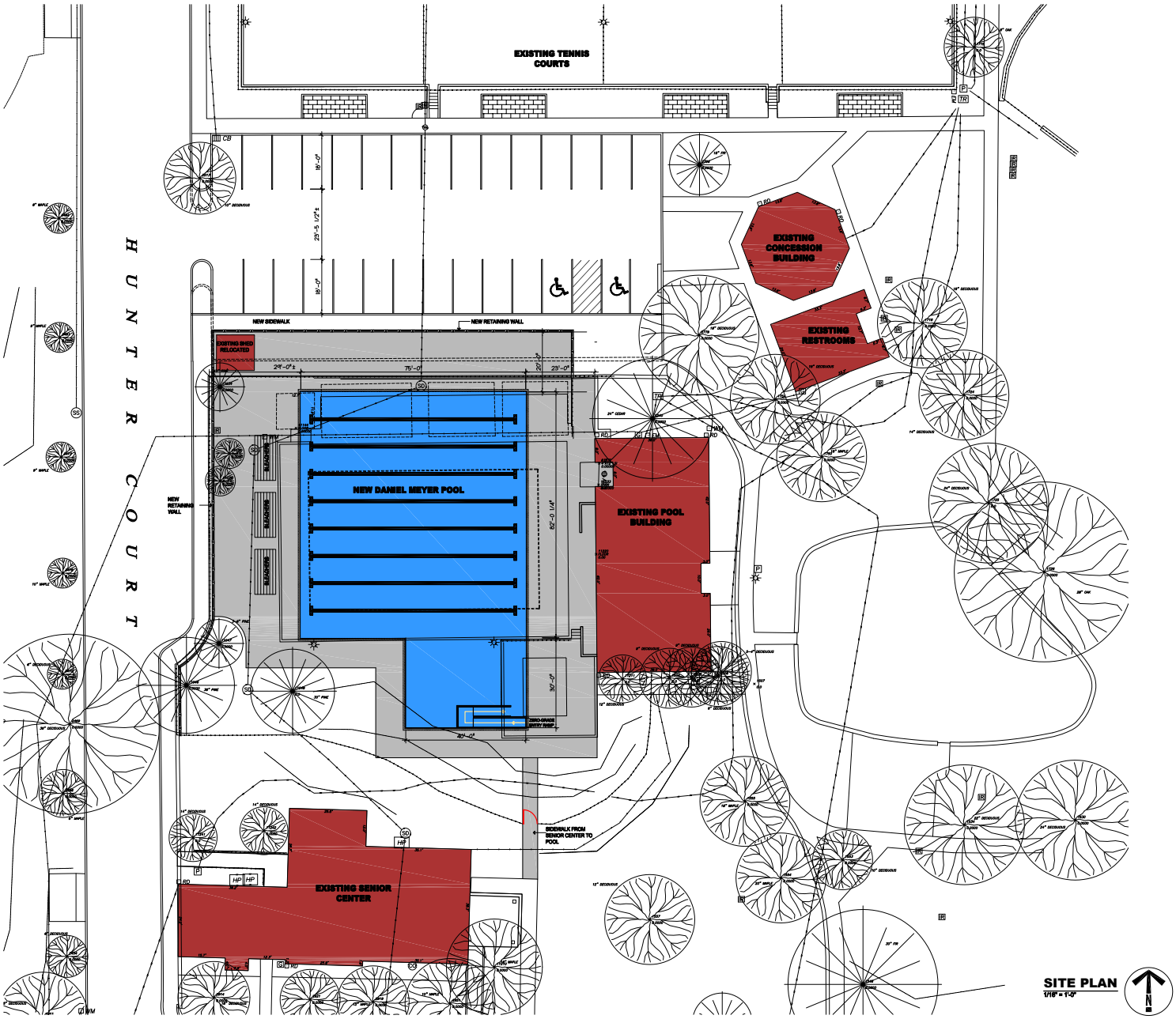
SCHEMATIC DESIGN REPORT – DRAFT – 12/08/2020

Daniel Meyer Pool Replacement & Renovation



Daniel Meyer Pool Replacement & Renovation

Schematic Design Report

Ashland Parks and Recreation Commission Project Team

Michael Black	Parks and Recreation Services Director
Tara Kiewel	Administrative Analyst
Rachel Dials	Recreation Superintendent
Lonny Flora	Recreation Manager
Jason Minica	Forestry & Trail Supervisor (Constr. project manager)

Project Design Team

Robertson|Sherwood|Architects pc
- Carl Sherwood, AIA
- Scott Stolarczyk, AIA

Aquatic Design Group
- Justin Caron

Thornton Engineering, Inc.
- Mike Thornton, PE
- Kirk Daley, PE
- Matt Scott

Cameron McCarthy Landscape Architecture
- Larry Gilbert, ASLA

Construction Focus
- Steve Gunn

Daniel Meyer Pool Replacement & Renovation

Schematic Design Report

Table of Contents

Daniel Meyer Pool Replacement & Renovation

Schematic Design Process

Background (from Parks Commission RFP)

The Daniel Meyer Pool was built in 1986 with the intent that it would serve as a seasonal community pool open just a few months per year for swim lessons, recreational, swimming and casual lap swimming. The actual use of the current pool is much more intensive than originally planned. The pool is open year-round, and it is used for competitive sports training. It serves a population much larger than what was intended. The current 25-yard by 15-yard pool is being used as if it were twice the size.

The Parks Commissioners formed a Pool Ad-Hoc Committee to review options for the Daniel Meyer Pool. The formation of this committee was predicated on a perceived need for a new community pool with the City of Ashland. The PAHC met several times and formed a recommendation for the replacement of the Daniel Meyer Pool, which was subsequently approved by the Parks Commissioners.

Based on the current state of the Daniel Meyer Pool (hereinafter "DMP") and the current demand for use, the PAHC recommended the following as its "primary recommendations:"

- DMP be replaced with a new 25-yard x 25-meter outdoor community pool, including an attached recreation/therapy alcove, to be located at the current DMP site in Hunter Park
- Immediate action to plan, design, and construct a new swimming pool supporting the identified aquatic needs of the Ashland community and PAHC Final Recommendations document.
- APRC address the funding requirements for meeting the Committee's recommendations in the most appropriate and expedient manner possible
- APRC seek out non-profit organizations and partners to support the funding and implementation of strategies to improve aquatics in Ashland
- APRC consider supplemental recommendations detailed in the PAHC Final Recommendations Document.

The Parks Commissioners approved the recommendations at their September 2019 business meeting and stated that by expanding the size of the pool, the City of Ashland will be able to better accommodate all current user groups. Replacing the pool with new and better infrastructure will address the impact of year-round use and will extend the life of the pool.

Project Scope (from Parks Commission RFP)

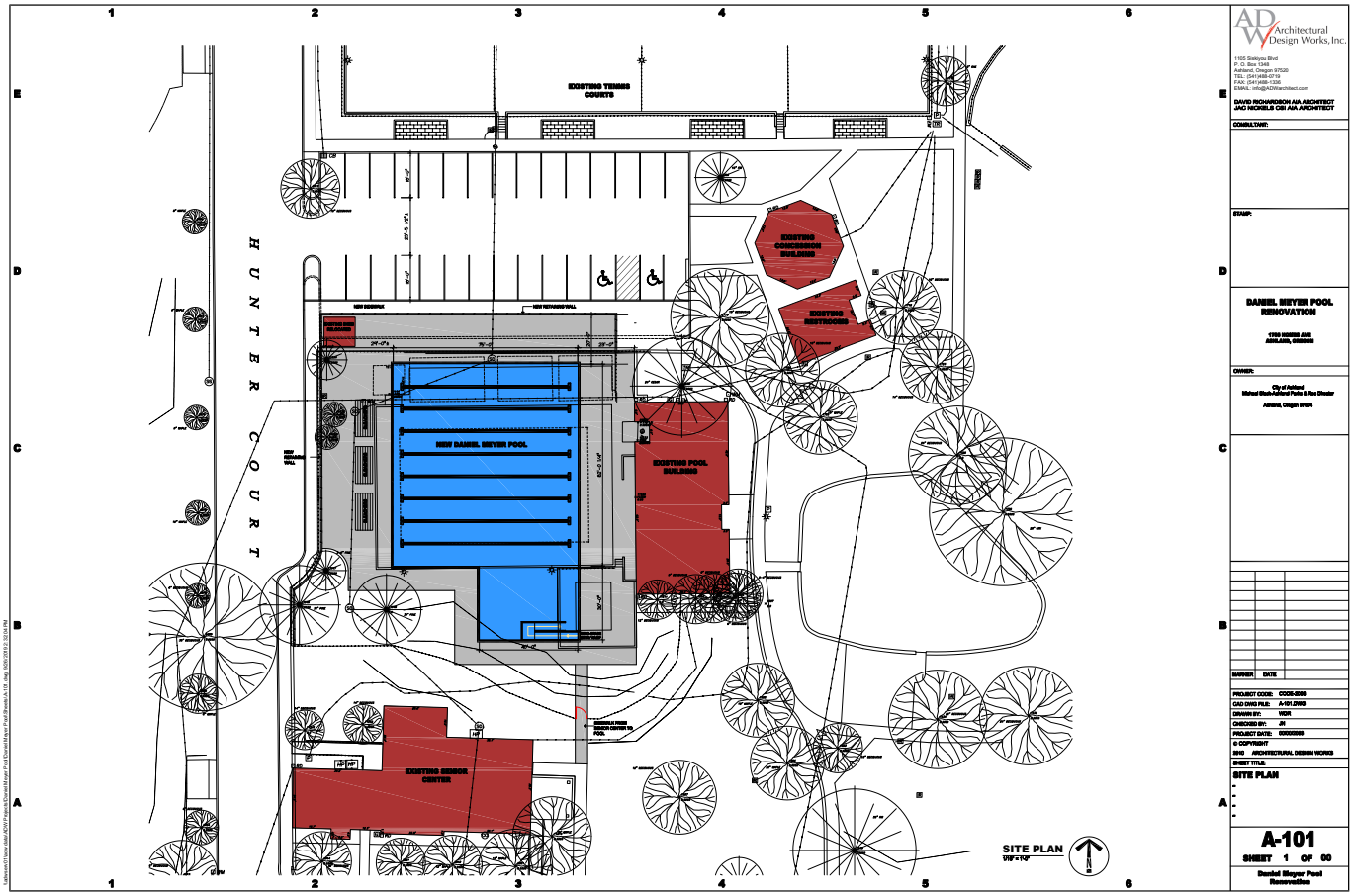
The design team was commissioned to provide schematic design, design development, bidding and construction documents required for the construction of a new municipal pool. The design must include the following:

- Complete demolition of existing pool, deck, and spa structures.
- Complete demolition of equipment inside the mechanical room will be required due to the increased volumetric recirculation demands. The existing 20-ft x 15-ft room should accommodate the new equipment.
- Excavate to accommodate new 25-yard x 25M pool with adjacent recreational swimming area (size to be determined) and its associated 10'x10'x12' surge tank.
- Install piping, SSOs, return fittings. Piping will be routed to new surge tank, and to existing equipment room.
- Backfill excavation and piping trenches with compacted structural fill material, graded to elevations for construction of the new pool floor, pool walls, and deck.

- Build concrete formwork, install reinforcing steel, and pour concrete pool floor slab.
- Install Myrtha Pool wall, gutter, and floor membrane system with integrated lap lanes and wall targets.
- Test fill water at source to determine balance chemicals necessary at startup.
- Form, reinforce, and pour concrete pool decks, retaining walls, fences and any other flatwork, drainage, ramps, stairs and walkways as per plan.
- Design and installation of landscaping.
- Install submerged suction outlet (SSO) covers, return fittings, light fixtures, handrails, etc.
- Monitor filling of pool and begin water balancing process.
- Balance water chemistry and operate equipment for two weeks, and orient operators to new systems.
- Environmentally efficient and sustainable features
- Pool deck area should allow for a season cover in the future
- Highest standards for construction and mechanical components to reduce long-term
- maintenance and operational costs
- ADA access between the pool and the Senior Center building

Proposed Site Plan (from Parks Commission RFP)

The following site plan was developed to help illustrate the intended scope of the project:



Schematic Design Analysis and Verification

Daniel Meyer Pool Replacement & Renovation

Based upon the previous program and concept design work developed and approved by the APRC, the Schematic Design seeks to further evaluate and define the scope of the project. To this end, the Design Team has worked with the APRC Project Team in exploration of specific areas of the pool design, and in planning work related to the elements of the proposed project scope, to both verify the goals of the concept design and develop a more detailed understanding of project requirements for budgeting purposes. This work has included:

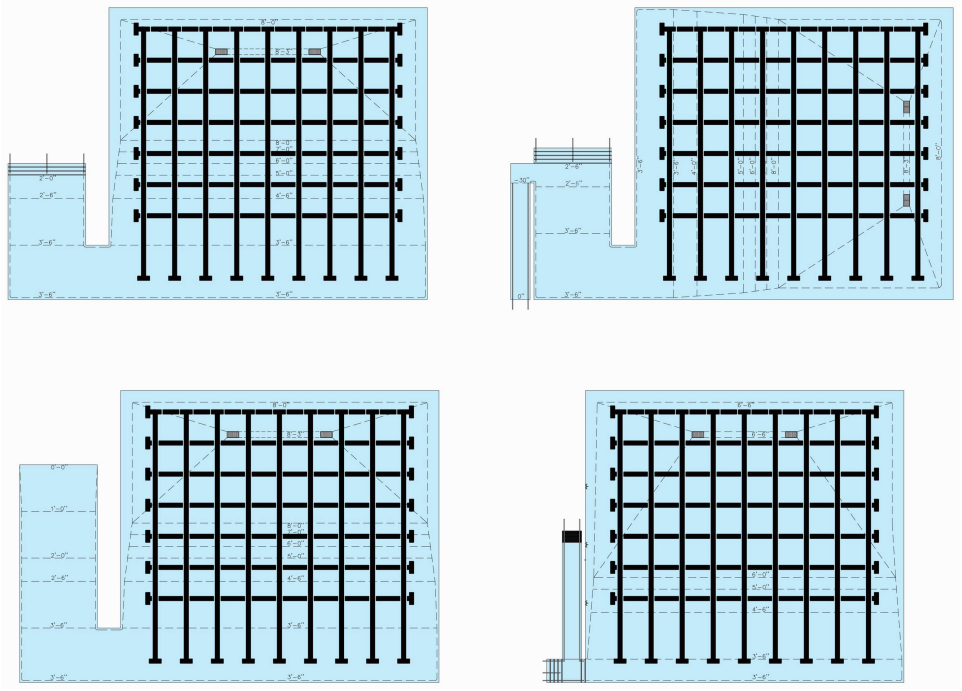
- Development of design alternatives for the new outdoor pool, and pool mechanical systems replacement, in order to verify that key program goals can be accommodated in the design as anticipated.
- Further analysis and verification of the requirements for site-based utility services, storm and wastewater management, landscape and hardscape design.
- Evaluation and preliminary sizing for the scope of mechanical, electrical and plumbing system improvements to the bathhouse required to meet the requirements of a larger pool facility.
- Preliminary identification of furnishings, fixtures and equipment (FFE) to define which operational components are anticipated to be purchased from the project funds.

Pool Schematic Design (SD) Alternatives

Initial evaluation by the design team of the pool concept outlined in the Site Plan on page 5 proved to that basic size and layout of the pool could accommodate the operational goals as set forth in the RFP and further detailed as follows:

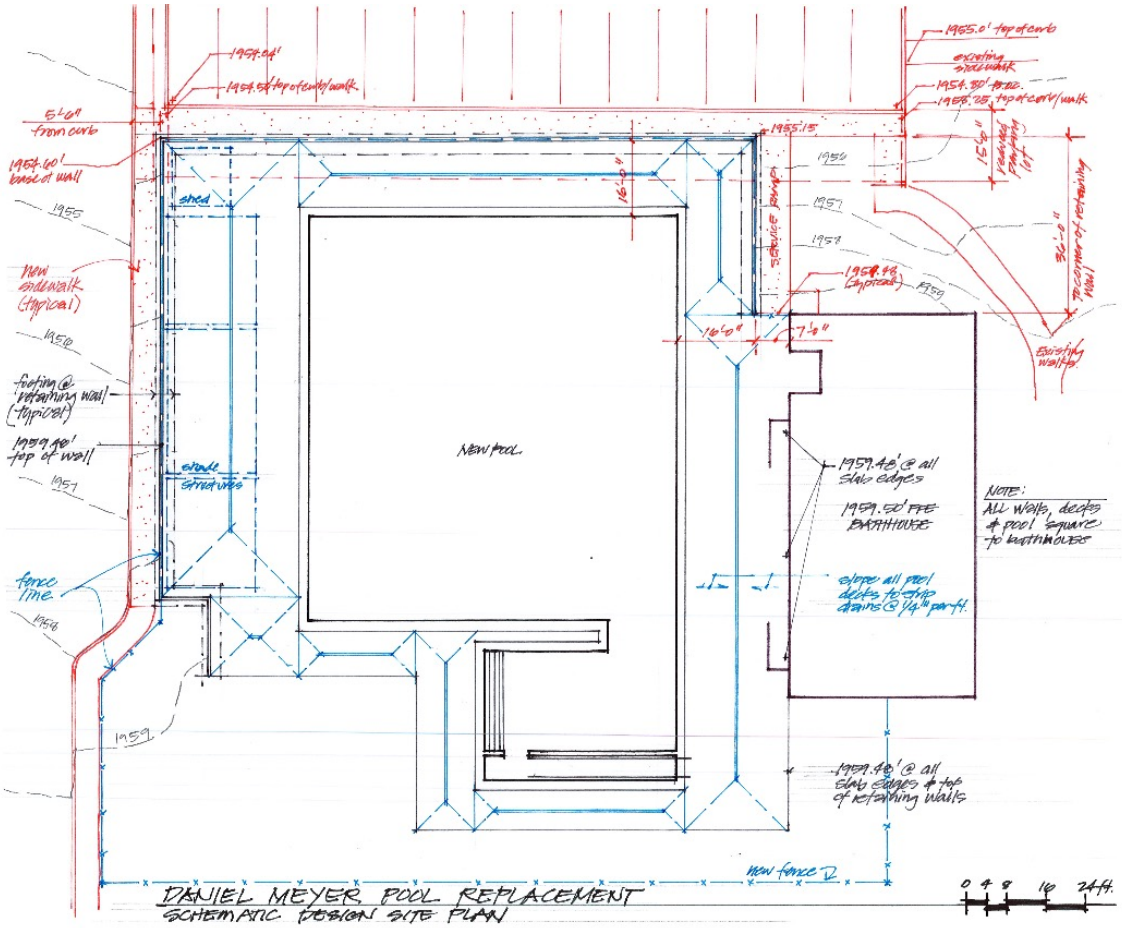
- Pool Size: 82' (25m) x 75' (25yd) plus shallow water area
- Competitive/Lap Lanes: 10 lanes at 25 Yards, 6 lanes at 25 meters
- Constant 8ft depth for a minimum of 6 competitive 25yd lap lanes to accommodate water polo
- Shallow water areas with depths from 2'-0" to 3'-6" and 3'-6" to 5'-0", and accessible ramp.

Schematic design alternatives were then developed and refined to consider the impact of placement of the key deep water and shallow water elements. The recommended Schematic Design layout meets all of the above goals.



Site Development Scope Confirmation

Analysis and verification of the site utility services, storm and wastewater management, landscape and hardscape design confirmed that the concept site plan could be achieved largely as envisioned:



Challenges to be evaluated as the design is further developed will include:

- Extent of tree removal at the SW corner of the site
- Accessible path from the ADA parking to the front door
- Accessible path from the Senior Center (made possible by recommended berm removal)
- The initial position of the City Public Works is that connection of deck drains to the sanitary sewer would only see a relatively small amount of storm water added to the system, which the City is generally ok with since the BMP is to discharge chlorinated water, no matter the concentration, to sewer and not the storm drain. However, they would like to consider a dual connection system with a valve control, similar to what the City currently has at the Ashland airport for the wash rack basin. During the day when the pool is in use, water could drain to the sanitary sewer and when the pool is not in use water could drain to the storm drain system.

Required Bathhouse Improvements (not previously envisioned for this project)

In September of 2013, Robertson Sherwood Architects led an assessment of the existing bathhouse at the Daniel Meyer Memorial Swimming Pool and prepared a summary report. While many conditions noted at that time have been addressed, changes that have been made in the almost 7 years since have not addressed conditions that will need to be considered as replacement of the pool is contemplated. Rather than conduct a new full assessment this report has been amended with new/revised commentary as noted in red on the copy of the report included in the Appendix.

The existing bathhouse will be required to comply with current OAR Chapter 333 Division 60 – Swimming Pool Rules before the new pool can be licensed for operation and opened to the public. In addition, any improvements in the bathhouse will require a permit under the 2019 OSSC building code, which will include the removal of accessibility barriers up to 25 % of the value of the work. The following items will need to be addressed in order to comply with these code requirements, and will be estimated as part of our preliminary design services:

- Additional toilets, lavatories and showers will need to be added to meet the increased bather load for the enlarged pool area. Modifications will also be required to meet current ADA dimensional requirements. The Schematic Design Floor Plan illustrates that most of the area of the existing toilet and showers will need to be remodeled.

- The current pool rules define the requirements for floor slopes and finishes in bathhouse construction. It will need to be determined if the current flooring (which does not seal to the walls) is compliant. (A copy of the last few years of operational licensing review report, may already be acceptance of this in the record.)

- The current pool rules require that doors allowing public access into the pool enclosure (fenced pool area) must open away from the pool and have latching hardware centered at least 42 inches above the floor. This will require replacement and slight relocation of the existing doors from the locker rooms out to the pool as shown on the plan layout.

- The creation of ADA compliant toilets, lavatories and showers will likely meet the 25% budget threshold required by code, but the Agency Having Jurisdiction (City) will have the final say in this matter, and may require additional improvements along the accessible route from the parking lot into the building and at the service counter (if not already compliant).

- The current 2019 OMSC (mechanical code) sets requirements for exhaust systems serving toilet rooms and shower areas and requires them to discharge outdoors. This would require some means of make-up outside air ventilation as well in order to balance the heating and ventilation system that was installed when the building was insulated within the past 7 years.

