Dayton's application for Water Supply Development funds. The City of Dayton and The DCDA work together to establish effective economic growth and development in Dayton. The DCDA supports the City's efforts to continue to improve the City's utility infrastructure so that effective development can continue.

In 2012, the DCDA led a community-wide effort to establish the Dayton Forward Plan, which provides actionable goals for the community to pursue. The City has supported that plan, and their efforts to improve water infrastructure as outlined in their application are in line with that plan.

Thank you and regards,

Kelly Haverkate, Program Coordinator
Dayton Community Development Program

DOWNTOWN DAYTON

971.241.2076

ADDRESS
PO Box 237
Dayton, OR 97114

www.daytonoregon.org

DAYTON COMMUNITY
DEVELOPMENT ASSOCIATION
A 501C3 NON PROFIT ORGANIZATION

rooted.

business oregon.
IFA Infrastructure Finance Authority

January 6, 2016

RE: Oregon Safe Drinking Water Revolving Loan Fund, City of Dayton – Water System Improvements

To Whom It May Concern:

Business Oregon – Infrastructure Finance Authority (IFA) has sufficient funding available through the Oregon Safe Drinking Water Revolving Loan Fund program for the City of Dayton to access for pending infrastructure projects. The City of Dayton has successfully managed other projects funded through IFA in the past and is considered an outstanding partner to work with.

Please feel free to contact me with any further questions at (503) 986-0142 or michelle.bilberry@oregon.gov

Thanks,

Michelle Bilberry

Michelle Bilberry, Regional Coordinator
Infrastructure Finance Authority

Attachment 31 - Section VII B Budget Detail

| Line Items | Number of Units/Hours | Unit Cost | In-Kind | Cash Match Funds | OWRD Funds | Total Cost |
|---|---|---|---|---|---|---|
| **Materials & Construction** | | | | | | |
| See attached sheets | | $2,275,000 | | $568,750 | $1,706,250 | $2,275,000 |
| **Contractual Services** | | | | | | |
| See attached sheets | | $302,500 | | $68,123 | $234,377 | $302,500 |
| **Staff Salary/Benefits** | | | | | | |
| Public Works Director | 139 | 44.58 | $6,197 | | | $6,197 |
| Maintenance Op. 2 | 70 | 25.98 | $1,819 | | | $1,819 |
| Maintenance Op. 1 | 70 | 28.40 | $1,988 | | | $1,988 |
| | | **Total for Section B** | **$10,003** | **$636,873** | **$1,940,627** | **$2,587,503** |
| | | **Percentage for Section B** | 0.39% | 24.61% | 75.00% | 100.00% |