Green Technology Requirement / Sustainable Design Goals

All publicly funded projects in the State of Oregon are subject to a minimum investment of 1.5% of the overall project (about $72,000 to $75,000 in this case) on Green Energy Technology (GET). Typically, for a pool project, this would be used for a direct pool solar hot water collector or a PV solar collection system. This minimum investment is built into the cost estimate presented later in this report.

More importantly, the City of Ashland has adopted a goal of reducing reliance on fossil fuels such as the natural gas that historically has fueled the heating needs for Daniel Meyer Pool. Unfortunately, the lowest cost construction and operational alternative (based on current rates) would still rely on natural gas as the primary source of pool heating energy. Such a pool heating system is included as the basis of the cost estimate presented later in the report.

However, alternatives to this approach are also presented in the Pool Heating Analysis section of this report and include both an all-electric option as well as an electric heat-pump with back-up natural gas or back-up electric heating options. Rough construction and operational cost are presented for comparison.

It should be noted that the 1.5% GET requirement is a minimum investment for a solar system that will reduce overall energy costs to some degree. Larger investments in such systems would yield greater savings under each of the heating options studied, but such technologies cannot be relied upon to meet all energy needs (no matter how large the collector) for a facility that is operated through the winter months.

Operational Furnishings, Fixtures and Equipment

The cost of equipping the new pool likely includes the acquisition of components that may be bid separately from the construction in order to save mark-up costs. Preliminary identification of furnishings, fixtures and equipment (FFE) to define which operational components are anticipated to be purchased from the project funds is included with the budget presented herein. These kinds of components are likely to include:

- Competitive Starting Blocks
- Lane Lines and Reel
- Thermal Pool Blankets and Reels
- Backstroke Flags and Banners
- Pace Clocks (lap swimming)
- Starting and Timing Systems (if included)
- Deck Furnishings

Schematic Design (SD) Documentation

The result of this Schematic Design work described above is presented in the report the form of:

- Schematic Design narrative and systems descriptions – providing a greater level of descriptive detail about strategies, materials, systems and design assumptions than can be illustrated in the plans.
- Drawings and plans to further define the scope of work – providing an illustrated context for the narrative and systems descriptions.
- Schematic Design cost estimate and Project Budget – including identification of all known project costs.

SD Component Descriptions

Item	Component	Description
1	**Pool Replacement**	
	Pool and Pool Systems	Per Scope and Cost Estimate coordinated with Pool Manufacturer
	Exterior Demolition and Excavation	Demolish existing pool decks, pool and pool piping excavation and backfill for new pool configuration
	Interior Demolition	Demolish pool systems and equipment, demolish walls at pool boiler room, relocate domestic water heater
2	**Site Development**	
	Site Demolition	In addition to pool and deck demolition noted above, remove existing perimeter fencing and retaining walls, demolish existing north and west sidewalk (keep street curb), demolish southern 15 feet of existing parking lot and curbs, salvage existing shed and shade structures for relocation
	Site Improvements	Install new retaining walls at north and west side of pool area as shown Install new curbs at edge of parking lot and patch asphalt paving Install new sidewalks where shown Install new 5-inch thick broom finished concrete decks, with integrated NDS Mini-Channel Strip Drains, 1/4 inch per foot slope, at full perimeter of pool, assume minimum 8-inch thick crushed rock base Install new chain link fencing and gates, on top of retaining walls and beyond (in mow strips) where shown Removal of existing grassy berm and regrading of lawn area south of pool/north of Senior Center Landscape and irrigation in area south of pool as described
	Site Utilities	Demolish existing storm water system and re-route new piping around new pool construction, extend connection to new perimeter pool deck drains noted above

3 Pool Mechanical Room

General Renovation	Patch existing finishes affected by demolition
Pool and Pool Systems	Per Scope and Cost Estimate coordinated with Pool Manufacturer

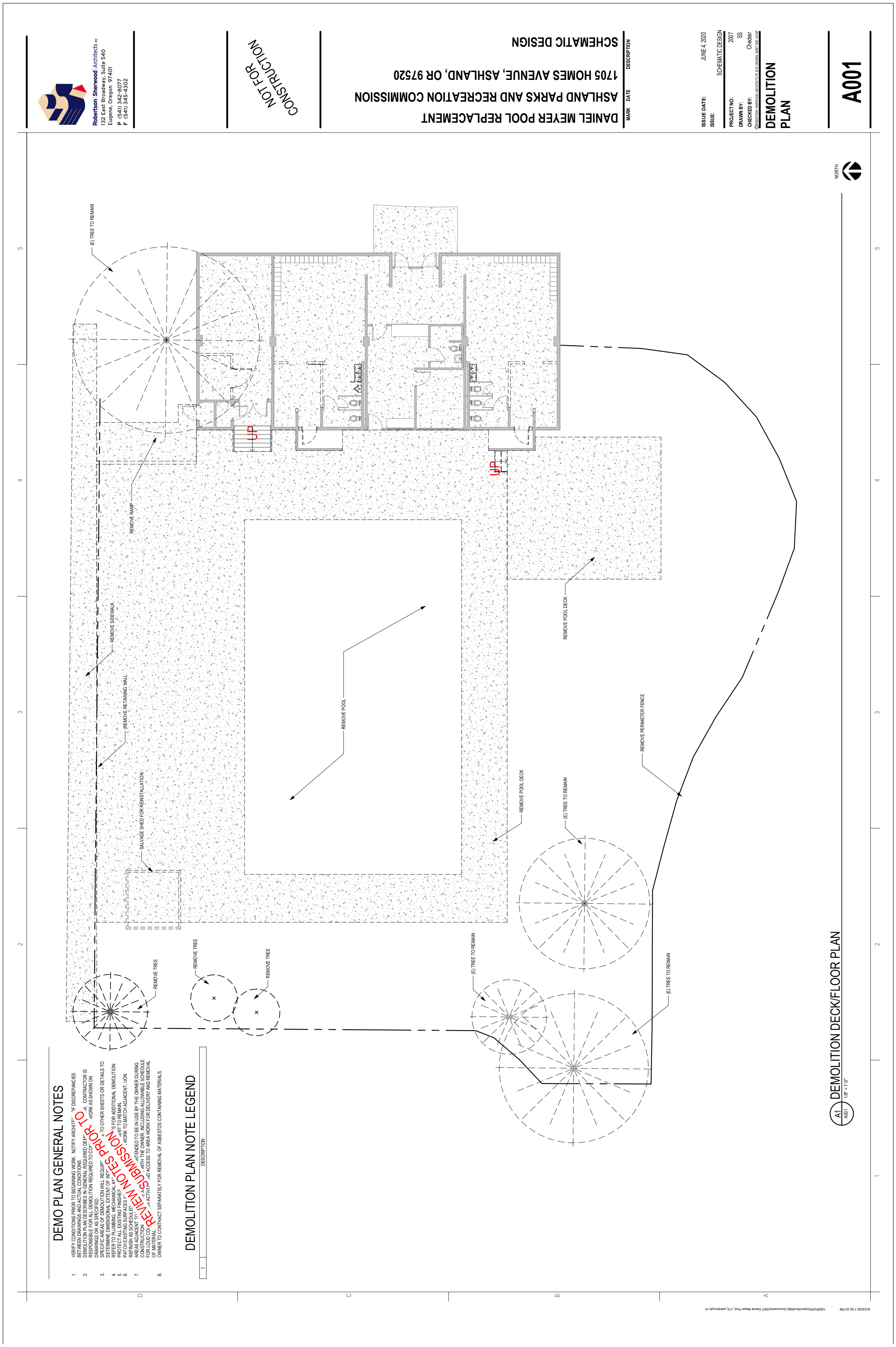
4 Locker Rooms Toilet and Shower Upgrades

Locker/Changing Rooms	Demo existing non-bearing cmu walls and concrete floor in existing locker rooms where shown
	Expand existing shower areas as shown with HDPE shower partitions and tile finishes throughout, patch and paint at hard ceiling
	Create new toilet stalls as shown with HDPE partitions and tile finishes throughout, patch and paint at hard ceiling, include new tile finishes at floor and walls of toilet areas to remain, toilet accessories
	New sink and countertops with backsplash where shown, painted CMU walls behind.
MEP scope in Locker/Changing Rooms	Demo existing fixtures and piping
	Install new showers, toilets, urinals and lavatories where shown
	Install new circulated hot water loop from Pool Mechanical Room and domestic water heater
	Install new lighting and electrical circuits in affected areas as required
	Install new exhaust fan units in each of men's and women's toilet and shower areas

SD Drawings

Drawings illustrating the proposed Schematic Design scope of work are included as follows:

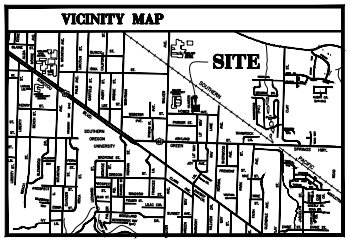
- Demo Plan (Architectural)
- Cover Sheet (Civil)
- Preliminary Site Plan (Civil)
- Preliminary Utility Plan (Civil)
- Preliminary Grading Plan (Civil)
- Detail Sheet (Civil)
- Detail Sheet (Civil)
- Site Plan (Landscape)
- Pool Deck Plan (Architectural)
- Bathhouse Floor Plan (Architectural)
- Swimming Pool Plan (Aquatics)
- Swimming Pool Sections (Aquatics)
- Swimming Pool Details (Aquatics)
- Swimming Pool Details (Aquatics)
- Mechanical Room Layout Plan (Aquatics)

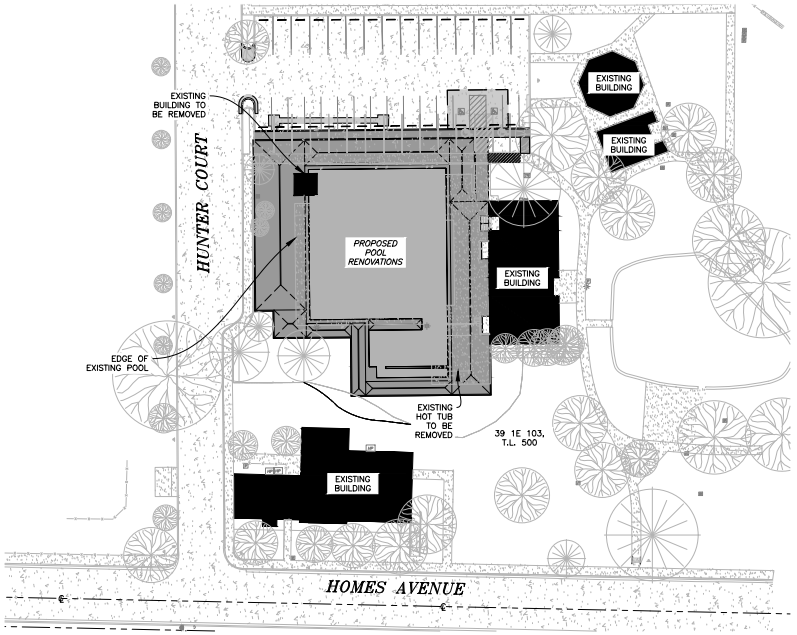

Robertson Sherwood Architects pc
132 East Broadway, Suite 540
Eugene, Oregon 97401
NOT FOR CONSTRUCTION
DANIEL MEYER POOL REPLACEMENT
ASHLAND PARKS AND RECREATION COMMISSION
1705 HOMES AVENUE, ASHLAND, OR 97520
SCHEMATIC DESIGN
ISSUE DATE: JUNE 4, 2020
ISSUE: SCHEMATIC DESIGN
DEMOLITION PLAN
A001
NORTH
(E) TREE TO REMAIN
REMOVE RAMP
REMOVE SIDEWALK
REMOVE RETAINING WALL
SALVAGE SHED FOR REINSTALLATION
REMOVE POOL
REMOVE POOL DECK
REMOVE PERIMETER FENCE
REMOVE TREE
UP
DEMOLITION DECK/FLOOR PLAN
DEMO PLAN GENERAL NOTES
DEMOLITION PLAN NOTE LEGEND
REVIEW NOTES PRIOR TO SUBMISSION

DANIEL MEYER POOL RENOVATION

A PROPOSED DEVELOPMENT LOCATED IN:
SOUTHEAST QUARTER OF SECTION 10, TOWNSHIP 39 SOUTH, RANGE 1 EAST, WILLAMETTE MERIDIAN CITY OF ASHLAND, JACKSON COUNTY, OREGON

VICINITY MAP





N

COVER SHEET -POOL RENOVATION

0 30 60 SCALE: 1"=30'

SCHEDULE OF DRAWINGS

1	COVER SHEET
2	PRELIMINARY SITE PLAN
3	PRELIMINARY UTILITY PLAN
4	PRELIMINARY GRADING PLAN
5	DETAIL SHEET
6	DETAIL SHEET

PLAN NOTES

1. These plans are a reproduction of the original electronic document. These drawings are not to be reproduced without the permission of the engineer. They are to be used on this project only. Any other use without the written permission of the engineer is strictly prohibited.

UTILITY LEGEND

FBO	EXISTING FIBER OPTIC LINE
G	EXISTING GAS
T	EXISTING TELEPHONE
OHP	EXISTING ELECTRIC
	EXISTING CABLE TV
	EXISTING IRRIGATION
SD	EXISTING STORM DRAIN
	EXISTING SANITARY SEWER
W	EXISTING WATER
	NEW STORM DRAIN
	NEW SANITARY SEWER
W	NEW WATER

SURVEY NOTES

BASIS OF BEARINGS

BEARINGS BASED BASED OFF OF ELEVATION BENCHMARK.

ELEVATION DATUM

THE BASIS OF VERTICAL CONTROL FOR THIS SURVEY IS A CITY OF ASHLAND BENCHMARK, BEING A 3" BRONZE DISK IN A MONUMENT WELL LOCATED IN THE CENTERLINE INTERSECTION OF SISKIYOU BOULEVARD AND WALKER AVENUE BENCHMARK ELEVATION = 2031.90' BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, ADJUSTED IN 1956 (NGVD 29/56).

ABBREVIATIONS & SYMBOLS

A.C.	ASPHALTIC CONCRETE	MIN	MINIMUM
B.C.	BACK OF CURB	M.H.	MANHOLE
B.C.R.	BEGINNING OF CURB RETURN	OG	ORIGINAL GROUND
C.I.	CURB INLET	OHP	OVERHEAD POWER
℄	CENTER LINE	P	PROPERTY LINE
CLR	CLEAR	PUE	PUBLIC UTILITY EASEMENT
CONC	CONCRETE	R/W	RIGHT-OF-WAY
D/W	DRIVEWAY	SS	SANITARY SEWER
E.C.R.	END OF CURB RETURN	SSL	SANITARY SEWER LATERAL
EL	ELEVATION	S/W	SIDEWALK
EXIST	EXISTING	STD	STANDARD
OG	ORIGINAL GRADE	SD	STORM DRAIN
FG	FINISH GRADE	TBC	TOP OF BOX CULVERT
FH	FIRE HYDRANT	TC	TOP OF CURB
FOL	FIBER OPTIC LINE	TW	TOP OF WALL
INV	INVERT OF PIPE	WM	WATER METER
MAX	MAXIMUM	WV	WATER VALVE

CONSULTANTS/OWNERS

OWNER
CITY OF ASHLAND PARKS AND RECREATION
1195 E MAIN STREET
ASHLAND, OREGON 97520
541-552-2251 (MICHAEL BLACK)

ARCHITECT
ROBERTSON SHERWOOD ARCHITECTS PC
132 EAST BROADWAY, SUITE 540
EUGENE, OREGON 97401
(541) 342-8077

CIVIL ENGINEER
THORNTON ENGINEERING, INC.
P.O. BOX 476
JACKSONVILLE, OR 97530
(541) 899-1489

SURVEYOR
POLARIS LAND SURVEYING LLC
P.O. BOX 459
ASHLAND, OR 97520
(541) 482-5009

DATE	CURRENT SET	PLAN SET DESCRIPTION
6-4-20	X	PRELIM. PLANS - TE/CLIENT PLAN REVIEW
		RECORD DRAWINGS

GENERAL NOTES

1. All workmanship and materials shall conform to the provisions of the 2018 Standard Specifications for Public Works Construction published by the Oregon Chapter of APWA, and the current amendments of the City of Ashland.
2. The Contractor shall determine the location of all utilities necessary to complete the work. The Engineer does not guarantee the accuracy of the location or depth of the utilities shown on the plans. The Contractor shall pothole existing utilities and notify Engineer of any discrepancies with these plans.
3. The Contractor and subcontractors shall be pre-qualified with the City of Ashland prior to any construction within City right-of-way.
4. The Contractor shall submit a traffic control plan and secure approval of the plan from the City at least (5) working days prior to starting work.
5. The Contractor shall not perform work without the Agency inspections where inspections are required by the specifications.
6. Requests by the contractor for changes to the plans must be approved by the consulting engineer and the Agency's engineer before the changes are implemented.
7. When performing excavations, the contractor shall comply with the provisions of ORS 757.541 to 757.571, which include requirements that the contractor hand-expose (pothole) underground facilities and use reasonable care to avoid damaging them.
8. The Engineer does not either expressly or by implication seek to establish or delineate the property and right-of-way boundaries. The Engineer has included the boundaries on the drawing to orient the location of the work only. The Engineer has drawn centerline and existing property line locations based on a boundary & topographic survey provided by Polaris Land Surveying. The Contractor shall contact a surveyor to establish horizontal and vertical control for the project.
9. Granular materials shall be obtained from a source approved by the City of Ashland. The contractor shall notify the City Engineer of the material source prior to any granular material placement and shall not change material source without approval.
10. All concrete shall be 3300 psi @ 28 days unless otherwise specified.
11. The private storm drain & s.s. lines shall be PVC conforming to ASTM D-3034, SDR 35. All joints shall be watertight.
12. Public storm drain lines shall be HDPE (ADS N-12 or equivalent) unless otherwise noted on the plans. All joints shall be watertight.
13. Public sanitary sewer lines shall be PVC conforming to ASTM D-3034, SDR 35. All joints shall be watertight.
14. Pipe lengths and slopes shown on the plans are based on the distance from center of manhole or structure (or face of curb for curb inlets).
15. The Contractor shall contact the respective Utility Companies to coordinate relocation or reconstruction of any utilities.
16. The Contractor shall notify the following 48 hours prior to starting the work:
    City of Ashland Engineering Department 541-488-5347
    Oregon Utility Notification Center 1-800-332-2344
    Thornton Engineering 541-899-1489
17. Placement or storage of spoils is not permitted on hard surface streets within public right-of-way. Spoils stored in other than right-of-way areas shall be covered to prevent erosion.
18. The Contractor shall be responsible to clean and/or maintain existing public streets of soil or other debris deposited by construction operations and repair all streets damaged by construction operations in a timely manner to avoid inconveniences or hazards to the public.
19. If "soft" or weak subgrade materials are encountered they shall be removed and replaced with compacted aggregate sub-base material, as necessary to achieve a compacted and stable subgrade. If significant subgrade areas are "soft" contact the geotechnical engineer to review the situation for additional design considerations.
20. Thornton Engineering, Inc. is not providing consulting services regarding subsurface soil and groundwater conditions for this project. The contractor shall stop work and contact the owner immediately if groundwater is encountered, or if unusually soft or unstable soil conditions exist on the site.
21. Contractor shall obtain any necessary building permits prior to construction or verify that the owner has done so.
22. Sanitary sewer laterals shall be marked in the field by a 2x4 post painted white. Storm drain laterals shall be marked in the field by a 2x4 post painted green.
23. Sanitary sewer lateral locations shall be permanently marked by a letter 'S' stamped in the top of curb.
24. City to chlorinate and test waterlines. No chlorination fees required by Contractor. Contractor is to provide pig.
25. City to install water laterals and air release valves. Contractor shall provide excavation, backfill and surfacing.
26. Ductile iron water line shall be class 52, domestic USA brand.
27. Fire Hydrants shall be Kennedy K81D, typical.
28. All Water line joints shall be restrained with MJ TRFlex or EBAA Iron Mega Lug.
29. A minimum 6-inch separation shall be maintained between all water, storm drain and sanitary sewer main crossings. Any crossings with less than 6-inch separation shall require a concrete separation as approved by PWD. All water and SS crossings shall conform to OAR Chapter 333 (18" as required).
30. All erosion and sediment control measures must be in place before construction begins.

PERMIT NOTE

Developer and contractor responsible for obtaining all applicable permits including:
-City of Ashland
-Oregon Department of Environmental Quality (Erosion Control)

CALL FOR UTILITY LOCATE 48 HOURS PRIOR TO EXCAVATION - 1-800-332-2344

JOB NO. 20-031
FILE: BASEMAP.DWG

DRAWN:	MRS
DATE:	6/3/2020
	REVISIONS

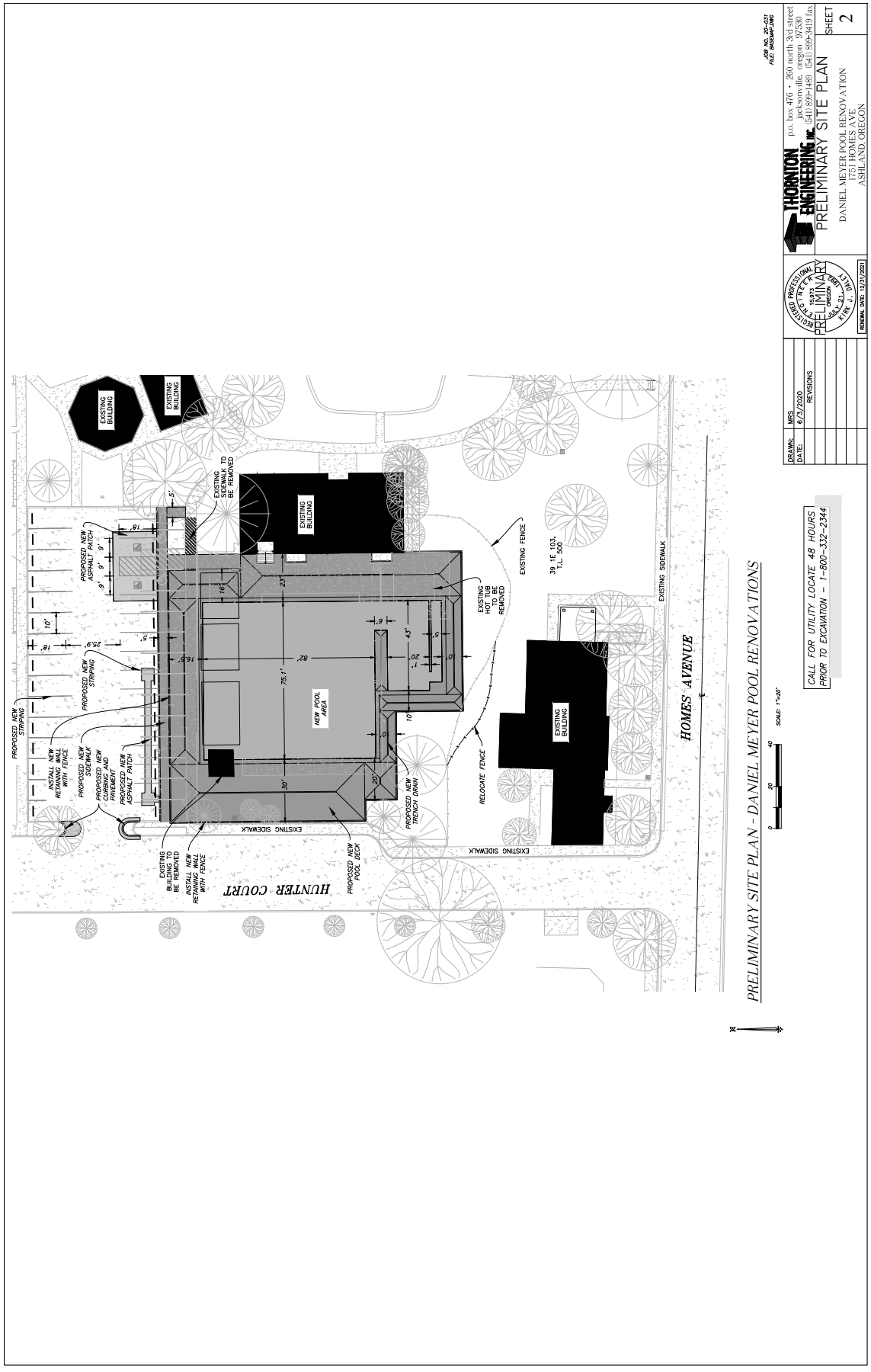
REGISTERED PROFESSIONAL ENGINEER 15,973 OREGON PRELIMINARY MAY 31, 1989 KIRK J. DALEY
RENEWAL DATE: 12/31/2021

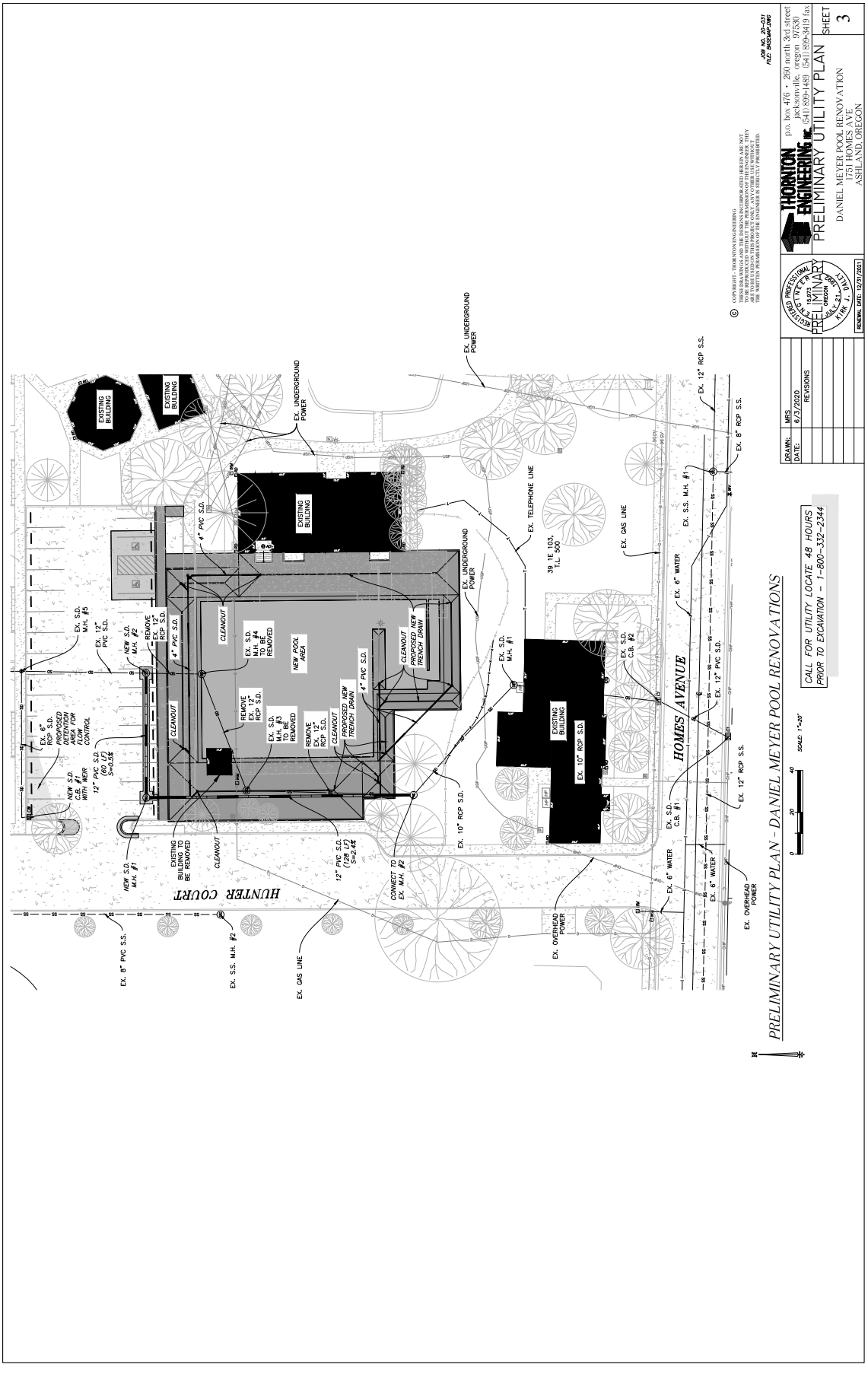
THORNTON ENGINEERING INC. p.o. box 476 • 260 north 3rd street jacksonville, oregon 97530 (541) 899-1489 (541) 899-3419 fax

COVER SHEET

DANIEL MEYER POOL RENOVATION
1751 HOMES AVE
ASHLAND, OREGON

SHEET 1


PRELIMINARY SITE PLAN - DANIEL MEYER POOL RENOVATIONS
SCALE: 1"=20'
CALL FOR UTILITY LOCATE 48 HOURS
PRIOR TO EXCAVATION - 1-800-332-2344
HOMES AVENUE
HUNTER COURT
EXISTING BUILDING
NEW POOL AREA
PROPOSED NEW ASPHALT PATCH
PROPOSED NEW STRIPING
INSTALL NEW RETAINING WALL WITH FENCE
PROPOSED NEW SIDEWALK
PROPOSED NEW CURBING AND PLANTER
EXISTING BUILDING TO BE REMOVED
PROPOSED NEW POOL DECK
PROPOSED NEW TRENCH DRAIN
EXISTING SIDEWALK TO BE REMOVED
EXISTING HOT TUB TO BE REMOVED
RELOCATE FENCE
EXISTING FENCE
EXISTING SIDEWALK
39° 1E 103
T.L. 500
THORNTON ENGINEERING inc.
p.o. box 476 • 260 north 3rd street
jacksonville, oregon 97530
(541) 899-1455 (541) 899-9419 fax
PRELIMINARY SITE PLAN
DANIEL MEYER POOL RENOVATION
1751 HOMES AVE
ASHLAND, OREGON
SHEET 2
DRAWN: MRS
DATE: 6/23/2020
REVISIONS
REGISTERED PROFESSIONAL ENGINEER
OREGON
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 12/31/2021


PRELIMINARY UTILITY PLAN - DANIEL MEYER POOL RENOVATIONS
CALL FOR UTILITY LOCATE 48 HOURS PRIOR TO EXCAVATION - 1-800-332-2344
HOMES AVENUE
HUNTER COURT
EXISTING BUILDING
NEW POOL AREA
EXISTING BUILDING TO BE REMOVED
NEW S.D. C.B. #1 WITH WEIR
NEW S.D. M.H. #1
CONNECT TO EX. M.H. #2
EX. 6" HDPE S.D. PROPOSED DETENTION AREA FLOW CONTROL
12" PVC S.D. @0.5% S=0.44
EX. S.D. M.H. #5
EX. 12" PVC S.D.
NEW S.D. M.H. #2
REMOVE EX. 12" RCP S.D.
4" PVC S.D.
CLEANOUT
EX. S.D. M.H. #4 TO BE REMOVED
REMOVE EX. 12" RCP S.D.
EX. S.D. M.H. #3 TO BE REMOVED
REMOVE EX. 12" RCP S.D.
CLEANOUT
PROPOSED NEW TRENCH DRAIN
CLEANOUT
PROPOSED NEW TRENCH DRAIN
EX. 10" RCP S.D.
EX. S.D. M.H. #1
EX. S.D. C.B. #2
EX. 10" RCP S.D.
EX. S.D. C.B. #1
EX. 12" PVC S.D.
EX. 12" RCP S.S.
EX. S.S. M.H. #1
EX. 8" RCP S.S.
EX. 6" WATER
EX. 6" WATER
EX. 6" WATER
EX. 8" PVC S.S.
EX. S.S. M.H. #2
EX. GAS LINE
EX. OVERHEAD POWER
EX. OVERHEAD POWER
EX. UNDERGROUND POWER
EX. UNDERGROUND POWER
EX. UNDERGROUND POWER
EX. TELEPHONE LINE
EX. GAS LINE
39 1E 10B TL 500
SCALE: 1"=20'
0
20
40
DRAWN: MRS
DATE: 6/23/2020
REVISIONS
THORNTON ENGINEERING inc.
p.o. box 476 • 260 north 3rd street
jacksonville, oregon 97530
(541) 899-1455 fax (541) 899-9419
PRELIMINARY UTILITY PLAN
SHEET 3
DANIEL MEYER POOL RENOVATION
1751 HOMES AVE
ASHLAND, OREGON
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 27, 1984
MARK A. THORNTON
PRELIMINARY
RENEWAL DATE: 12/31/2021
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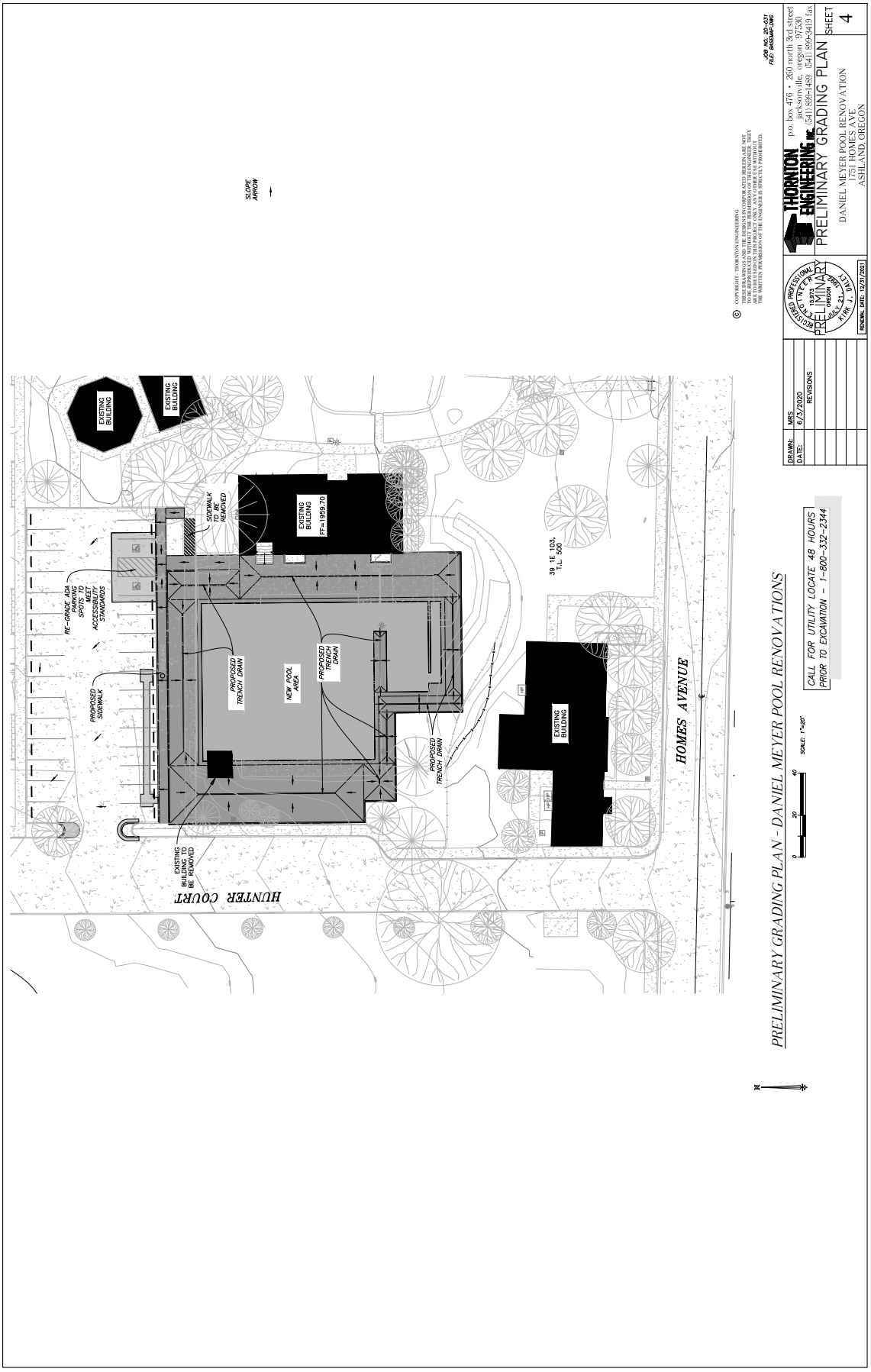
APP. NO. 20-037
FILE: B4DSAPP.DWG


EXISTING BUILDING
EXISTING BUILDING
EXISTING BUILDING
EXISTING BUILDING FF=1959.70
SIDEWALK TO BE REMOVED
RE-GRADE ADA PARKING SPOTS TO MEET ACCESSIBILITY STANDARDS
PROPOSED SIDEWALK
PROPOSED TRENCH DRAIN
NEW POOL AREA
PROPOSED TRENCH DRAIN
PROPOSED TRENCH DRAIN
EXISTING BUILDING TO BE REMOVED
HUNTER COURT
HOMES AVENUE
39 1E 10J3 TL 500
SLOPE ARROW
PRELIMINARY GRADING PLAN - DANIEL MEYER POOL RENOVATIONS
SCALE: 1"=20'
0
20
40
CALL FOR UTILITY LOCATE 48 HOURS PRIOR TO EXCAVATION - 1-800-332-2344
DRAWN: MRS
DATE: 6/23/2020
REVISIONS
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 27, 1984
PRELIMINARY
RENEWAL DATE: 12/31/2021
THORNTON ENGINEERING inc.
p.o. box 476 • 260 north 3rd street
jacksonville, oregon 97530
(541) 899-1455 FAX: (541) 899-9410 fax
PRELIMINARY GRADING PLAN
SHEET 4
DANIEL MEYER POOL RENOVATION
1751 HOMES AVE
ASHLAND, OREGON
APP. NO. 20-037
FILE: BKGRMP-2060
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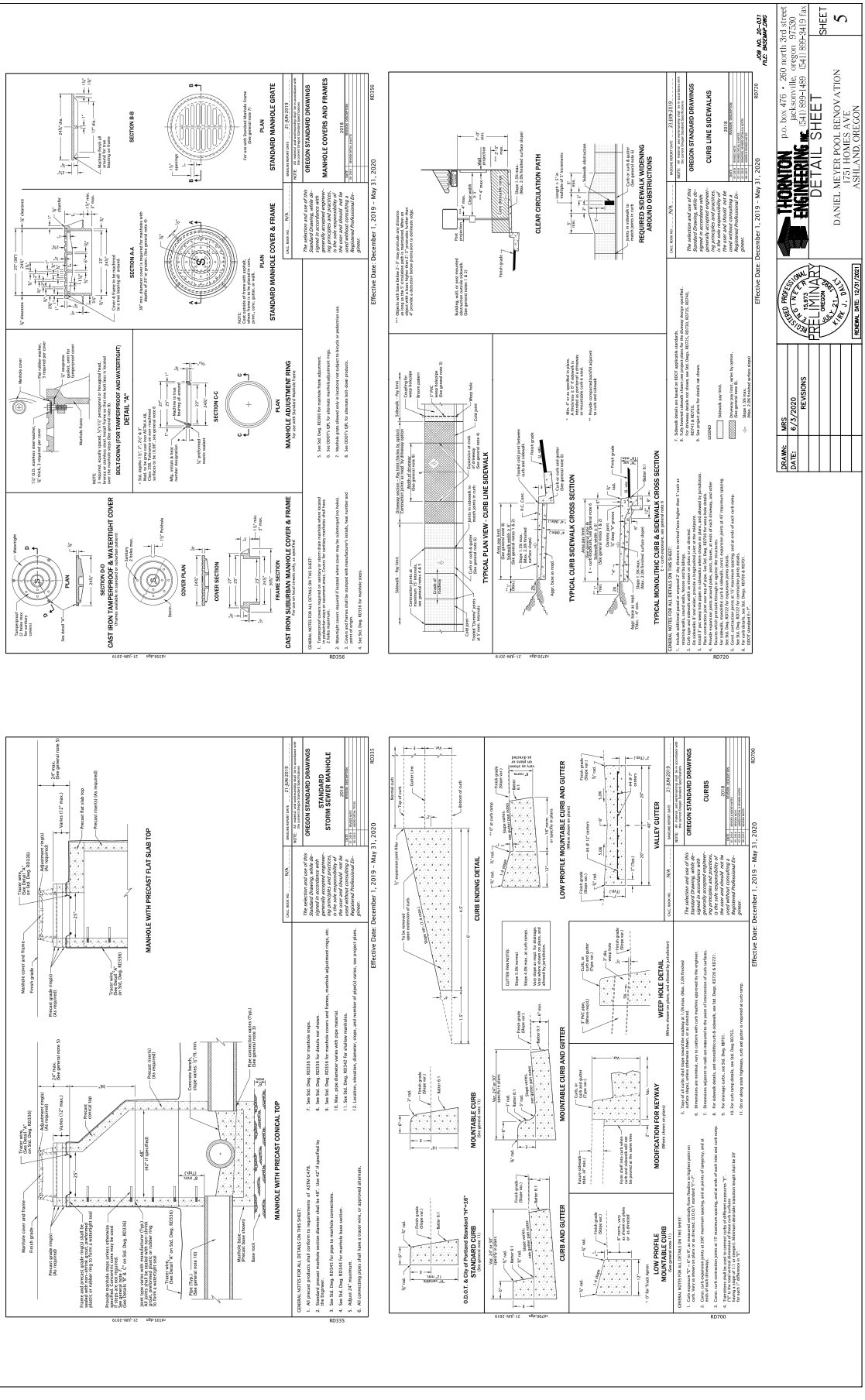
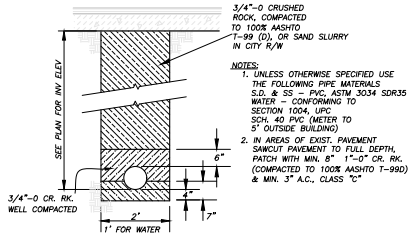
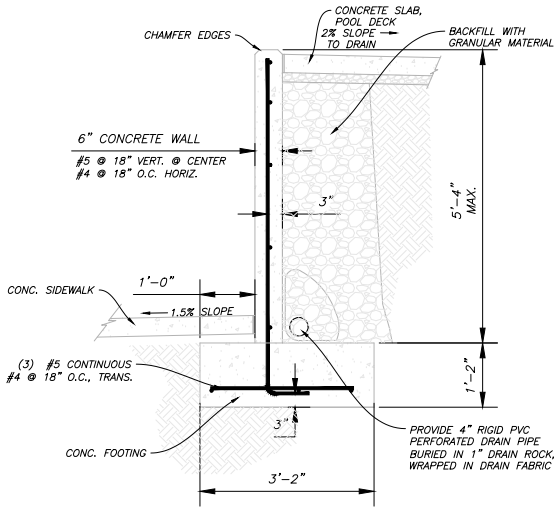
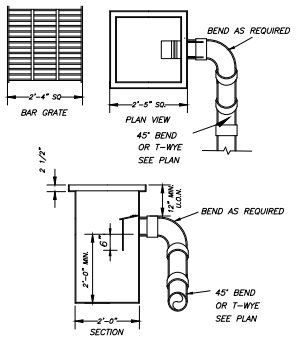

CAST IRON TAMPERPROOF & WATERTIGHT COVER
BOLT-DOWN (FOR TAMPERPROOF AND WATERTIGHT)
DETAIL "A"
CAST IRON SUBURBAN MANHOLE COVER & FRAME
STANDARD MANHOLE COVER & FRAME
STANDARD MANHOLE GRATE
MANHOLE ADJUSTMENT RING
MANHOLE COVERS AND FRAMES
OREGON STANDARD DRAWINGS
TYPICAL PLAN VIEW - CURB LINE SIDEWALK
TYPICAL CURB SIDEWALK CROSS SECTION
TYPICAL MONOLITHIC CURB & SIDEWALK CROSS SECTION
CLEAR CIRCULATION PATH
REQUIRED SIDEWALK WIDENING AROUND OBSTRUCTIONS
CURB LINE SIDEWALKS
Effective Date: December 1, 2019 - May 31, 2020
RD356
RD720
THORNTON ENGINEERING inc.
p.o. box 476 • 260 north 3rd street
jacksonville, oregon 97530
(541) 899-1455 (541) 899-9410 fax
DRAWN: MRS
DATE: 6/3/2020
REVISIONS
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 13, 1973
MARK R. SCHOLZ
EXPIRES: 12/31/2021
PRELIMINARY
NOT FOR CONSTRUCTION
DETAIL SHEET
DANIEL MEYER POOL RENOVATION
1751 HOMES AVE
ASHLAND, OREGON
SHEET 5
JOB NO. 20-037
A&S BACKUP.DWG



1/6 TRENCH DETAIL
No Scale



2/6 5'-4" CONCRETE RETAINING WALL DETAIL
CANTILEVER DESIGN 1"=1'-0"



AREA DRAIN NOTES:
1. WELDED 10 GA. MILD STEEL, COATED ALL SURFACES W/ ASPHALTIC PAINT.
2. WELDED STEEL DROP-IN BAR GRATE (ASTM A36). 16,000 LB UNIFORM LOAD CAPACITY.
3. AS MANUFACTURED BY: GRATEMASTER IRONWORKS OR APPROVED EQUAL.