**Location: Dayton, Oregon**

**Project: Dayton Water System Improvements (Transmission Line Replacement & Water Well Development)**

**WRD WSD Account application, Section VII.B Table (prior to design estimates)** **Date: Jan 2016**

## Preliminary Planning Estimates (w/Funding Application, before design)

| Line Items | Estimated Quantity | Unit | Unit Cost | Estimated Cost | Subtotal sum |
|---|---|---|---|---|---|
| **Watershed Transmission Line Replacement** | | | | | |
| **1. Transmission Line Topographic Survey/Design/Permit Applications/Agency Approvals (Contract Services)** | | | | | |
| Project Mgr/PIC | 8 | Hr | $142 | $1,136 | |
| Project Engineer | 92 | Hr | $126 | $11,592 | |
| Drafting | 130 | Hr | $84 | $10,920 | |
| Admin | 28 | Hr | $62 | $1,736 | |
| Topographic Survey | ALL | L.S. | Lump Sum | $13,100 | |
| Expenses | ALL | L.S. | Lump Sum | $1,016 | $39,500 |
| **2. Transmission Line Bidding (Contract Services)** | | | | | |
| Project Engineer | 36 | Hr | $126 | $4,536 | |
| Drafting | 4 | Hr | $84 | $336 | |
| Admin | 12 | Hr | $62 | $744 | |
| Expenses | ALL | L.S. | Lump Sum | $384 | $6,000 |
| **3. Transmission Line Contract Administration / Inspection (Contract Services)** | | | | | |
| Project Mgr/PIC | 16 | Hr | $142 | $2,272 | |
| Project Engineer | 280 | Hr | $126 | $35,280 | |
| Drafting (including as-builts) | 40 | Hr | $84 | $3,360 | |
| Admin | 60 | Hr | $62 | $3,720 | |
| As-built Survey | ALL | L.S. | Lump Sum | $1,300 | |
| Expenses | ALL | L.S. | Lump Sum | $1,068 | $47,000 |
| **4. Transmission Line Construction Costs** | | | | | |
| Mobilization, Bonds, Permits & Insurance | ALL | L.S. | Lump Sum | $23,000 | |
| 12" Transmission Main through farm fields, complete | 2000 | L.F. | $85 | $170,000 | |
| 12" Transmission Main along roadways, complete | 6800 | L.F. | $145 | $986,000 | |
| Bore under highway, complete | 100 | L.F. | $750 | $75,000 | |
| Connections to existing waterlines, complete | 4 | Each | $9,500 | $38,000 | $1,292,000 |
| **Fisher Farm Well Improvements** | | | | | |
| **5. Fisher Farms Design / Permit Applications / Agency Approvals (Contract Services)** | | | | | |
| Project Mgr/PIC | 8 | Hr | $142 | $1,136 | |
| Project Engineer | 134 | Hr | $126 | $16,884 | |
| Drafting | 120 | Hr | $84 | $10,080 | |
| Admin | 40 | Hr | $62 | $2,480 | |
| Electrical/Controls Design | ALL | L.S. | Lump Sum | $18,500 | |
| Structural Design | ALL | L.S. | Lump Sum | $2,100 | |
| Expenses | ALL | L.S. | Lump Sum | $820 | $52,000 |

**Location: Dayton, Oregon**

**Project: Dayton Water System Improvements (Transmission Line Replacement & Water Well Development)**

**WRD WSD Account application, Section VII.B Table (prior to design estimates)** **Date: Jan 2016**

## Preliminary Planning Estimates (w/Funding Application, before design)

| | Line Items | Estimated Quantity | Unit | Unit Cost | Estimated Cost | Subtotal sum |
|---|---|---|---|---|---|---|
| **6.** | **Fisher Farms Bidding (Contract Services)** | | | | | |
| | Project Engineer | 43 | Hr | $126 | $5,418 | |
| | Drafting | 4 | Hr | $84 | $336 | |
| | Admin | 12 | Hr | $62 | $744 | |
| | Electrical/Control Subconsultant | 4 | Hr | $140 | $560 | |
| | Expenses | ALL | L.S. | Lump Sum | $442 | $7,500 |
| **7.** | **Fisher Farms Contract Administration / Inspection (Contract Services)** | | | | | |
| | Project Mgr/PIC | 20 | Hr | $142 | $2,840 | |
| | Project Engineer | 310 | Hr | $126 | $39,060 | |
| | Drafting (including as-builts) | 50 | Hr | $84 | $4,200 | |
| | Admin | 90 | Hr | $62 | $5,580 | |
| | Electrical/Control Subconsultant | 120 | Hr | $140 | $16,800 | |
| | Structural Subconsultant | 16 | Hr | $130 | $2,080 | |
| | SCADA programming/integration | ALL | L.S. | Lump Sum | $13,000 | |
| | Expenses | ALL | L.S. | Lump Sum | $1,440 | $85,000 |
| **8.** | **Fisher Farms Construction Costs** | | | | | |
| | Mobilization, Bonds, Permits & Insurance | ALL | L.S. | Lump Sum | $38,000 | |
| | Site Work, Access, Grading & Drainage (3 sites) | 3 | Each | $16,500 | $49,500 | |
| | Wellhead Improvements (4 wells) | 4 | Each | $18,500 | $74,000 | |
| | Methane Stripper & Control Building | ALL | L.S. | Lump Sum | $68,000 | |
| | Methane Stripper System & Mechanical | ALL | L.S. | Lump Sum | $185,000 | |
| | Site Piping, connections to City system (main well) | ALL | L.S. | Lump Sum | $65,000 | |
| | Site Piping, pump to waste, well mechanical | 3 | Each | $16,500 | $49,500 | |
| | Electrical & Controls (main well & methane stripper) | 1 | Each | $95,000 | $95,000 | |
| | Auxiliary Power Generator & ATS | ALL | L.S. | Lump Sum | $52,500 | |
| | Power Service Modifications | 3 | Each | $14,500 | $43,500 | |
| | Electrical & Controls, Control Shelters, MTS (3 wells) | 3 | Each | $45,000 | $135,000 | $855,000 |
| **Wellfield Well 1 & 3 VFD Improvements** | | | | | | |
| **9.** | **Well 1&3 VFD Design / Permit Applications / Agency Approvals (Contract Services)** | | | | | |
| | Project Mgr/PIC | 6 | Hr | $142 | $852 | |
| | Project Engineer | 54 | Hr | $126 | $6,804 | |
| | Drafting | 44 | Hr | $84 | $3,696 | |
| | Admin | 26 | Hr | $62 | $1,612 | |
| | Electrical/Controls Design | ALL | L.S. | Lump Sum | $10,500 | |
| | Expenses | ALL | L.S. | Lump Sum | $536 | $24,000 |