3/6 CATCH BASIN DETAIL
No Scale

JOB NO. 20-031
FILE: BASEMAP.DWG

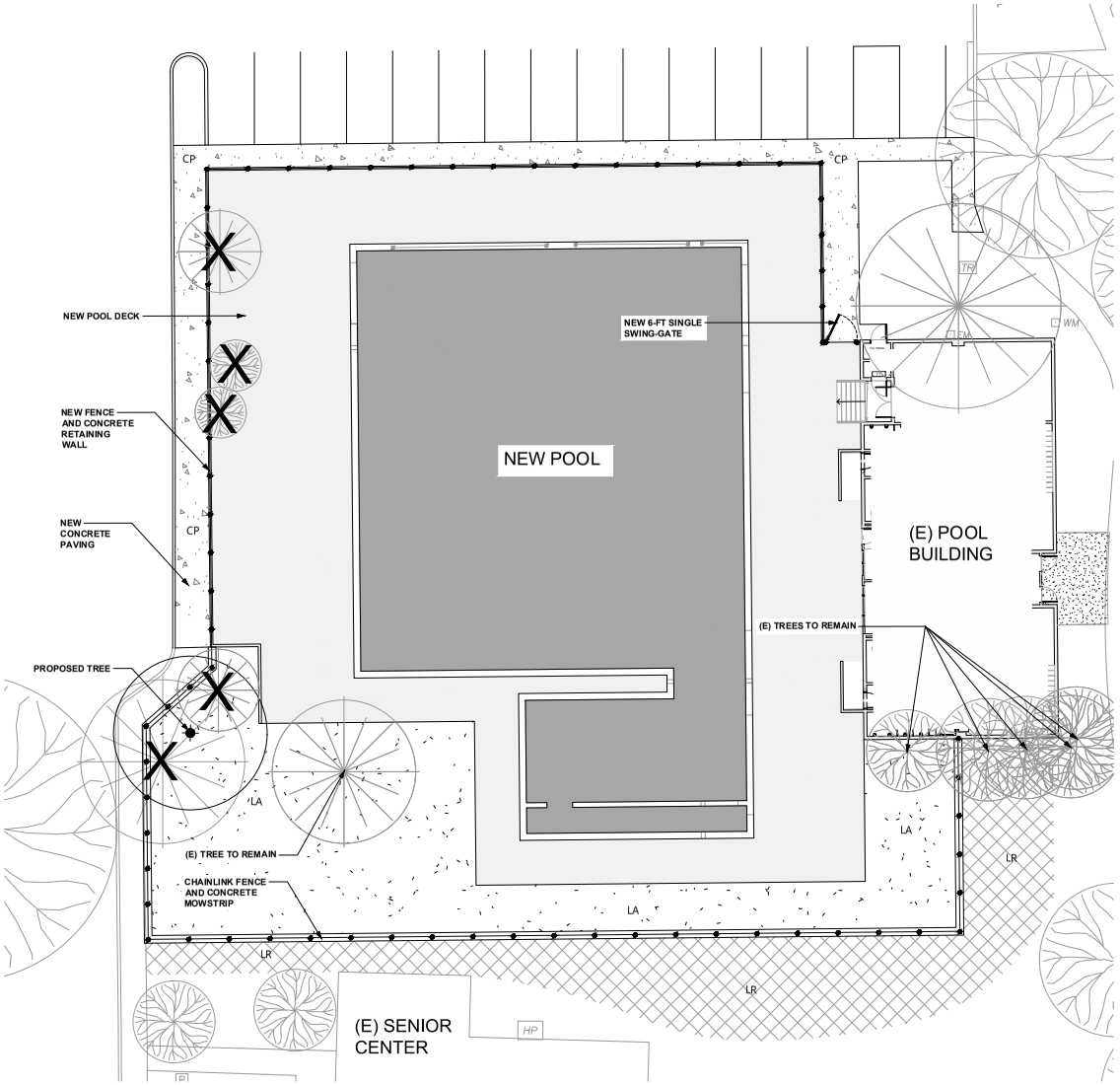
DRAWN:	MRS
DATE:	6/3/2020
	REVISIONS

REGISTERED PROFESSIONAL ENGINEER 15,973 OREGON JULY 21, 1989 KIRK J. DALEY
PRELIMINARY
RENEWAL DATE: 12/31/2021

THORNTON ENGINEERING INC. p.o. box 476 • 260 north 3rd street jacksonville, oregon 97530 (541) 899-1489 (541) 899-3419 fax

DETAIL SHEET
DANIEL MEYER POOL RENOVATION
1751 HOMES AVE
ASHLAND, OREGON

SHEET 6



GENERAL NOTES

1. ALL SURVEY INFORMATION PROVIDED BY:
   POLARIS LAND SURVEYING LLC
   P.O. BOX 459
   ASHLAND, OREGON 97520
   PHONE: (541) 482-5009
2. VERIFY EXACT LOCATIONS AND ROUTING OF EXISTING UNDERGROUND UTILITIES PRIOR TO STARTING EXCAVATION. REPAIR ANY DAMAGE TO EXISTING PIPES, UTILITIES OR RELATED FACILITIES AT CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY OWNER'S REPRESENTATIVE.
3. BARRICADE AND PROTECT TRUNKS, LIMBS, ROOTS AND ROOT ZONES BEYOND DRIPLINE OF EXISTING TREES AND PLANT MATERIALS TO REMAIN AS DIRECTED BY OWNER'S REPRESENTATIVE. CUT NO LIMBS OR ROOTS LARGER THAN 2" DIAMETER WITHOUT APPROVAL OF OWNER'S REPRESENTATIVE. NOTIFY OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY EXCAVATION WITHIN PROTECTION AREAS.

LEGEND

- (E) — EXISTING ELEMENT
- (E) TREES PROTECT/TO REMAIN
- (E) TREES TO BE REMOVED
- PROPOSED TREE
- CHAINLINK FENCE
- CHAINLINK FENCE AND CONCRETE MOWSTRIP
- CP — CONCRETE PAVING
- LA — LAWN
- LR — LAWN REPAIR

1" = 10'-0" (0', 5', 10', 20')

CAMERON McCARTHY

Robertson Sherwood Architects PC
132 East Broadway, Suite 540
Eugene, Oregon 97401
P (541) 342-8077
F (541) 345-6302

DANIEL MEYER POOL REPLACEMENT

ASHLAND PARKS AND RECREATION COMMISSION
1705 HOMES AVENUE, ASHLAND, OR 97520

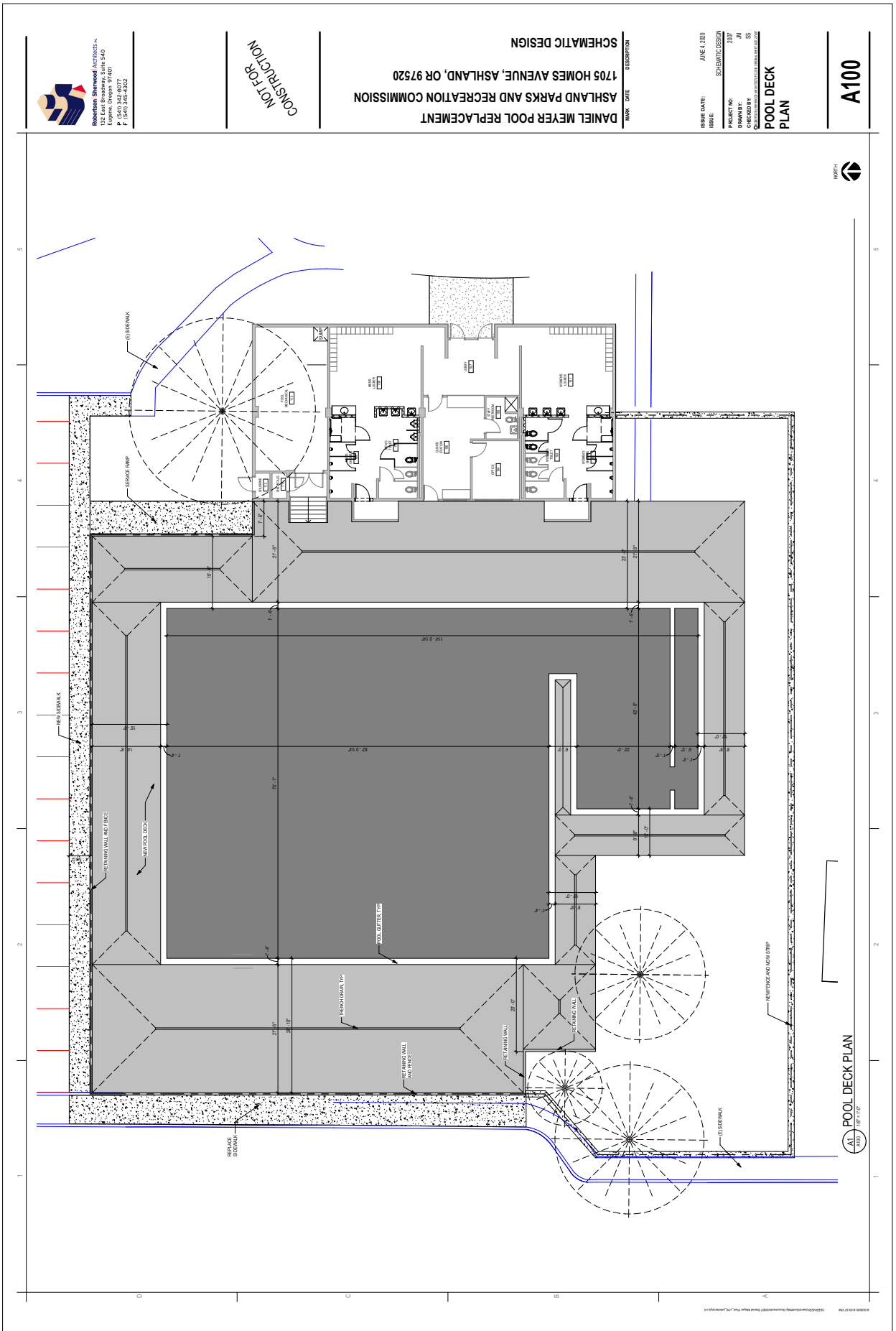
FOR INFORMATION ONLY

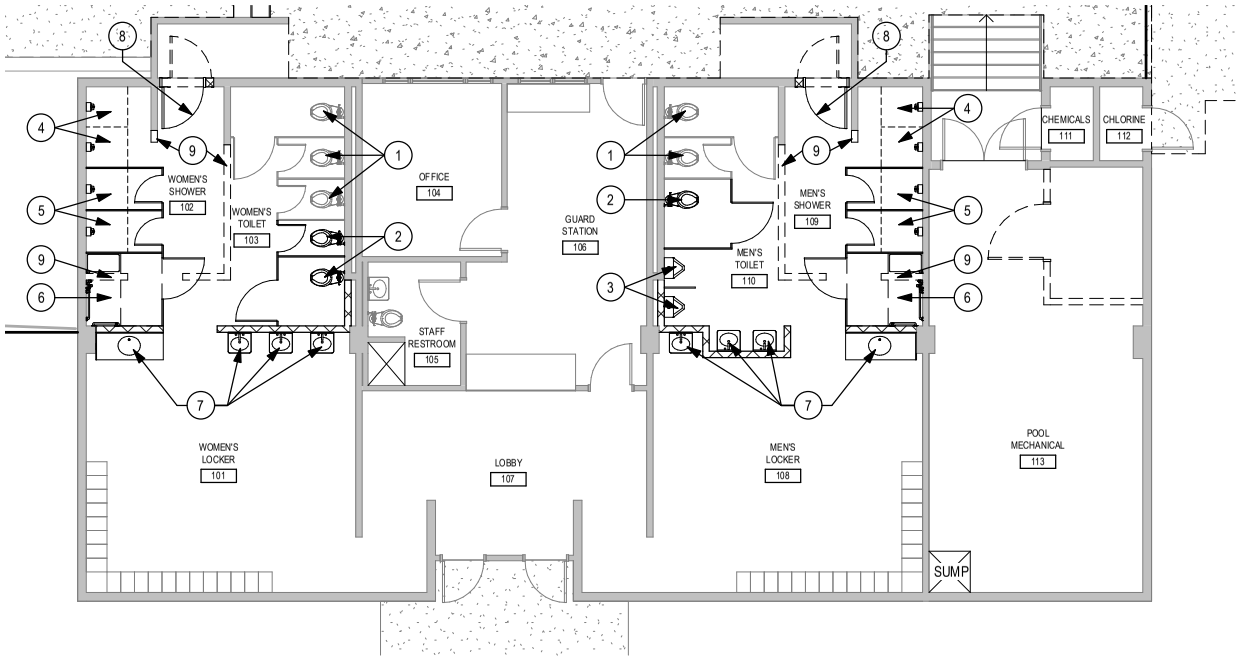
Drawn By:	ZBJ
Checked:	LKG
Project #:	2013 J
Date:	06/05/2020

Rev. #:	Date:

SITE PLAN

L1.0


Robertson Sherwood Architects PC
DANIEL MEYER POOL REPLACEMENT
ASHLAND PARKS AND RECREATION COMMISSION
1705 HOMES AVENUE, ASHLAND, OR 97520
SCHEMATIC DESIGN
NOT FOR CONSTRUCTION
ISSUE DATE: JUNE 4, 2020
SCHEMATIC DESIGN
POOL DECK PLAN
A100
NORTH
(E) SIDEWALK
SERVICE RAMP
NEW SIDEWALK
NEW POOL DECK
RETAINING WALL AND FENCE
POOL GUTTER TYP.
TRENCH DRAIN TYP.
RETAINING WALL
NEW FENCE AND MOW STRIP
REPLACE SIDEWALK
A1 POOL DECK PLAN
1/8" = 1'-0"



PLAN NOTES

1 (E) STALLS
2 NEW STALLS
3 URINALS
4 OPEN SHOWERS
5 PRIVATE SHOWERS
6 WHEELCHAIR SHOWER
7 (4) SINKS/LAVATORIES
8 RESWING DOOR
9 REMOVE PORTION OF WALL

BATHHOUSE PLAN

0' 4' 8' 16'

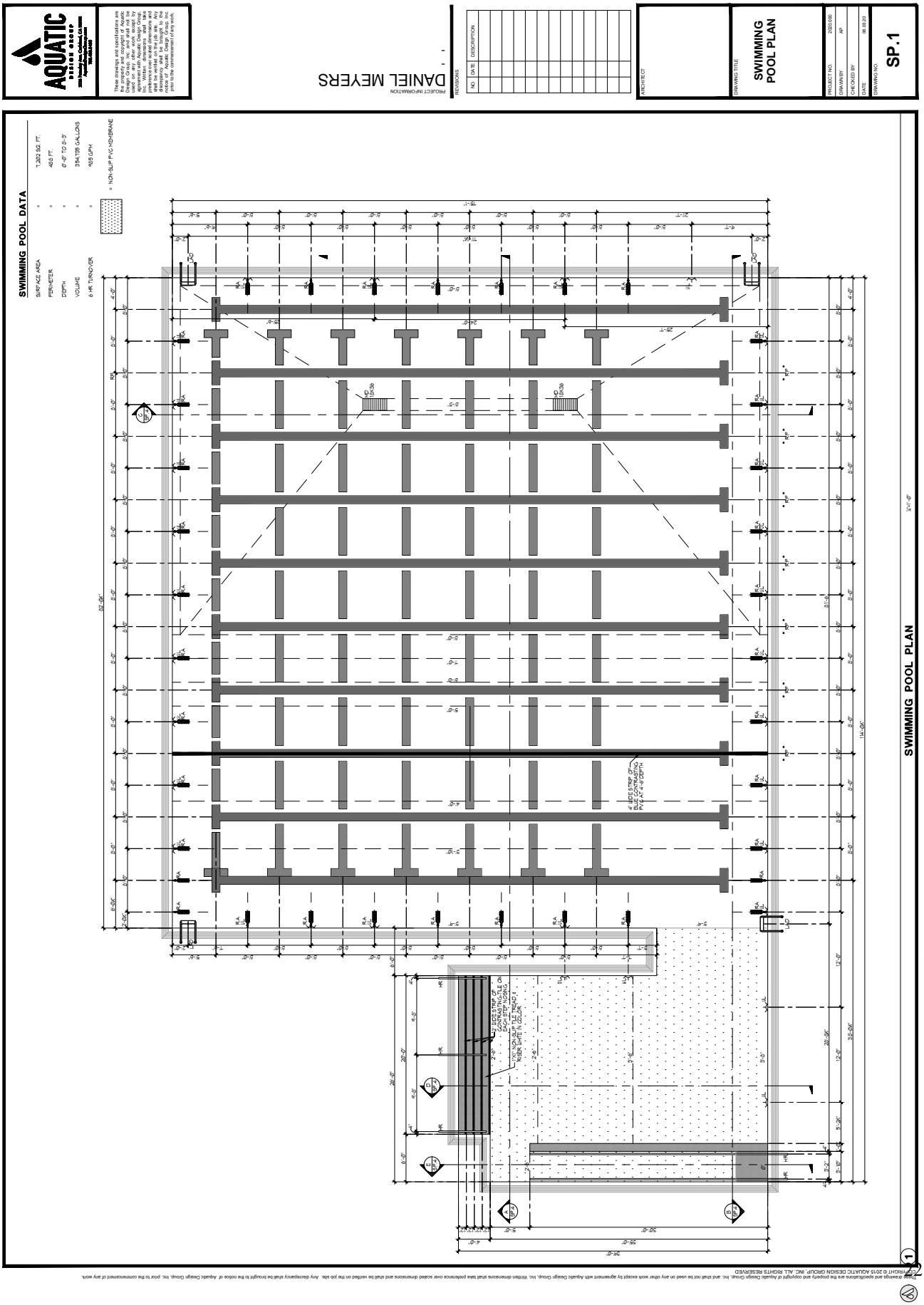
NORTH

DANIEL MEYER POOL REPLACEMENT

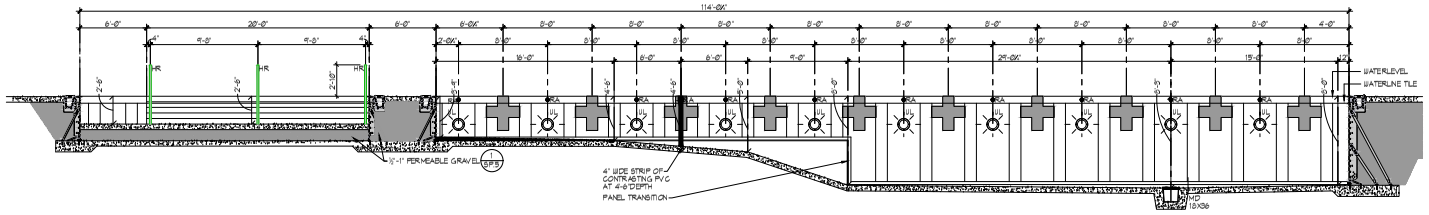
3/2020 8:30:10 PM

Robertson | Sherwood | Architects PC

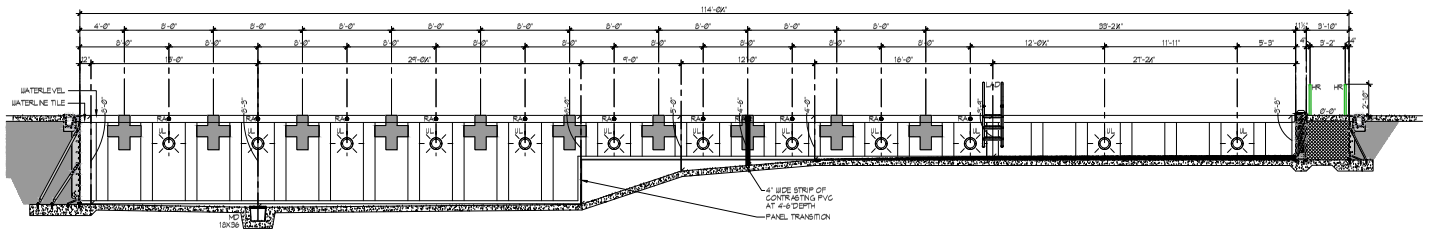
Daniel Meyer Pool Replacement & Renovation



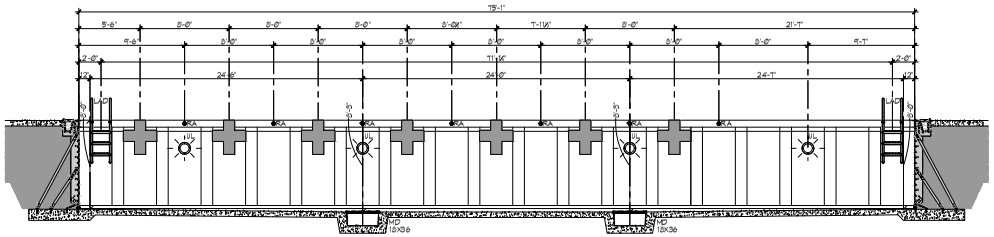
Daniel Meyer Pool Replacement & Renovation



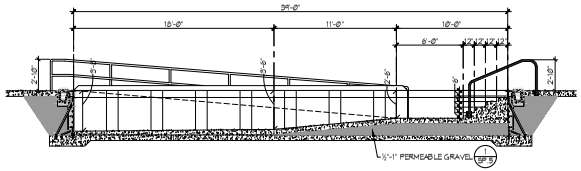
A **SWIMMING POOL PLAN** ¼"=1'-0"



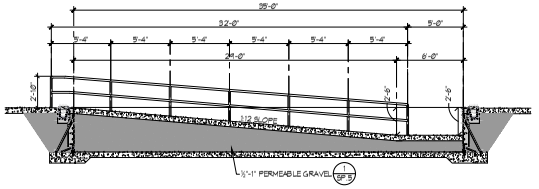
B **SWIMMING POOL PLAN** ¼"=1'-0"



C **SWIMMING POOL PLAN** ¼"=1'-0"



D **SWIMMING POOL PLAN** ¼"=1'-0"



E **SWIMMING POOL PLAN** ¼"=1'-0"

AQUATIC
DESIGN GROUP
2534 Peralta Ave, Oakland, CA 94601
AquaticDesignGroup.com
925.458.9400

PROJECT INFORMATION
DANIEL MEYERS

REVISIONS

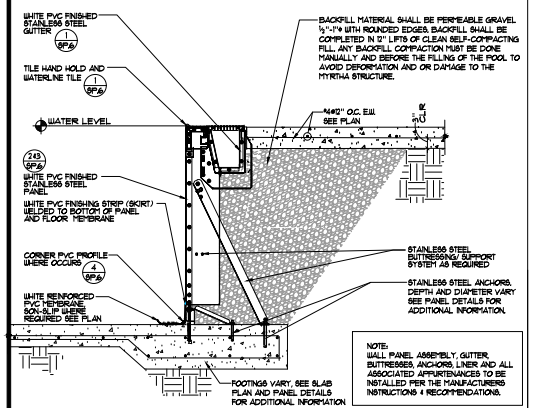
NO.	DATE	DESCRIPTION

ARCHITECT

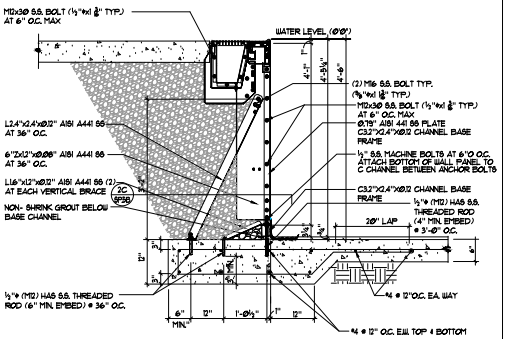
DRAWING TITLE
SWIMMING POOL SECTIONS

PROJECT NO.	2020.000
DRAWN BY	AP
CHECKED BY	
DATE	06.03.20

DRAWING NO.
SP.2

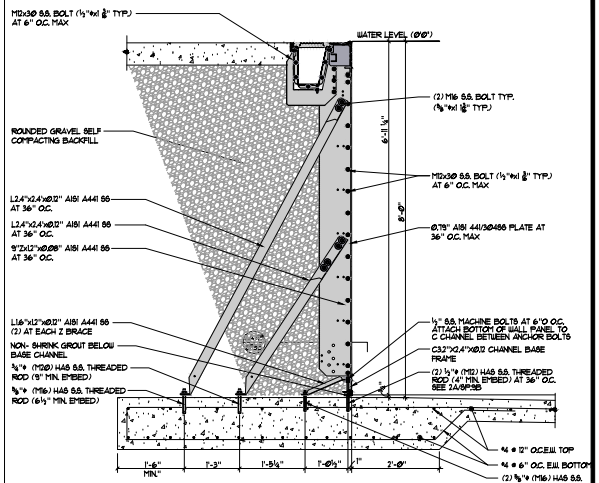


1 TYPICAL POOL WALL FINISH 1"=1'-0"



NOTES:
4 SP.5 SEE CONCRETE NOTES FOR ADDITIONAL INFORMATION
1 SP.3B SEE 1/SP.3B FOR DESIGN CRITERIA
5 SP.5 SEE TESTING LOADS FOR ALL MACHINE BOLT CONNECTIONS AND ANCHORS.

2 STAINLESS STEEL POOL WALL 4'-6" DEPTH 1"=1'-0"



NOTE:
4 SP.3 SEE CONCRETE NOTES FOR ADDITIONAL INFORMATION
1 SP.3B SEE 1/SP.3B FOR DESIGN CRITERIA
5 SP.5 SEE TESTING LOADS FOR ALL MACHINE BOLT CONNECTIONS AND ANCHORS.

3 STAINLESS STEEL POOL WALL 7'-0" DEPTH 1"=1'-0"

CONCRETE NOTES:

1. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS
   POOL WALLS = 3,000 PSI
   DAYS
   SLAB-ON-GRADE = 4,000 PSI WITH WATER / CEMENT RATIO OF 0.39.
2. CONTINUOUS INSPECTION BY AN D.S.A. APPROVED INSPECTOR IS REQUIRED OF ALL CONCRETE PLACEMENT.
3. ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II.
4. FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, MAXIMUM SIZE OF AGGREGATE TO BE ¾".
5. CONCRETE MIX DESIGNS SHALL BE BASED UPON CBC SECTION 1904A2.
6. CONCRETE SHALL BE TESTED AND INSPECTED PER SECTION CBC 1705A.3 AND 1913A.1.
7. REMOVAL OF FORMS SHALL COMPLY WITH ACI-14, 36.1.
8. ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 14 BAR DIA.

SHOTCRETE NOTES:

1. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS POOL WALLS = 3000 PSI.
2. CONTINUOUS INSPECTION BY AN D.S.A. APPROVED INSPECTOR IS REQUIRED OF ALL SHOTCRETE PLACEMENT.
3. ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II.
4. FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, MAXIMUM SIZE OF AGGREGATE TO BE ⅜".
5. SHOTCRETE MIX DESIGNS SHALL BE PER CBC SECTION 1910A.2.
6. SHOTCRETE SHALL BE TESTED AND INSPECTED PER SECTIONS 1705A.3 AND 1910A.5.
7. ANCHOR BOLTS, ANCHORS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING OF SHOTCRETE.
8. ALL REINFORCEMENT WITHIN SHOTCRETE SHALL MAINTAIN MINIMUM 2" CLEAR NON-CONTACT SPLICES.
9. THE FILM OF LAITANCE WHICH FORMS ON THE SURFACE OF THE SHOTCRETE SHALL BE REMOVED WITHIN APPROXIMATELY TWO HOURS AFTER APPLICATION BY BRUSHING WITH A STIFF BROOM. IF THIS IS NOT REMOVED WITHIN TWO HOURS, IT SHALL BE REMOVED BY THOROUGH WIRE BRUSHING OR SAND BLASTING. CONSTRUCTION JOINTS OVER EIGHT HOURS OLD SHALL BE THOROUGHLY CLEANED WITH AIR AND WATER PRIOR TO RECEIVING SHOTCRETE.
10. ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 14 BAR DIA.

4 CONCRETE NOTES

EPOXY ANCHOR PULL TESTING LOADS

LOCATION	DIAMETER	DEPTH	TEST VALUE	TESTING %
4'-6" PANEL	½ø	4" EMBED	4,150 LBS	10%**
	½ø	4" EMBED	4,150 LBS	100%
	½ø	6" EMBED	4,150 LBS	100%
8'-0" PANEL	½ø	4" EMBED	4,150 LBS	10%**
	⅝ø	6½" EMBED	7,400 LBS	100%
	¾ø	9" EMBED	10,600 LBS	100%

ALL STAINLESS STEEL ALL THREAD ANCHORS SHALL BE SET W/ HILTI HIT-HY 200 EPOXY ADHESIVE ANCHORING SYSTEM (ICC ESR-3187)

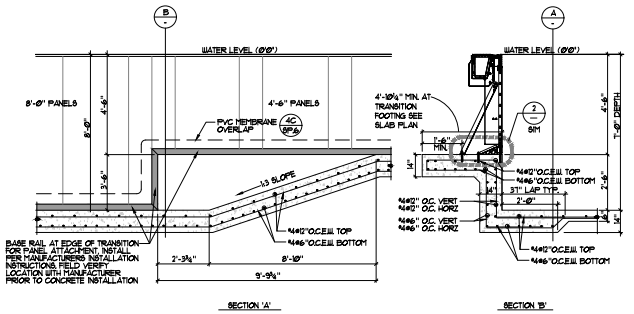
** 10% PER IBC 1910A.5.3 EXCEPTION 2

MACHINE BOLT TORQUE TESTING LOADS

DIAMETER	LOAD	
½ø	47.50 LBS	SEE NOTES
⅝ø	7,400 LBS	SEE NOTES

- BOLTED CONNECTIONS SHALL BE INSPECTED PER CBC 2013-AISC 360 M13
- BOLTS BETWEEN PANELS SHALL BE PERIODICALLY INSPECTED.
- BOLTS BETWEEN BUTTRESS AND PANELS SHALL BE INSPECTED CONTINUOUSLY.
- BOLT TESTING AND FIELD VERIFICATION SHALL BE THE SAMPLES PER 400 BOLTS PER IBC 2013A.1

5 TESTING LOADS



6 STEPPED FOOTING AT PANEL TRANSITION ½"=1'-0"

AQUATIC DESIGN GROUP
2304 Peralta Ave. Oakland, CA 94601
AquaticDesignGroup.com
925.418.9400

Daniel Meyer Pool Replacement & Renovation

PROJECT INFORMATION
DANIEL MEYERS

REVISIONS

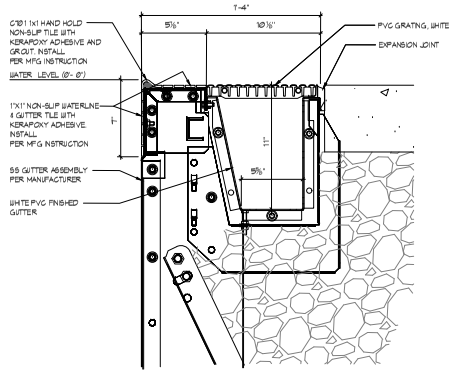
NO.	DATE	DESCRIPTION

ARCHITECT

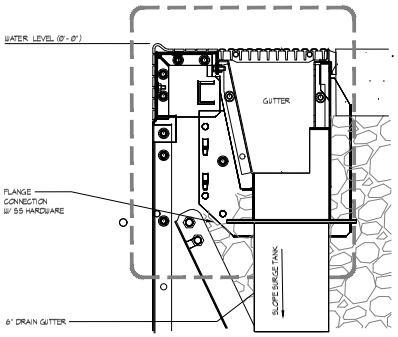
DRAWING TITLE
DETAILS

PROJECT NO.	2020.000
DRAWN BY	AP
CHECKED BY	
DATE	06.03.20

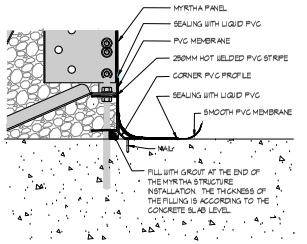
DRAWING NO.
SP.5



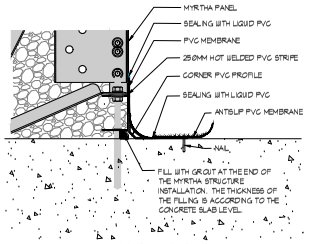
1 **STAINLESS STEEL GUTTER DETAIL** 3"=1'-0"



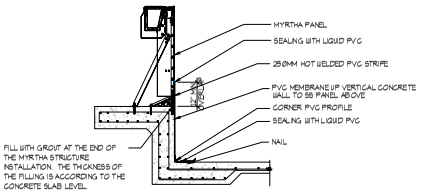
2 **TYPICAL 6" GUTTER DRAIN** 3"=1'-0"



DETAIL "A"

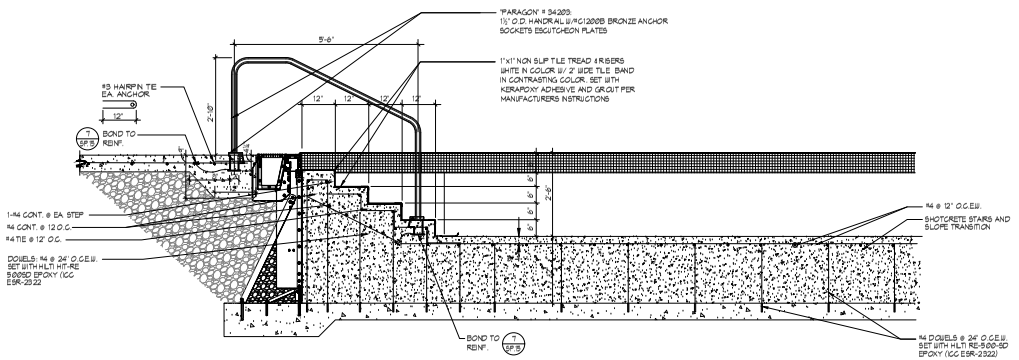


DETAIL "B"

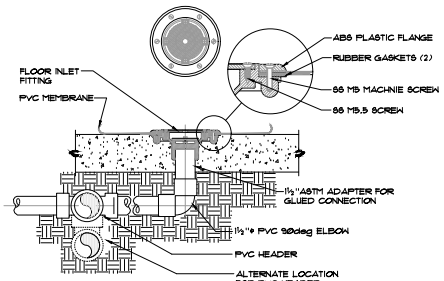


DETAIL "C"

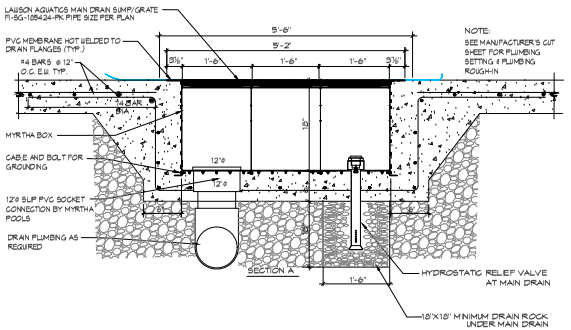
4 **TYPICAL CORNER PROFILES & MEMBRANE** 3"=1'-0"



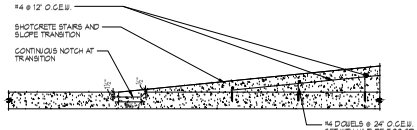
3 **STAIRS / HANDRAIL DETAIL** ¾"=1'-0"



5 **FOOR INLET** 1"=1'-0"



6 **MAIN DRAIN** 1"=1'-0"



7 **SLOPE TRANSITION** 1"=1'-0"

AQUATIC DESIGN GROUP

PROJECT INFORMATION
DANIEL MEYERS

REVISIONS

NO.	DATE	DESCRIPTION

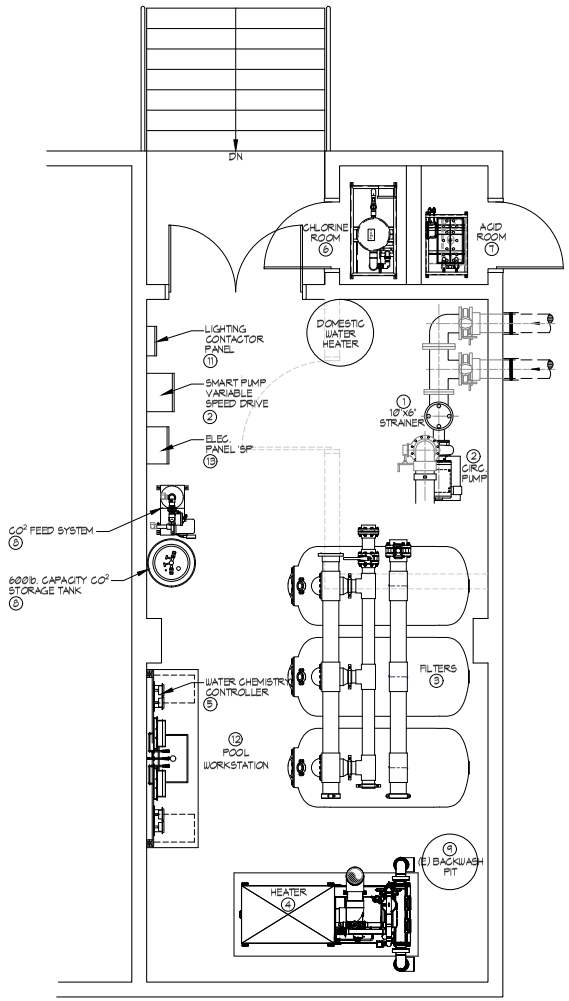
ARCHITECT

DRAWING TITLE
DETAILS

PROJECT NO.	2020.000
DRAWN BY	AP
CHECKED BY	
DATE	06.03.20

DRAWING NO.
SP.6

Daniel Meyer Pool Replacement & Renovation



EQUIPMENT LIST

1. SWIMMING POOL/SWIMMING POOL STRAINER: 'MER-MADE' F.G. SERIES FRP BASKET STRAINER. 10"x6" STANDARD WITH ACRYLIC LID AND TWO (2) STAINLESS STEEL STRAINERS EA. (150lbs.)
2. SWIMMING POOL CIRCULATION PUMP: 'PACO' #5093-7 OR, A 5"x6"x15" TYPE 'LC' END SUCTION CENTRIFUGAL PUMP. 1750 RPM 460V, 3PH. 20HP, RATED AT 1,000 GPM @ 60 FT. TDH, 82.1% EFFICIENT. PREMIUM EFFICIENCY TEFC MOTOR. EPOXY COAT ALL WET SURFACES. 'PACO', 'AURORA' OR EQUAL. (1ea.) PROVIDE SPCS SMART PUMP CONTROL SYSTEM VARIABLE SPEED DRIVE MODEL SPCS60HDT2-4 SYSTEM 21"x47"x15" DEEP. COORDINATE MOUNTING LOCATION TO MAINTAIN DESIRED CLEARANCES, 460V 3PH. (171 lbs.) ONE (1) TOTAL.
3. SWIMMING POOL FILTERS: 'EKO' 42-230-3 AUTOMATIC FILTER CONTROL ('AFC') FULLY AUTOMATIC HI-RATE, PERMANENT MEDIA FILTER WITH 64 SQ. FT. OF FILTER AREA RATED AT 1,035 GPM AT 15 GPM/SQ FT. COMPLETE WITH 2" FACE PIPING, 6" BACKWASH, SEISMIC ANCHORAGE. PROVIDE ALL UTILITIES, PIPING, VALVING ETC. 3 (6,195 lbs EACH TANK) 'PARAGON STARK' END 3 OR EQUAL. PROVIDE SIGNET MK-515 FLOSENSOR WITH DIGITAL READ-OUT. ONE (1) SYSTEM TOTAL.
4. SWIMMING POOL HEATER(S): INDIRECT FIRED POOL HEATING PACKAGE SYSTEM 'RAYPAK' X-THERM CONDENSING MODULATING BOILER, TITANIUM HEAT EXCHANGER WITH CPVC CONNECTIONS, FACTORY ASSEMBLED SKID MOUNTED PACKAGE, 2" NATURAL GAS CONNECTION, 8" WATER CONNECTIONS, 8" Ø FLUE TO ATMOSPHERE. 1,999,000 BTU PER HOUR INPUT, 97% EFFICIENT, PROVIDE ¾" COLD WATER TO EACH UNIT. LOCHINVAR KPN1802, WEIGHT = 1,950 lbs. EA.
5. WATER CHEMISTRY CONTROLLER: PROVIDE ETHERNET CONNECTION TO 'BECKYS' CS-BECKYSYST-BP-E WATER CHEMISTRY CONTROLLER. PROVIDE COMPLETE SYSTEM CONTROL PACKAGE. 'BECKYS SYSTEM 7', 'CHEMTROL' OR APPROVED EQUAL. TWO (2) TOTAL.
6. CHLORINE STORAGE/FEED SYSTEM: 'PPG' ACCU-TAB POWERBASE CHLORINATION UNIT MODEL 3150 WITH 177lbs/DAY OUTPUT, 1401b. STORAGE. COMPLETE WITH PIPING, VALVING, VENTURI INJECTION AND ¾ HP BOOSTER PUMP. NSF 50 CERTIFIED.
7. ACID STORAGE/FEED SYSTEM: 'ACID-RITE' UNIT MODEL 2500 WITH 25lbs/HR OUTPUT, 45lb. STORAGE. COMPLETE WITH PIPING, VALVING, VENTURI INJECTION AND ¾ HP BOOSTER PUMP. NSF 50 CERTIFIED.
8. CARBON DIOXIDE STORAGE FEED SYSTEM: 'NOVO-84007' 600lb. CRYOGENIC LIQUID CO2 STORAGE TANK WITH REMOTE FILL PORT. 994 LIQUID lbs., (9,1*8 CUBIC FEET OF GASEOUS CO2 AT NTP) PROVIDE EKO PH-MTS CO2 HIGH EFFICIENCY FEED SYSTEM WITH ALKALINITY CONTROL, 0 TO 160 SCFH FEED CAPACITY BOOSTER PUMP, PIPING INJECTOR, FLOWMETER, RELAYS AND ACID FEED ALKALINITY CONTROL. (120lbs.) PROVIDE HARD WIRED BAR-TELITT CO2 DETECTOR WITH AUDIBLE AND VISUAL ALARMS IN EACH CHEMICAL ROOM. UL 1411 STANDARD LISTED, ONE (1) TOTAL.
9. BACKWASH PIT: EXISTING PIT WITH GRATE AND P-TRAP OUTLET TO SEWER. PROVIDE WATERPROOFING PER SPECIFICATIONS. COORDINATE WITH STRUCTURAL AND PLUMBING PLANS.
10. FILL SYSTEM(S): 3" 'CLA-VAL' FILL SYSTEM TO INCLUDE 3" 'CLA-VAL' SOLENOID CONTROL VALVE #136-01BY, 3" DUCTIRON, EPOXY COATED BODY WITH CAST IRON DISC RETAINER AND DIAPHRAGM WASHER, BRONZE TRIM, FLANGED GLOBE PATTERN, 120V AT 60HZ. SOLENOID WIRING SHALL BE WIRED TO WATER CHEMISTRY CONTROLLER. PROVIDE 6" AIR GAP AT FILL POINT.
11. LIGHTING CONTACTOR PANEL: 'ALLEN BRADLEY' #500L- OR APPROVED EQUAL. PANEL SHALL BE MOUNTED IN A NEMA 12 HINGED COVER - LOCKABLE ENCLOSURE CONTACTORS TO BE SWITCHED BY MOMENTARY SWITCH EQUAL TO HUBBELL #1557 MOUNTED IN J-BOX IN MECHANICAL EQUIPMENT ROOM. REFER TO ELECTRICAL PLANS FOR LOCATION OF OWNER COORDINATED REMOTE UNDERWATER LIGHT SWITCH.
12. POOL OPERATOR WORKSTATION DESK: TOTAL LAB SOLUTIONS' EPOXY COUNTERTOP WITH DROP-IN SINK AND TWO (2) END CABINETS. FURNISH WITH WALL MOUNTED TWO (2) FAUCETS 'BRIGEN BOSS' OR APPROVED EQUAL. SEE MEP PLANS FOR WATER SUPPLY PIPING.
13. ELECTRICAL: PROVIDE ALL ELECTRICAL WIRING, CONDUIT, PANEL(S), STARTER/DISCONNECT INTERCONNECT(S) ETC. AS REQUIRED FOR PROPER EQUIPMENT INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS AND SHOP DRAWINGS. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. REFER TO ELEC. PLANS FOR ALL ADDITIONAL INFO.