**Location: Dayton, Oregon**

**Project: Dayton Water System Improvements (Transmission Line Replacement & Water Well Development)**

**WRD WSD Account application, Section VII.B Table (prior to design estimates)** **Date: Jan 2016**

## Preliminary Planning Estimates (w/Funding Application, before design)

| | Line Items | Estimated Quantity | Unit | Unit Cost | Estimated Cost | Subtotal sum |
|---|---|---|---|---|---|---|
| **10.** | **Well 1 & 3 VFD Bidding (Contract Services)** | | | | | |
| | Project Engineer | 45 | Hr | $126 | $5,670 | |
| | Drafting | 4 | Hr | $84 | $336 | |
| | Admin | 12 | Hr | $62 | $744 | |
| | Electrical/Control Subconsultant | 3 | Hr | $140 | $420 | |
| | Expenses | ALL | L.S. | Lump Sum | $330 | $7,500 |
| **11.** | **Well 1 & 3 VFD Contract Administration/Inspection (Contract Services)** | | | | | |
| | Project Mgr/PIC | 6 | Hr | $142 | $852 | |
| | Project Engineer | 72 | Hr | $126 | $9,072 | |
| | Drafting (including as-builts) | 30 | Hr | $84 | $2,520 | |
| | Admin | 58 | Hr | $62 | $3,596 | |
| | Electrical/Control Subconsultant | 48 | Hr | $140 | $6,720 | |
| | SCADA programming/integration | ALL | L.S. | Lump Sum | $9,800 | |
| | Expenses | ALL | L.S. | Lump Sum | $1,440 | $34,000 |
| **12.** | **Well 1 & 3 VFD Construction Costs** | | | | | |
| | Mobilization, Bonds, Permits & Insurance | ALL | L.S. | Lump Sum | $4,400 | |
| | Site Work & Wellhead Discharge Piping Mods (2 wells) | 2 | Each | $31,000 | $62,000 | |
| | Wellhead Improvements (2 wells) | 2 | Each | $1,800 | $3,600 | |
| | Site Piping, Complete (2 wells) | 2 | Each | $6,500 | $13,000 | |
| | Electrical & Controls (2 wells) | 2 | Each | $22,500 | $45,000 | $128,000 |
| **City Public Works Staff** | | | | | | |
| **13.** | **City Staff Salary/Benefits** | | | | | |
| | Public Works Director | 139 | Hr | $44.58 | $6,197 | |
| | Maintenance Op. 2 | 70 | Hr | $25.98 | $1,819 | |
| | Maintenance Op. 1 | 70 | Hr | $28.40 | $1,988 | $10,003 |
| | | | | **Estimated Project Total:** | **$2,587,503** | **$2,587,503** |
| | | | | Contractual Services (% of total) | 11.7% | |