MECHANICAL ROOM LAYOUT PLAN 1/4"=1'-0"

AQUATIC DESIGN GROUP
2330 Faraday Ave, Carlsbad, CA 92008
AquaticDesignGroup@cox.net
760.438.8400

Daniel Meyer Pool Replacement & Renovation

PROJECT INFORMATION
DANIEL MEYERS

REVISIONS

NO.	DATE	DESCRIPTION

ARCHITECT

DRAWING TITLE
MECHANICAL ROOM LAYOUT PLAN

PROJECT NO.	2020.000
DRAWN BY	AP
CHECKED BY	
DATE	06.03.20

DRAWING NO.
MR-1

Schematic Design Cost Estimate and Project Budget

The Schematic Design Cost Estimate and Project Budget is based upon the above outlined project scope and estimates prepared by Aquatic Design Group (+CEM Aquatics), and Construction Focus. The following pages are a summary of these direct construction estimates as well as recommended soft cost budgets necessary for implementing these projects. The following back-up information may be found in the Appendix:

Daniel Meyer Pool SD 2020-07-01 - Cost Estimate Prepared by Construction Focus
Daniel Meyers Pool Construction Cost Opinion - 06-22-2020 – Prepared by CEM Aquatics

The Schematic Design Cost Estimate and Project Budget is presented in two parts on the following pages:

Schematic Design Project Cost Summary - Pool Replacement and Site Work
This covers the pool and site demolition, site development, pool replacement and pool systems associated with the proposed replacement of the Daniel Meyer Pool.

Proposed Soft Costs include an allowance of 16.5% to cover permits, testing, construction contingencies, and design and engineering fees, 1.5% GET funding, and other project related costs. In addition, a $250,000 budget is identified for pool related equipment purchases not covered within the pool cost estimate.

Schematic Design Project Cost Summary – Bathhouse Improvements
This covers the renovation of the toilet and shower areas of the bathhouse that would be required to support the expanded pool associated with the proposed replacement of the Daniel Meyer Pool.

Proposed Soft Costs include an allowance of 30% to cover permits, testing, construction contingencies, and design and engineering fees, 1.5% GET funding, and other project related costs.

Daniel Meyer Pool Replacement
Schematic Design Project Cost Summary - Pool Replacement and Site Work

Item	Component	Description	Hardcost
1	**Site Demolition and Relocations**		
	Demolition of Site Components	Demolish existing pool decks , pool and pool piping, excavation and backfill for new pool configuration,remove existing perimeter fencing and retaining walls, demolish existing north and west sidewalk (keep street curb), demolish southern 15 feet of existing parking lot and curbs	$ 39,589
	Relocation of Buildings	Salvage and relocate shed and shade structures	11,639
2	**Site Earthwork**		
	Survey, Erosion Control and Mobilization	Contractor site mobilization activities including surveying, erosion control and traffic control dring construction	20,000
	Excavation, Backfill and Base Rock	Pool, pool piping, and retaining wall excavation and backfill	186,267
3	**Paving and Curbs**		
	Hardscapes and Curbs	Patching at parking lot, new sidewalks and curbs, and new 5-inch thick broom finished concrete decks, with 1/4 inch per foot slope to new strip drains at perimeter of pool, including compacted base rock	107,437
	Markings and Signage	Paint striping, ADA markings and signs	1,204
	Fencing and Gates	Install new chainlink fencing and gates, on top of retaining walls	29,050
	Site Improvements	Parking bumpers, concrete mow strips at fence	10,740
	Retaining Walls and Footings	New retaining walls and footings including waterproofing and drainage	128,934
4	**Landscaping**		
	Landscape Demolition	Earthwork and berm removal, tree removal, and site grubbing	7,000
	Planting and Irrigation	New lawn, landscape repair, irrigation repair	15,120
5	**Site and Pool System Utilty Services**		
	Water and Gas Systems	Domestic water reconnections, water meter, backflow preventer, natural gas reconnection, hose bibbs, emergency shower connection	8,900
	Electrical	Pool grounding system, site lighting, electrical panels and branch wiring	48,599
	Storm Sewer Systems	Demolish existing storm water system and re-route new piping around new pool construction, install new integrated strip drains and extend connections to new integrated NDS Mini-Channel Strip Drains as perimeter pool deck drains	91,690
6	**Pool and Pool Systems**		
	Myrtha Swimming Pool and Systems	Per budget included from CES Aquatic - see appendix	2,098,000
	Concrete Structures	Surge tank and misc housekeeping pads for pool equipment	60,000
	Pool electrical	Electrical connection for pool lighting and pool equipment	9,500
		Hardcost Subtotal	**$2,873,669**
		Estimating Contingency, Escalation and Contractor Markups (average)	$ 658,970
		Base Bid Estimate Pool Replacement and Site Work	**$3,532,639**
		Recommended Soft Costs	
		Fees, Permits, Testing, Construction Contingency (@ 15 %)	$ 529,896
		Furnishings and Equipment Allowance - items not in pool estimate (start blocks, water polo, timing system and scoreboard, furnishings, etc.)	$ 250,000
		1.5% Green Energy Technology Investment	$ 64,688
		TOTAL RECOMMENDED PROJECT BUDGET - Pool and Site work	**$4,377,223**

Daniel Meyer Pool Replacement
Schematic Design Project Cost Summary - Bathhouse Improvements

Item	Component	Description	Hardcost
1	**Locker Rooms Toilet and Shower Upgrades**		
	Demolition	Demo existing flooring and slab, existing doors, existing walls and salvage toliet partitions and plmbing fixtures	$ 21,798
	Slab on Grade	New 4 inch slab on grade, sloped to drain	6,647
	Exterior Doors	New pool side doors and hardware, including grouting and painting	4,934
	Interior Partitions	New masonry walls and painting	8,141
	Ceiling and Wall Finishes	Patch ceilings, in stall ceramic wall tile on new and existing walls in	26,781
	Furnishings and Specialties	Toilet and showe partitions, countertops, grab bars and toilet accessories	20,642
	Floor Coverings	Ceramic tile at toilets and showers, sealed concrete elsewhere	16,101
	Plumbing Fixtures and Piping	Toilets, urinals, sinks, showers, drains, piping and and circulation pump for	111,894
	HVAC Systems	Two exhaust fans	2,642
	Electrical	Lighting, equipment connections	50,064
		Hardcost Subtotal	**$ 269,644**
		Estimating Contingency, Escalation and Contractor Markups (average)	$ 96,831
		Base Bid Estimate Bathhouse Improvements	**$ 366,475**
		Recommended Soft Costs	
		Fees, Permits, Testing, Construction Contingency (@ 28.5 %)	**$ 104,445**
		1.5% Green Energy Technology Investment	**$ 7,064**
		TOTAL RECOMMENDED PROJECT BUDGET - Bathhouse Improvements	**$ 477,984**

Potential Scope Reduction/Cost Savings

Pool
Eliminate shallow water area and ramp. ADA access requirements provided by stair and lift. Adjust pool deck alignment and develop remaining area inside of fence with lawn. Maintain size of filters and equipment, and stub in piping to allow for future development.

Potential Savings $225,000

Bathhouse
If reduction of pool area is permanent, the resulting OHA sanitary fixture requirements for the bathhouse are reduced by one toilet, lavatory, and shower for each changing room.

Potential Savings $ 25,000

Pool Heating System Alternatives

In recent years the City of Ashland has operated the existing outdoor Daniel Meyer Pool year-round and it is assumed this will continue into the foreseeable future. Consequently, the heating of the pool water will be the single largest operating cost for this facility. With the increased volume and surface area of the proposed pool it will be important to select the most efficient heating systems considering both first costs and comparative operating costs.

Pool Water Heating Load

The proposed new pool is anticipated to require a pool water heating system capable of providing the day to day needs on a year-round basis, as well as provide peak load capacity under worst case conditions (start-up, cold/dark winter nights, etc.). For system comparison purposes assuming 360 days of operation, at least 10 hours per day with thermal blankets in place, and heating to an average of 82 degrees in the Ashland area climate the assumed pool water heating requirements are as follows:

Winter – 90 days = 3,240,000,000 BTU total
Spring/Fall – 180 days = 4,320,000,000 BTU total
Summer – 90 days = 1,080,000,000 BTU total

This totals 8,640,000,000 BTU of heating load over the course of one year.

For peak load conditions, it is further assumed that the system should be capable of providing up to 3,000,000 BTU output.

Heating System Options

Commonly, as has been the case with the existing Daniel Meyer Pool, natural gas is utilized as the primary fuel source for most facilities – with approximately 20,650therms used in 2019. However, like many other municipalities, the City of Ashland has adopted a goal of reducing reliance on fossil fuels such as the natural gas that historically has fueled the heating needs for Daniel Meyer Pool.

For this project, the lowest cost construction and operational alternative (based on current rates) would still rely on natural gas as the primary source of pool heating energy. Accordingly, such a pool heating system is included in the base cost estimate presented later in the report. Alternatives to this most common approach have been considered briefly as a part of this report in order to provide a comparison between first costs and comparative operating costs.

Option 1 (base estimate)
Pool Heating – a new natural-gas fired 3MBtuh pool heater with 97% efficiency, proposed by the pool contractor to replace the older heater.

Option 2
Pool Heating – Four (4) new 300kW all-electric pool heaters with new 1400amp 480v Electrical service upgrade.

Option 3
Pool Heating – a new 268kW Heat Pump Chiller unit requiring a new 600amp 480v Electrical service upgrade. Winter operation (below 35F) requires supplemental heating through:
3A - back-up natural-gas fired 3MBtuh boiler system (similar to Option 1)
3B - back-up electric pool heater system (similar to Option 2)

This comparison does not include other heating and power needs as they would likely be similar in all cases and would not significantly alter the analysis.

- *Domestic Water Heating* – replacement of existing domestic water heater with new natural-gas fired (with Option 1) or electric water heater (with Option 2 or 3 service upgrade) and storage tank (if scope of bathhouse improvements is added to the project)
- *Space Heating* – No Change to natural gas fired unit in bathhouse (with Option 1), or replacement with new electric furnace or heat pump (with Option 2 or 3 service upgrade).

	POOL WATER HEATING SYSTEM COMPARISON CHART			
	All systems are to are assumed to have a peak capacity of 3,000,000 BTU per hour, and will meet pool water heating load requirements of 8,640,000,000 BTU over the course of one year			
	OPTION 1	**OPTION 2**	**OPTION 3A**	**OPTION 3B**
	Description			
	New natural-gas fired 3MBH pool heater with 97% efficiency proposed by the pool contractor to replace the older heater.	Four (4) new 300kW all-electric pool heaters at 97% efficiency, with new 1400amp 480v electrical service upgrade.	New 268kW Heat Pump Chiller unit requiring a new 600amp 480v Electrical service upgrade, with new back-up natural-gas fired 3MBH boiler.	New 268kW Heat Pump Chiller unit with back-up from (4) new 300kW all-electric pool heaters at 97% efficiency, with new 1400amp 480v electrical
	Annual Power/Fuel Requirements			
Power		2,610,556 kWh	738,182 kWh	738,182 kWh
Nat. Gas	89,072 Therms		13,732 Therms	402,417 kWh
	Power/Fuel Rates			
Power		Use & Demand Charges	Use & Demand Charges	Use & Demand Charges
Nat. Gas	$0.90184/Therm		$0.90184/Therm	
	Annual Power/Fuel Costs			
Power		$274,188	$88,056	$88,056
Nat. Gas	$80,329		$12,384	$50,149
	TOTAL Annual Power/Fuel Costs			
	$80,329	**$274,188**	**$100,440**	**$138,205**
	Added Capital Costs and Project Costs			
	$0.00	$101,844	$534,441	$599,748
	Equipment priced in Base Estimate and Project Budget	Equipment cost differential and electrical service	Equipment cost differential and electrical service	Equipment cost differential and electrical service
	Simple Payback			
	Lowest Cost	**240% Energy Cost Increase**	**25% Energy Cost Increase**	**74% Energy Cost Increase**
	No Payback	**No Payback**	**2.7yr Payback over Option 2**	**4.4yr Payback over Option 2**
	Gas Only Heating	All-Electric Heating	Electric/Gas Back-up Heating	Electric/Elect. Back-up Heating

Solar Contribution

As noted earlier this publicly funded project is subject to the State mandate requiring that a minimum of 1.5% of the overall budget (about $72,000 to $75,000 in this case) be spent on Green Energy Technology, which for a pool project would typically be used for a direct pool solar thermal/hot water collector or a solar photovoltaic power generation system.

The potential exists for a greater investment in site based solar thermal heating or power generation to meet a practical portion of pool, domestic water and building heating needs in order to offset costs of other energy sources. Basically, investing in solar for thermal heating or power generation will reduce energy consumption. However, it will not reduce the required design capacity of the heating systems for required for peak load conditions. Additionally, in the case of Option 3A/3B where an electric heat pump

chiller is used as the primary heating source, this will have limited effect on the amount of natural gas or power consumed as a back-up to meet peak needs in the winter months during periods when solar is not available.

The site is limited in area and opportunities for proper installation and orientation of solar systems may require the use of additional structures (e.g., shade structures over pool deck or parking) for installation of effective arrays resulting in increased first costs and reduced cost benefit. Optimizing the size, cost and type of solar thermal heating or power generation system will require more detailed study as the project progresses.

Other Strategies for Energy Savings

While clearly outside the goals for this project, if energy savings were the only consideration:

- Do not operate in winter months
- Limit operations in late-fall and early-spring.
- Enclose the pool to reduce heat loss through evaporation and air temperature (savings offset by cost of enclosing the pool and heating space)
- Reduce the size of the pool
- Reduce the volume of the pool
- More frequent use of pool blankets
- Operate at lower water temperatures

Schematic Design Project Cost Comparison

This table summarizes the cost of construction for pool, sitework and bathhouse and factors in the differential capital cost for each pool heating alternative.

	COST ESTIMATE COMPARISIONS Based on Schematic Design report, prevailing wage rates, estimating contigency, Contractors general conditions and 3% annual cost escalation			
	OPTION 1	OPTION 2	OPTION 3A	OPTION 3B
	Pools and Site Work			
Pool/Pool Systems	$2,709,257	$2,709,257	$2,709,257	$2,709,257
Site Work	$823,382	$823,382	$823,382	$823,382
Design/Fees/Permits	$529,896	$529,896	$529,896	$529,896
Furnishings/Equipment	$250,000	$250,000	$250,000	$250,000
1.5% Green Energy Tech.	$64,688	$64,688	$64,688	$64,688
	Differential Capital Costs for Pool Heating Alternatives Project Costs			
Pool Heating Equipment	$0.00	$101,844	$534,441	$599,748
POOL/SITE WORK TOTAL	$4,377,223	$4,479,067	$4,911,664	$4,976,971
	Bathhouse Improvements			
Bathhouse Improvements	$366,475	$366,475	$366,475	$366,475
Design/Fees/Permits	$104,445	$104,445	$104,445	$104,445
1.5% Green Energy Tech.	$7,064	$7,064	$7,064	$7,064
BATHHOUSE TOTAL	$477,984	$477,984	$477,984	$477,984

Potential Cost Reduction: Eliminate shallow water area and ramp approximately $250,000.

Proposed Schedule

Assuming the project scope remains as outlined in this study report the following tasks and rough schedule should apply once funding becomes available and authorization to proceed is given.

Design Development 4 Weeks

- Scope Review and Adjustment Meetings
- *Letter of Intent to Myrtha Pools*
- Submit for State of Oregon Pool Variance Request Approval
- 100% DD Update and Cost Estimate
- 100% DD Owner Review Period

Construction Documents 7 weeks

- Meetings as Scheduled
- State of Oregon Pool Variance Request Approval
- *Shop Drawings from Myrtha Pools*
- 100% CD Drawings/Spec
- Pre-Bid Cost Estimate
- Bid and Permit Package Assembly

Bidding/Permit Review 4 weeks

- Submit for COA Permit Review
- Submit for State of Oregon Pool Construction Permit
- Bid Advertisement
- *Fabrication Order to Myrtha Pools from City of Ashland*
- *Fabrication and Delivery takes 10-12 weeks*
- Pre-Bid Virtual Walkthrough
- Last Addendum
- Bid Opening

Bid Review/Award 3 weeks

- Review Bids/Recommend Award/Prepare Contracts
- Complete Permit Review Process and Obtain Permit
- Notice to Proceed

Construction 5 - 6 months

- Contractor On-site Construction Start
- *Myrtha Pool Delivery*
- Substantial Completion
- Shakedown/Move-in/Commissioning

APPENDICES

2020 Update of 2013 Facility Assessment

Daniel Meyer Pool SD 2020-07-01 - Cost Estimate Prepared by Construction Focus

Daniel Meyers Pool Construction Cost Opinion - 06-22-2020 – Prepared by CEM Aquatics

Facility Assessment Update

March 16, 2020

In September of 2013 Robertson Sherwood Architects led an assessment of the existing bathhouse at the Daniel Meyer Memorial Swimming Pool and prepared the summary report included below. While many conditions noted at that time have been addressed, changes that have been made in the almost 7 years since have not addressed conditions that may need to be considered as replacement of the pool is contemplated. Rather than conduct a new full assessment this report has been amended with new/revised commentary as noted in **red.**

Daniel Meyer Memorial Swimming Pool

September 2013

FACILITY ASSESSMENT

Friday, September 13, 2013 a brief facility assessment was conducted at the Daniel Meyer Memorial Swimming Pool located in Ashland, Oregon. The goal of this assessment was to review existing conditions and make initial observations regarding condition and long-term viability of the building, structural, pool, plumbing, HVAC, and electrical systems. During the course of the field investigation, the assessment team met briefly with pool operational and maintenance personnel and on-site pool staff, in order to gather specific information relative to existing conditions and functional issues, and to advise staff on-site of initial observations and recommendations for possible improvements or further study.

The assessment team consisted of Robertson/Sherwood/Architects pc and Systems West Engineers, Inc. (mechanical and electrical engineers). The assessment team toured the building and pool facilities and reviewed current conditions. Construction drawings of the building were reviewed prior to the assessment and copies were requested to aid in the review and preparation of this summary report. Since some elements of the building are concealed by wall and ceiling finishes, the structural, mechanical and electrical system observations and opinions contained in this report are based solely on interviews with service personnel, visible evidence, and where possible, by review of the original construction documents.

In order to organize the work, the assessment was directed at the following systems:

Site Conditions and Systems

Structural Systems
Building Envelope
Interior Finishes
Special Construction
Fire and Life Safety, Building Code and ADA Compliance
Functional Efficiency

Pool Equipment
Heating and Ventilating Equipment
Plumbing Systems
Electrical Systems

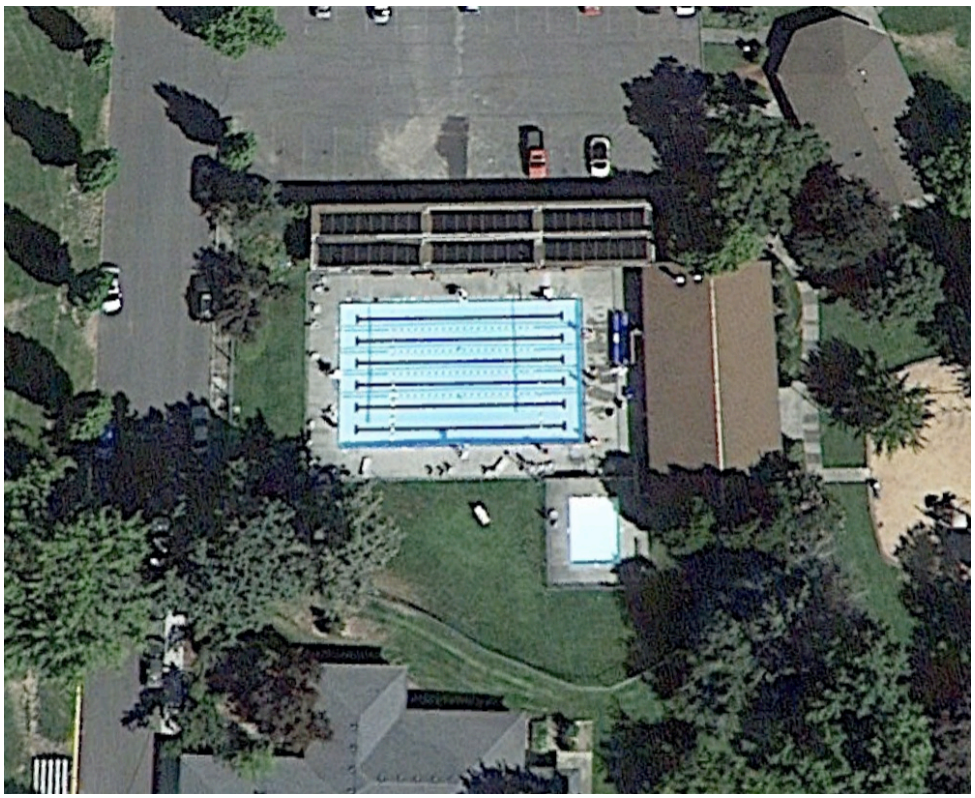
Daniel Meyer Pool Replacement & Renovation

The following is a written summary of this assessment and subsequent review of record drawings supplied to the assessment team and provides recommendations relative to the observed conditions for future study or action.

BACKGROUND

Daniel Meyer Memorial Swimming Pool was initially constructed in 1982 on land within Hunter Park in Ashland, Oregon, and is operated and maintained by the City of Ashland (Ashland Parks and Recreation Commission.) The facility has never been expanded nor undergone a comprehensive renovation. Specific systems have been maintained and replaced as needed to facilitate continuous operations.

Primary components in the original swimming pool construction include a six-lane 25-yard pool, learner pool, spectator area, and seasonal bathhouse with men's, women's and staff dressing rooms, reception/staff area, various storage areas, lower level boiler room and a lower level pool mechanical room. The facility is set on a terraced site with a paved parking area/access drive to the north including accessible parking.



~~This facility provides typical seasonal aquatic activities of recreation, lessons programs, fitness, competition and therapy.~~ Currently, the Daniel Meyer Memorial Swimming Pool is the only outdoor public aquatic facility locally available. With the closure of the indoor pool at Southern Oregon University, the facility has been modified to some extent to support year-round use of the outdoor pool.

The facility has had a fairly typical history of maintenance, and overall is an indication that the facility was well built to begin with. The building and pool systems show evidence of routine maintenance and

replacement of equipment or systems when needed. No other major repair or replacement work has occurred at the facility.

City pool maintenance staff has been able to maintain the "status quo" and provide periodic maintenance but has not recently had the resources to make significant improvements. Even with a brief survey of the facility it is apparent that some of the finishes and building systems are aged and worn and in need of refurbishment or replacement in the short-term.

SITE CONDITIONS AND SYSTEMS

The facility is located on a slightly sloped and terraced site. Generally, the immediate site is in good condition and appears to be well maintained, as it is primarily a park area.

The north side of the facility abuts a parking area, which was not a subject of this assessment but looks to be in fair conditions, with some maintenance issues, to be addressed. Currently there are signed accessible parking spaces near the building entry, with a side loading area. A compliant accessible route appears to be provided to the building entry.

STRUCTURAL SYSTEMS

The assessment team was able to view (and later obtain) original construction drawings at the time of the field review. These drawings, along with on-site observations, both contributed to the observation of the structural systems noted below

Foundations

The foundations for the entire structure are formed, poured-in-place concrete footings, slabs and bearing columns. Footings and walls step down on the site at the north, creating a lower level pool mechanical room. There is no apparent evidence of foundation settlement or cracking, and in general the concrete portions of this facility are in good condition.

Floors

~~The floor systems consist of exposed concrete slabs on grade throughout the bathhouse and pool area. Nowhere was excessive cracking or settlement of the concrete floor slab noted, though normal surface hairline cracking was evident, and much of the flooring in the bathhouse is covered by drainable plastic matting. The broom finished concrete does show 40 plus years of wear and some areas may need to be treated to increase slip-resistance.~~ Rubber sheet flooring (similar to Mondo or Tarkett sports flooring) has been installed in the bathhouse over the existing concrete surfaces. Drainable plastic matting is still in use in the wet areas over the tile floors in the shower area.

Walls

The walls are constructed of concrete masonry (CMU) to a height of 7'-6" at the eaves and at the gable ends and interior partitions. CMU has been painted/coated inside and clear sealed on the outside.

Moisture intrusion into the CMU is evident from the bubbles in the paint on the interior of the east wall. The exterior landscape sprinkler system, gutter system or roof leak, appear to be the most likely sources of the water and should be investigated. The CMU should be resealed.

Walls above the CMU are constructed with 2x wood framing with exterior wood siding and interior gypsum or wood finishes. ~~Since the facility is an unheated seasonal there is no need to insulate these walls, and the end walls have large steel grate screens providing the necessary cross ventilation. These vents have been partially blocked by rigid insulation panels – Which could lead to lack of ventilation to some parts of the structure.~~ The previously open, end walls have been framed in and sealed to allow for heating and year-round use of the bathhouse. A mechanical system has been installed to provide heating of the space and air circulation. Outside air intake for required ventilation was not evident.

Roof Structure

The roof structure was not constructed as indicated in the construction documents. Instead of glu-laminated beams supporting tongue and groove wood decking, it appears that the roof is framed with 2x12 or 2x14 joists and plywood sheathing. This assembly is currently covered with gypsum board so the assembly cannot be verified. The gypsum board was recently removed and replaced, and the joist cavity was reported to be filled with fiberglass insulation in order to improve energy efficiency with the heating system.

There does not appear to be any sag in the roof plane when viewed from the outside, but there ~~is~~ was in 2013 evidence of moisture intrusion and repair in the gypsum board ceiling over the lobby area. ~~The source of this should be investigated to assure there is no damage to the structure.~~

Lateral Force Resisting Systems

The building structural systems are required to resist lateral forces from wind or earthquake.
It is currently recognized that the potential for a strong earthquake in western Oregon is much greater than thought at the time this building was constructed. As a result, it is likely that the strength of the lateral force resisting systems do not meet current standards – though it is important to note that they are not required to be upgraded unless significant alterations are undertaken. (It will be up to the local Building Official to determine if remodeling of the toilet and shower areas would constitute a “significant alteration”.)

If constructed today there would be special connections between the structural elements of the building to resist the strong forces that an earthquake might generate. Since construction drawings do not fully match the actual construction, it is difficult to determine the seismic safety of the building without further study.

An earthquake could also negatively affect the building mechanical systems. The majority of the equipment for the pools systems and water heating are not anchored to their supports. A moderate seismic event could damage equipment and piping.

Swimming Pool Structural Components

Pool Tank: The existing pool tank varies in water depth from 3-1/2 feet at the shallow end to 5-1/2 feet at the main drains. It is constructed of pneumatically placed reinforced concrete floor and walls, with a painted plaster coating. Under normal operations, no significant water loss is reported. There are no signs

of structural problems with the pool tank. The painted plaster finish has been continuing to deteriorate. The pool is too shallow for safe dive starts and training purposes and should not be used with conventional height start blocks.

Pool Deck: The pool deck is constructed of poured-in-place concrete slabs on crushed rock. This deck was originally poured with an exposed aggregate finish, which appears to be in good condition. ~~Wood separators in the pool deck are showing signs of age and may need to be replaced in the near future for foot traffic safety.~~ Wood separators have been replaced with concrete or non-shrink cementitious grout.

BUILDING ENVELOPE

Roofing: ~~The existing composition shingle roofing (age unknown) is reportedly getting old, and is planned for replacement.~~ The building has been reroofed with metal roofing. Only a few mechanical fan caps and vents over the bathhouse are located on the roof. Gutters and downspouts are located on the east and west roof edges and appear to be functional.

Installation of skylights could be considered when the roofing is replaced in order to reduce energy costs from electric lighting in the bathhouse. In addition, a solar heating system for the pool water could be considered but should be evaluated for efficiency as the roof orientation is not ideal, and the roof structure would need to be evaluated.

Exterior Masonry Walls: As noted in the structural section above the exterior walls are concrete masonry with marginal finishes. The finishes on the interior of these walls exhibit moisture intrusion into this structural element.

Exterior Wood Siding, Soffits and Trim: Original wood siding and trim has been refinished and ~~is in need of refinishing in some areas, but otherwise~~ appears to be in suitable condition for continued use.

Exterior Windows and Doors: The exterior door and window systems are limited to the east and east walls of the bathhouse and are in worn condition and should be considered for repair and replacement.

Exterior door hardware appears to match the condition of the doors they are attached to and should be replaced if doors are replaced. There are a variety of door types in the building and most appear to be functioning adequately. Those without accessible hardware should be updated.

INTERIOR FINISHES

The overall appearance is that of a ~~well-worn~~ selectively updated facility. This is mostly due to refinishing of ~~general wear and tear on any of~~ the soft or coated finishes. ~~Replacement and repair of finishes is recommended throughout the facility.~~

Doors: There are only a handful of interior doors and relites (interior windows) and they are in generally fair condition, though doorframes are not, and most of the hardware is not ADA compliant. (Refer to section on

ADA compliance below) All doorframes, doors and hardware and should be replaced for long-term use of the facility.

Floors: Generally, concrete flooring finishes ~~are in fair condition~~ are now covered by rubber flooring. Any areas that present a potential slip and fall hazard and should be addressed as part of any long-term use of the facility.

Dressing Room Accessories: Toilet partitions in the dressing rooms are of fairly recent HDPE plastic construction and are in good condition. All toilet room accessories appear to be in fairly good condition and are not of original vintage. Benches in both dressing rooms are in good condition as are a bank of lockers found in each dressing room.

SPECIAL CONSTRUCTION

Swimming Pool: The swimming pool finish appears to be paint on plaster - likely with chlorinated rubber-based paint. The finish appears to be in good condition, though most painted systems need refinishing every 2-4 years. There is a stainless-steel perimeter gutter system with skimmer weirs, which appears to be in generally good condition. Staff reports recent problems with the interior pool finish causing hazards for swimmers in the pool.

Pool Accessories: The pool has stainless steel ladder rails and recessed wall steps and is provided with a drop-in fiberglass access stair unit that can be placed when needed for ADA compliance. Lanes lines and other pool operating equipment are stored in various locations around the pool deck, including a pool blanket system. Use of such systems result in significant energy savings.

FIRE AND LIFE SAFETY, BUILDING CODE AND ADA COMPLIANCE

Building Code Compliance: Design and construction of the Daniel Meyer Memorial Swimming Pool was completed under the provisions of the Uniform Building Code in effect in 1982. Several revised editions of the UBC have been published since that time and now the governing code is the 2019 State of Oregon Structural Specialty Code Amendments (based on the 2018 International Building Code). Provisions of this edition of the code will apply to any changes to the facility that would require a building permit. Generally, this would be additions and alterations of a structural nature or those affecting the exiting or fire and life safety provisions of the building. In addition, mechanical and electrical alteration often will require a permit. Replacement of interior or exterior finishes, would usually not require a permit, particularly those of a cosmetic nature, and would not fall under the provisions of the building code. Up to 25% of the value of the permitted work must be spent towards the removal of architectural barriers (see ADA compliance below).

In general, it appears that the exiting systems for the building would meet current code. However, it is unlikely that there is the minimum required emergency lighting on the exit path through the building and out to the street. A lighting analysis was not included in this report. A review of this requirement is recommended with any major building renovation project.

Some areas within the bathhouse are not up to current ADA compliance throughout this facility and should be corrected for long-term use of the facility.

Swimming Pool Rules: The swimming pool portions of the facility will also fall under the requirements of the Oregon Health Division Rules for the Design and Construction of Public Swimming Pools. (OAR Chapter 333). Under these rules any alteration to the pool facility will require that related components such as the bathhouse will be required to be brought into current compliance. Typically, this will result in changes to change room and toilet facilities as well as require additional space for new pool circulation, filtration and chemical treatment systems.

Following is a comparison of the number of existing plumbing fixtures and the number or fixtures required by current code based on an estimated user load of 200 persons (2,520sf / 15sf per person + 885sf / 27sf per person ~~+ 300 sf wading pool /24sf per person~~) for the current 25 yard x 45 foot wide pool and wading pool.

	EXISTING FIXTURES	REQUIRED FIXTURES
WOMEN'S (assumes 100 users)		
Toilets	3 (1 Accessible)	3 (1 Accessible)
Lavatories	2 (1 Accessible)	2 (1 Accessible)
Showers	4 (1 Accessible)	3 (1 Accessible)

MEN'S (assumes 100 users)		
Toilets	2 (1 Accessible)	2 (1 Accessible)
Urinals	1	1
Lavatories	2 (1 Accessible)	2 (1 Accessible)
Showers	4 (1 Accessible)	3 (1 Accessible)

The fixtures noted in the above chart are in the dressing rooms which are the only ones accessible to pool users. It is apparent from the chart that there are adequate toilets and showering facilities for the existing pool, though ADA compliance is marginal, changes would not be required until alterations to the pools or the building are made.

A new pool of the size and depths assumed from the Concept Site Plan and preliminary discussions regarding pool depths indicate that the estimated pool user load will increase to 386 persons (3,444sf / 27sf per person + 3,906sf / 15sf per person). The following table illustrates requirements compared to the existing:

	EXISTING FIXTURES	REQUIRED FIXTURES	Add'l Req'd
WOMEN'S (assumes 193 users)			
Toilets	3 (1 Accessible)	5 (1 Accessible)	2
Lavatories	2 (1 Accessible)	4 (1 Accessible)	2
Showers	4 (1 Accessible)	5 (1 Accessible)	1

MEN'S (assumes 193 users)			
Toilets	2 (1 Accessible)	3 (1 Accessible)	1
Urinals	1	2	1
Lavatories	2 (1 Accessible)	4 (1 Accessible)	2
Showers	4 (1 Accessible)	5 (1 Accessible)	1

ADA Compliance: As mentioned above, any permitted alteration to an existing facility requires that up to 25% of the value of the permitted work be spent on the removal of existing architectural barriers as defined by the Americans with Disabilities Act (ADA), should any exist. It is not unusual for buildings of this vintage to have several deficiencies with regard to accessibility and compliance with the ADA guidelines. Starting from outside the facility ADA compliance issues are as follows:

a. Accessible parking: accessible parking is required as a ratio of required parking with a minimum of one accessible space for each 25 spaces provided up to 100 spaces. At least one accessible space needs to be "van accessible". Both regular and van accessible parking spaces have a minimum space width of nine feet with an adjacent access aisle of 8-feet for vans and 6-feet for regular. Currently there are two marked spaces in front of the building providing compliance. This will need to be replaced as the parking lot is modified.
b. The route into the building from the sidewalk appears to be compliant. This will need to be verified for compliance with slope and cross-slope.
c. Exterior doors may have thresholds that appear to be compliant for wheelchair users.
d. It is likely that several doors on accessible routes require too high a pull force to open them. (8.5 lbs at exterior, 5 lbs. at interior).
e. None of the interior or exterior doors have ADA compliant hardware.
f. No portion of the reception counter is at ADA compliant height.
g. There are no fully ADA compliant toilet facilities in the dressing rooms, although there may be marginal approval at this point. Minor changes in walls and plumbing would need to be made to bring these facilities into compliance. Any changes involving new fixtures will trigger bringing all fixtures into compliance.

In general, there are ADA deficiencies that should be addressed with each permitted project when required, with the ultimate goal of removing all significant barriers. Evaluation of the detailed requirements of the ADA guidelines is necessary to both identify and remove architectural barriers. Such detailed evaluation is beyond the scope of this assessment but should be anticipated in the scope of each future project requiring a building permit.

FUNCTIONAL EFFICIENCY

The facility lacks many of the features found in today's modern community aquatic facilities, such as family dressing rooms, water features and a variety of water space and temperature. The evaluation of the pools systems is covered below (Refer to the mechanical assessment later in this report), but essentially most of the building systems need to be repaired or replaced for the long–term use of the facility. **While this can be expensive, it is also practical and can be effective in maintaining a community asset**. In the end, the result is a renovated 1982 pool facility, which can continue to serve the community in its present capacity for the foreseeable future. As long as that is the expectation, this is a viable approach to long-term use of the facility.

The primary functional area – the pool – provides sufficient deck space to accommodate most activities and spectators, including the storage of numerous pool related items that are stored in the open around the deck. In all, the pool area is really quite functional, and perhaps could provide enough space to contemplate the addition of a small hot tub if desired.

From a program standpoint the facility ~~gets seasonal~~ has recently received year-round use, and in the program hours information the pool provides for a wide range of aquatic activities, and some opportunity for having more than one activity at a time in the pool.

The bathhouse dressing rooms are marginally functional for the use they receive. The dressing rooms provide the necessary space to change, shower and use the restroom, ~~but they are due for a cosmetic overhaul to improve the appearance and ease of maintenance~~. They may only be lacking suitable ADA and family change rooms that would be found in a newer facility.

The staff work area behind the front desk is in need of reorganization in order for it to become more efficient. Most surfaces are worn and tired and the whole reception counter should be renovated to improve appearance, accessibility, computer use and staff functionality, and control of access to the changing rooms.

The lobby area is cramped, and the front doors do now allow for easy staff supervision of the areas immediately east of the building.

Future renovations could address a number of the deficiencies noted above.

MECHANICAL AND ELECTRICAL SYSTEMS

As is often the case with pool facilities, mechanical and electrical equipment have been replaced and systems revised over the years as equipment fails. At this time, equipment varies in condition from essentially new to items in need of immediate replacement. In general, most are functional although a variety of abandoned equipment and piping should be removed or re-configured to simplify operation and aid in maintenance.

A more detailed discussion of specific system elements follows.

Main Pool

The main pool is served by a circulation system including filter, pump, and chemical treatment system, which also serves the wading pool. The pool has two drains that are reportedly compliant with the Virginia Graham Baker act to prevent entrapment. The pool includes a stainless-steel return gutter system with a supply channel and inlets spaced approximately every four feet. The gutter is constructed with four return weirs located adjacent to the four corners of the pool.

The total pool volume is approximately 110,000 gallons, and the circulation system supply rate was observed at 350 gallons per minute (gpm). If the scheduled flow rate to the wading pool of 20 gpm is subtracted from the observed flow rate (which it now has because the wading pool has been abandoned), the amount delivered to the pool of 330 gpm produces a pool turnover rate of around 5.2 hours. The observed turnover rate exceeds the code required turnover rate of 6 hours.

In summary, the pool appears to meet current code requirements. However, we would not consider the pool arrangement to be optimum for the use. For municipal pools that are relatively shallow, the number of users per square foot is often very high resulting in a high contaminate load per gallon of water. To

address the high bather load, a turnover rate of 3 to 4 hours would be more appropriate to maintain water quality during peak load periods. None of this equipment would be suitable for re-use with a large pool or water volume.

In addition, the gutter supply/return system is not the best possible. The velocity of water delivered from the gutter system is not likely high enough to deliver water to the middle of the pool potentially leaving some areas of the pool with a low turnover rate. The low turnover rate can contribute to formation of chloramines that impact pool water quality.

Wading Pool

The wading pool has been abandoned. ~~is more problematic. While the system is likely legal since it was installed prior to many code upgrades, some deficiencies and performance problems are significant and should be addressed to ensure clean, safe water is provided to users. Issues include:~~

- ~~The pool is served by the same circulation system as the main pool. This is a violation of current code and presents a significant challenge to chemical treatment systems. During hours of peak use, the contaminate load in a wading pool is much higher than would be expected in the main pool, and the sanitizer demand is correspondingly greater. However, since the chemical treatment system measures demand on the combined return, the measured demand does not represent actual conditions in the wading pool. As a result, the amount of sanitizer delivered to the wading pool may be significantly less than actually required.~~
- ~~The original design documents indicated a scheduled flow to the wading pool of 20 gpm. With an approximate wading pool volume of 2,250 gallons, the pool turnover time would be about 112 minutes or not quite 2 times the current code maximum of 60 minutes. Further, current design practice would suggest a turnover rate somewhere around 20 to 30 minutes to be more appropriate for a wading pool application.~~
- ~~The actual turnover rate in the pool appears to be even less than design. While the flow rate was not actually measured, the amount of flow from the wading pool outlets seemed to be very low. Of the three outlets, the first was observed to produce a very modest flow, the second significantly less, and flow from the third could not be detected.~~

~~In summary, maintaining appropriate sanitizer levels in the pool at all times will remain very challenging given the current configuration. Possibly, removing the automatic flow control valve located in the supply piping takeoff to the wading pool may improve flow and help the situation.~~

Filtration

The circulation system includes a rapid sand filter. The filter type is correctly sized, appropriate for the application, and appears to be in good condition. Reportedly, sand was replaced in 2012, and filter operation is satisfactory. This component may be reusable.

Circulation Pump

A 7-1/2 HP, base-mounted, centrifugal pump circulates water through the filter and back to the pool. A separate basket strainer is installed at the pump inlet. The pump and basket strainer appear to be in good condition and are operating satisfactorily. The pump is reportedly not in good condition at this time.

Chemical Treatment

Recently, a new chemical treatment system was installed including a new controller and sodium hypochlorite feeder. The existing Pulsar calcium hypochlorite feeder and related controller are still present but no longer used as the primary chemical treatment source although the system appears to be operational.

The new chemical treatment system appears to be appropriate and should be effective for the application. While components may be reusable, more capacity will be required for a larger pool.

Level Control and Balance

The circulation system includes a balance tank. Conceptually, the balance tank allows the amount of water from the main drain and the gutter systems to be balanced to the proportions desired. Current code requires no less than 50% of the pool flow to return from the gutter overflow since most contaminates are found in surface water. Good practice would suggest a rate as high as 80% for best performance.

The use of weirs in the gutter return system affects this ratio. When the pool is occupied, water levels in the pool rise and overflow into the gutter increases raising the ratio. Conversely, when the pool is not in use or the number of users is low, water into the gutter is restricted to the amount that enters through the weirs. While not tested, the ratio of overflow to main drain water is probably less than desirable under these conditions.

An automatic level control system was originally installed to maintain a minimum level in the pool. The automatic system has failed and is no longer used. Currently, makeup is manually controlled based on observed water level in the pool. The new pool will require a new surge tank for level control and balance.

Heating System

The pool is heated by a gas fired hot water boiler manufactured by LAARS Company and equipped with an atmospheric burner. The boiler was manufactured in 2004 and has a rated efficiency of 81% at peak firing rate. The boiler is leaking and was out of service at the time of the survey.

The efficiency of the boiler is limited by the use of an atmospheric type burner which does not allow precise control of the fuel-air mixture. A conventional boiler with an external power burner would provide an improved full load efficiency of around 85% while a new condensing boiler could be expected to achieve an even better efficiency of around 95%.

Given the age, poor condition, and inefficiency of the existing boiler, replacement is recommended.

Solar System

A solar pool heating system was recently removed. The associated circulation pump remains but is in generally poor condition and should likely be replaced if a new solar system is installed.

Plumbing

A separate gas fired water heater produces domestic hot water for facility use. The unit includes an external power burner and is approximately 7 to 8 years old. The water heater appears to be in good condition and is appropriate for the application.

Existing plumbing fixtures are of good quality and in generally good condition. The exception is the showers. Reportedly, shower controls are susceptible to failure, and replacement is desired. The hot water system takes a long time to heat up in the women's room. Consideration should be given to a hot water circulation system for improved response and water savings.

No facility backflow preventer was found on the site and backflow from piping serving building plumbing fixtures is possible. However, swimming pool backflow prevention is adequate since there is an air gap between the fill line and the balance tank where makeup is introduced. This should be/may be required to be addressed during replacement of the pool.

Electrical

The existing main service panel in the pool equipment room appears to have been recently replaced. The condition and capacity of the service appears to be good. Reportedly, wiring to pool lights is problematic, and one of the pool lights is no longer functional.

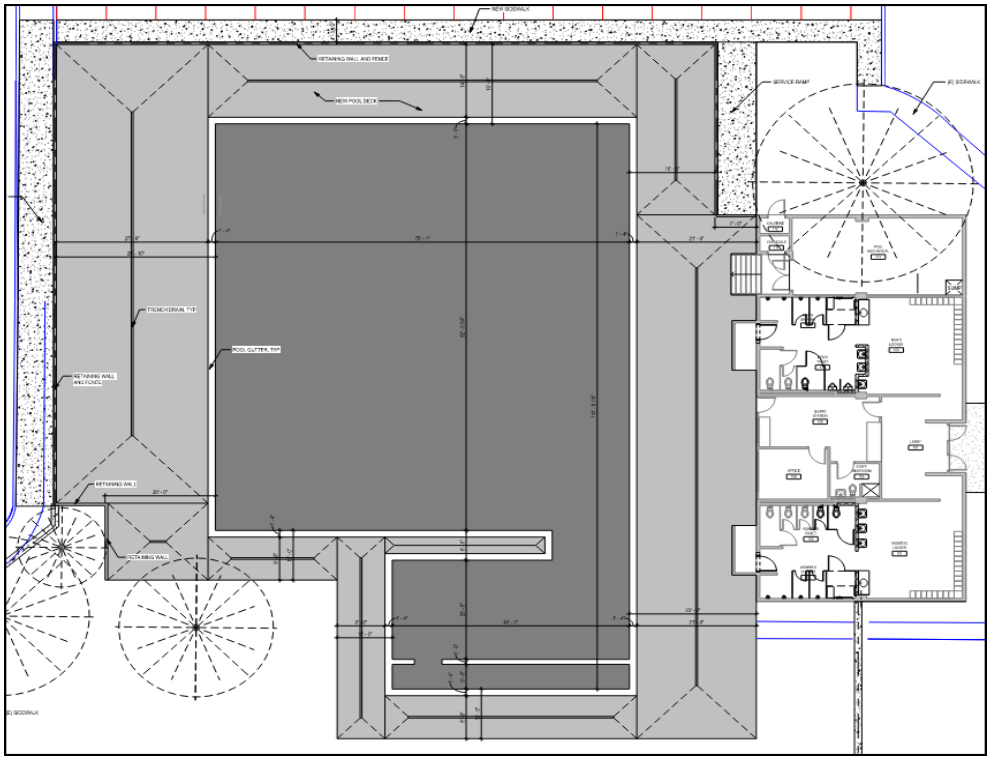
Bathhouse Heating and Ventilating System

A mechanical system has been installed to provide heating and air circulation for the dressing areas and office space. Outside air intake for code required ventilation was not evident, and new exhaust fans appear to serve toilet and shower areas as would be required for non-seasonal buildings.

Construction FOCUS
Integrated Project Solutions

July 6, 2020
Revision #1

DANIEL MEYER
POOL RENOVATION



STATEMENT OF PROBABLE COST

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DANIEL MEYER
POOL RENOVATION
Statement of Probable Cost

LOC	ITEM	DESCRIPTION	QNTY	UNIT	$/UNIT	TOTAL $
	SITE AREAS					
	Site Gross Area		17,758	SF		
	Landscaping Gross Area		6,820	SF		
	Hardscapes Gross Area		10,938	SF		
	SITE DEMOLITION & RELOCATIONS					
	Demolition of Site Components					39,589
	Sawcut		430	LF	2.50	1,075
	Demo pool equipment	allowance	3,540	SF	3.50	12,390
	Demo pool deck	x_ conc	6,462	SF	1.00	6,462
	Demo hardscapes	x_ AC & sidewalks	4,240	SF	1.00	4,240
	Demo fence	x_ chain link	496	LF	7.00	3,472
	Demo retaining wall	x_conc wall	122	LF	25.00	3,050
	Demo site utilities	x_storm_12"	170	LF	30.00	5,100
	Demo storm MH	x_man hole	2	EA	1,100.00	2,200
	Remove light post	x_ light post	2	EA	800.00	1,600
	Relocation of Building & Utilities					11,639
	Salvage shed		1	LS	1,800.00	1,800
	Foundation for shed	concrete work	154	SF	12.00	1,848
	Canopy footings	excavate/concrete work	12	EA	350.00	4,200
	Canopies	salvage/re-install	3	EA	1,263.53	3,791
					SITE DEMOLITION & RELOCATIONS HARDCOST	51,228
	SITE EARTHWORK					
	Survey, Erosion Control & Mobilization					20,000
	Mobilization		1	LS	7,500.00	7,500
	Surveying		1	LS	8,000.00	8,000
	Erosion control		1	LS	3,000.00	3,000
	Traffic control		1	LS	1,500.00	1,500
	Excavation, Backfill, & Base Rock					186,267
Pool	Trenching	plumbing, piping & drains	75	LF	35.00	2,625
Pool	Excavate pool		1,330	CY	42.00	55,860
Pool	Backfill	rock	1,095	TN	44.00	48,189
Pool	Base rock		680	TN	34.00	23,120
Ret. Wall	Excavation		277	CY	45.00	12,465
Ret. Wall	Backfill	rock	796	TN	48.00	38,184
Ret. Wall	Base rock		112	TN	52.00	5,824
					SITE EARTHWORK HARDCOST	206,267
	PAVING & CURBS					
	Hardscapes & Curb					107,437
Pkg Lot	Asphalt patch (1640 sf)	ac-4"	42	TN	125.00	5,188
Street/Pk	Sidewalk	conc-4"	1,646	SF	7.50	12,345
Sen Ctr	Sidewalk	conc-4"	204	SF	7.50	1,530
	Sidewalk thickened edge/curb	type C	148	LF	23.00	3,404
	Pool deck	conc-5"	7,652	SF	8.30	63,512
Sidewk	Aggregate base	crushed rock-8"	63	TN	56.00	3,549
Pool Dk	Aggregate base	crushed rock-8"	350	TN	49.00	17,127
	Curb	type C	34	LF	23.00	782
	Markings & Signage					1,204
	Paint striping	white_4"	630	LF	0.80	504
	Handicap symbols w/signs	ADA, stencil	2	EA	350.00	700
					PAVING & CURBS HARDCOST	108,642

DANIEL MEYER
POOL RENOVATION
Statement of Probable Cost

LOC	ITEM	DESCRIPTION	QNTY	UNIT	$/UNIT	TOTAL $
	SITE DEVELOPMENT					
	Fencing and Gates					29,050
	Chain link fencing (6' ht)	per CM	510	LF	45.00	22,950
	Chain link gates	per CM	1	LS	3,500.00	3,500
Gate	Hardware: panic	various	2	EA	1,300.00	2,600
	Site Improvements					10,740
	Parking bumper		30	EA	150.00	4,500
	Concrete header	per CM	260	LF	24.00	6,240
	Exterior Walls, Footings, and Steps					128,934
	Strip ftg	4'-0" W x 1'-0" D w/rebar	280	LF	115.62	32,374
	Retaining wall	f/s/pl/fin_8"w_reinf	1,299	SF	57.09	74,160
	Waterproofing	bentonite	1,299	SF	8.28	10,756
	Foundation drainage	pvc_4"	280	LF	20.16	5,645
	Dewatering		1	LS	6,000.00	6,000
					SITE DEVELOPMENT HARDCOST	168,724
	LANDSCAPING					
	Landscaping & Irrigation					22,120
	Earthwork / berm removal	per CM	1	LS	4,000.00	4,000
	New irrigated lawn	per CM	4,150	SF	3.00	12,450
	Lawn / landscape / irrig repair	per CM	2,670	SF	1.00	2,670
	Tree removal (4) / site grubbing	per CM	1	LS	3,000.00	3,000
					LANDSCAPING HARDCOST	22,120
	SITE UTILITIES					
	Water & Gas System					8,900
	Hose bibs		3	EA	450.00	1,350
	Natural gas connection		1	LS	550.00	550
	Domestic water connection		1	LS	550.00	550
	Water meter		1	LS	750.00	750
	Backflow preventor		1	LS	5,200.00	5,200
	Emergency shower connection		1	LS	500.00	500
	Storm Sewer Systems					91,690
	Manhole		2	EA	4,200.00	8,400
	Storm system piping	pvc_12"	190	LF	90.00	17,100
	Storm system piping	pvc_4"	290	LF	46.00	13,340
	Storm system piping	connect to (E) MH	2	EA	900.00	1,800
	Drainage connections	connect to (E)	10	EA	500.00	5,000
Pkg	Catch basin w/weir		1	EA	1,300.00	1,300
Pool Dk	Cleanout		10	EA	450.00	4,500
Pool Dk	Trench drain		322	LF	125.00	40,250
	Electrical					48,598
	Heat exchanger		2	EA	3,038.00	6,076
	Grounding	pool equip	1	LS	4,500.00	4,500
	Site Lighting		6	EA	3,245.33	19,472
	Site Branch Wiring		1	LS	8,550.00	8,550
	Electrical accessories	conduit/junctions/breakers/fuses	1	LS	10,000.00	10,000
					SITE UTILITIES HARDCOST	149,188
	AQUATICS					
	Pool and Equipment					2,167,500
	Swimming pool		1	LS	2,098,000.00	2,098,000
	House keeping pad/CIP surge tank		1	LS	60,000.00	60,000
Pool	Electrical		1	LS	9,500.00	9,500

DANIEL MEYER
POOL RENOVATION
Statement of Probable Cost

LOC	ITEM	DESCRIPTION	QNTY	UNIT	$/UNIT	TOTAL $
	Pool equip (pool covers, misc)	included in owner's FFE				
	Pool equip (competetive equipment)	included in owner's FFE				
					AQUATICS HARDCOST	2,167,500
					HARDCOST TOTAL	2,873,669

The above HARDCOST TOTAL does not include typical general contractor markups.
Those plus contingencies are listed below as part of a Low-High Range.
Variables include fluctuations in market conditions, material selections, and design considerations.
The Cost Estimate Range will be consolidated as we move closer to the actual Bid Date.

LOW RANGE			HIGH RANGE	
		Markups (excluding the pool cost):		
10.00%	77,567	Estimating Contingency	20.00%	155,134
		Markups (including the pool cost):		
7.00%	206,586	General Conditions	7.00%	212,016
0.40%	12,631	Insurance	0.40%	12,963
6.00%	190,227	Profit & Overhead	6.00%	195,227
1.20%	40,328	Performance Bond:	1.20%	41,388
1.00%	34,010	Escalation	3.00%	104,712
0.50%	17,175	OR Gross Receipts Tax	0.50%	17,976
	578,525	**Markup Subtotals:**		739,416
	3,452,194	**POOL RENOVATION BASE BID TOTAL**		**3,613,084**

NOTES
Wage rates: BOLI
This estimate assumes competitive bidding by local contractors
Use of a CMGC or special selection process for bidders will increase the estimated cost

EXCLUSIONS
Design fees, permit fees, system development fees, utility hookup charges, testing, BOLI fee.
Commissioning
Hazardous materials abatement, moving expenses, anti-graffiti coating, fireproofing.
Wet weather sitework and adverse weather conditions.
Shoring/Pinning of excavated soils

ABBREVIATIONS

EA= Each	SF=Square Feet	BCY=Bank Cubic Yard
LF= Linear Feet	LS=Lump Sum	TN=Ton
SY=Square Yard	OPNG=Opening	LB=Pounds
PR=Pair	HT=Height	

Added cost for 3MBH pool heater vs 2MBH pool heater is $35,000 to Mrytha Pool costs plus $8,050 average of markups.

DANIEL MEYER
LOCKER ROOM RENOVATION
Statement of Probable Cost

LOC	ITEM	DESCRIPTION	QNTY	UNIT	$/UNIT	TOTAL $
	BUILDING AREAS					
		Bath House Gross Area	2,930	SF		
	SLAB ON GRADE					
	Concrete Slabs					6,647
	Slab on grade	f/s/pl/fin 4"t_reinf	728	SF	7.51	5,467
	Vapor barrier	polyethylene	728	SF	0.62	451
	Base rock	crushed rock_6" D	728	SF	1.00	728
					SLAB ON GRADE HARDCOST	6,647
	EXTERIOR DOORS					
	Doors, Frames, and Hardware					4,451
	Door	3'-0" x 7'-0"_hm_inslu	2	LEAF	728.16	1,456
	Frame	3'-0" x 7'-0"_hm_P&D	2	EA	647.39	1,295
	Hardware	various	2	LEAF	850.00	1,700
	Painting & Grouting					483
	Grout frame		2	EA	128.36	257
	Paint:door & frame		2	LEAF	113.31	227
					EXTERIOR DOORS HARDCOST	4,934
	INTERIOR PARTITIONS					
	Masonry Walls					7,156
Doors	Masonry infill wall	8x8x16_CMU_sm-fc_grout/reinf	10	SF	42.47	425
	Masonry wall	6x8x16_CMU_sm-fc_grout/reinf	289	SF	23.29	6,731
	Sheathing & Wall Board					310
	Wall end	T1-11/corner trim	6	SF	51.59	310
	Painting, Coating, & Staining					676
	Paint: wall (B&R)	2 top ct on (E) paint	308	SF	1.03	317
	Paint: wall (B&R)	prime/2 top ct on cmu	244	SF	1.38	337
	Paint: wall (B&R)	2 top ct on siding	9	SF	2.48	22
					INTERIOR PARTITIONS HARDCOST	8,141
	FURNISHINGS AND SPECIALTIES					
	Toilet Partitions & Locker					10,187
	Toilet partition: ADA	HDPE	4	EA	1,181.18	4,725
	Toilet partition: standard	HDPE	5	EA	1,031.18	5,156
	Toilet partition: screen	HDPE	1	EA	306.36	306
	Lockers	-OFOI-			0.00	0
	Casework & Countertop					5,509
	Base cabinet	p-lam, w-doors/drawers	11	LF	265.00	2,915
	Countertop	solid surface (assumed)	21	SF	123.50	2,594
	Toilet & Bath Accessories					4,947
	Toilet accessories	various	35	EA	106.59	3,731
	Toilet accessories	grab bar	10	EA	121.59	1,216
					FURNISHINGS AND SPECIALTIES HARDCOST	20,642
	CEILING & WALL FINISHES					
	Ceilings & Painting					45
	Ceiling patch	gypbd-5/8"_LVL-4 match (E)	4	SF	8.00	32

DANIEL MEYER
LOCKER ROOM RENOVATION
Statement of Probable Cost

LOC	ITEM	DESCRIPTION	QNTY	UNIT	$/UNIT	TOTAL $
	Paint: ceiling (B & roll)	prime/2 top ct on gyp bd	8	SF	1.57	13
	Wall Tile					26,737
(E) walls	Ceramic tile	wall prep/thin-set	645	SF	26.69	17,215
New walls	Ceramic tile	thin-set	378	SF	25.19	9,522
					CEILING & WALL FINISHES HARDCOST	26,781
	FLOOR COVERINGS					
	Floor Coverings					16,101
	Sealed concrete		143	SF	2.50	358
	Ceramic tile	thin set	700	SF	22.49	15,743
					FLOOR COVERINGS HARDCOST	16,101
	PLUMBING FIXTURES & GC'S					
	Fixtures					69,793
	Lavatory sinks		4	EA	2,649.31	10,597
	Urinals		1	EA	3,196.45	3,196
	Water closet: floor mounted		3	EA	2,767.71	8,303
	Showers: stnlss stl	head & lever	10	EA	2,864.96	28,650
	Reinstall plumbing fixtures	(E) fixture/re-pipe	15	EA	986.46	14,797
Shower	Trench drain		34	LF	125.00	4,250
					PLUMBING FIXTURES & GC'S HARDCOST	69,793
	PLUMBING PIPING AND ACCESSORIES					
	Domestic Water, Sanitary, Vent Piping					38,719
	Domestic water piping	primary pipe	100	LF	60.00	6,000
	Domestic water piping	various sizes	579	LF	35.00	20,265
Blw Grd	Sanitary piping	various sizes	130	LF	85.00	11,050
	Vent piping	various sizes	104	LF	13.50	1,404
	Accessories & Connection					3,381
	Floor drain w/ p-trap		2	EA	1,074.24	2,148
	Circulation pump		1	EA	1,232.21	1,232
					PLUMBING PIPING AND ACCESSORIES HARDCOST	42,100
	HVAC DISTRIBUTION SYSTEMS					
	HVAC Equipment					2,642
	Exhaust fan		2	EA	900.00	1,800
	Roofing: patch metal		2	LOC	421.18	842
					HVAC DISTRIBUTION SYSTEMS HARDCOST	2,642
	ELECTRICAL					
	Electrical					50,064
	Lighting		20	EA	1,143.80	22,876
	Devices		19	EA	182.64	3,470
	Equipment connections	allowance for 2 exhaust fans	1	LS	346.00	346
	Branch wiring		1	LS	16,919.00	16,919
	Demolition		1	LS	2,700.00	2,700
	Temorary service		1	LS	1,200.00	1,200
	Permits, labeling, & coordination		1	LS	2,553.00	2,553
					ELECTRICAL HARDCOST	50,064

DANIEL MEYER
LOCKER ROOM RENOVATION
Statement of Probable Cost

LOC	ITEM	DESCRIPTION	QNTY	UNIT	$/UNIT	TOTAL $
	BUILDING DEMOLITION					
	Demo Floors & Doors					8,797
Plumbing	Demo flooring	x_rubberized sheet	728	SF	3.95	2,876
Plumbing	Demo slab	x_concrete: 4"	728	SF	7.51	5,467
	Demo door & frame	x_door/frame_3x7	3	EA	151.36	454
	Demo Walls & Columns					8,091
	Demo wall portion	x_cmu	24	SF	12.60	302
	Demo wall portion	x_framing/finish	5	SF	10.53	53
	Sawcut wall	x_cmu	30	LF	4.50	135
	Demo wall	x_cmu	400	SF	8.40	3,360
	Demo wall	x_framing/finish	69	SF	3.86	266
	Demo wall finish	x_ceramic tile on cmu	543	SF	7.32	3,975
	Demo Specialties					474
	Toilet partitions	remove and reinstall	5	EA	94.77	474
	Demo MEP					4,436
	Demo/salvage plumbing fixtures		14	EA	316.85	4,436
					BUILDING DEMOLITION HARDCOST	21,798
					HARDCOST TOTAL	269,644

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LOW RANGE			HIGH RANGE	
		Markups:		
10.00%	26,964	Estimating Contingency	20.00%	53,929
7.00%	20,763	General Conditions	7.00%	22,650
0.40%	1,269	Insurance	0.40%	1,385
6.00%	19,118	Profit & Overhead	6.00%	20,856
1.20%	4,053	Performance Bond:	1.20%	4,422
1.00%	3,418	Escalation	3.00%	11,187
0.50%	1,726	OR Gross Receipts Tax	0.50%	1,920
	77,312	**Markup Subtotals:**		116,349
	346,956	**LOCKER ROOM BASE BID TOTAL**		**385,992**

NOTES
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EXCLUSIONS
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Hazardous materials abatement, moving expenses, anti-graffiti coating, fireproofing.
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CEM AQUATICS

Phone: (253) 514 6664
Fax: (253) 358 3454

Daniel Meyers Swimming Pool Construction Cost Opinion

DATE

June 22, 2020

PROJECT INFO

Project Address	Pool Consultant
Ashland, Oregon	Aquatic Design Group

BUDGET DOCUMENTS

Pool Plans: dated 06.03.20

BUDGET DESIGN CRITERIA

Outdoor Gutter Profile Lap Pool ~75'x82' x 3'-9" to 8'-6" depth with additional shallow bump-out area.	Myrtha California Ceramic Gutter Profile

ADMINSTRATIVE INFORMATION

Addendum Received: None	P&P bond not accounted for
Only CAT tax has been accounted for	Prevailing wages **are** accounted for

CEM will provide the scope of work shown in the project plans and specifications and will not be responsible for labor, materials, apparatus, or drawings not shown or specified.

Some manufactures require front end materials acquisition deposits or customized engineering prior to submittal or fabrication. These are cost that the owner is required to pay and will be listed on the schedule of values as an Engineering Cost.

PROJECT INCLUSIONS

Pool Structure

Forming of pool slab and footings	Removal/disposal of forms
CIPC pool slab	Structural reinforcement of pool slabs
Myrtha pool walls	Myrtha pool gutter
Pool stairs	Structural reinforcement of pool stairs

Pool Mechanical Equipment

Above/Below grade PVC pool piping	All pool valves and fittings
Pool recirculation Pump	2m BTU 97% efficient heater
Fiberglass hair and lint strainer	Eko sand filtration system
Chlorine feed system	Becs chemical controller
Acid feed system	pH (CO_2) Control system
CO_2 storage tank – 600-pound capacity	CO_2 sensor
Containment palette	Water level controller
Flow meters	Pool operator work station
SP panel	Light panel

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Pool pipe supports	Compound/Pressure gauges
O&M manuals	Pipe labeling & equipment ID tags
	Start-up & owner training

Pool Recirculation Equipment

Main drain sumps	Hydrostat valves & collection tubes
Gutter grating (Myrtha)	Spa air intake grating
Gutter dropout grates	Floor inlets

Pool Deck Equipment

Pool lights (29)	Wedge anchors/escutcheons
Stanchion anchors	ADA pool lift with anchors
Hand/Grab rails	Cup anchors/Flip-up anchors
	Stanchion post with sliding rings

Water Sports

Lane line storage reels	Floating lane lines
	Backstroke flag lines

Pool Finish

Myrtha Membrane and gutter grip profile

PROJECT EXCLUSIONS

Concrete/Structural

CIPC pool deck	Structural reinforcement in pool deck
CIPC pool pump pit	Structural reinforcement of pump pit
CIPC in pool mechanical room	Structural reinforcement for mechanical
CIPC house-keeping pads	room

Earth Work

Mass excavation for pool structures	Backfill & compact around pool structures
Excavation for pool main drains	18” of drain rock under main drain
Excavation for surge tank	Backfill & compaction around surge tanks
Pipe trenching for pool plumbing	Backfill & compact pipe trenching
Granular fill below pool structures	Pool underdrain system (if required)
Dewatering	Shoring, bracing, or safety barriers
Adverse weather conditions	Tenting and heating

Electrical

Grounding of pool equipment & structures	Conduit, junction boxes, breakers, fuses
All motor starters and soft starts	Connect pool equipment to power source

CEM AQUATICS

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Mechanical/Plumbing

Deck drains	Connection to domestic/Source water
Connection to sanitary sewer/storm drain	Connection to natural gas (pool heater)
Supply/Install heat exchangers	Water meters, backflows, & hose bibs
Connection of water to emergency showers	

Mechanical Room

Any and all guard rails	Guard rail chain access
Any and all grating	

General

All permits & inspections	Water cost for leak test (if required)

Please feel free to contact me if you have any questions regarding this proposal or our scope of work assumptions. Thank you for the opportunity to bid this project, we look forward to the possibility of working with your team.

Daniel Meyers Swimming Pool Construction Cost Opinion

BUDGET: **$2,098,000.00**