

# NORTH COAST COUNTY WATER DISTRICT HEADQUARTERS UPGRADE MASTER PLAN

May 12, 2021



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# I. EXECUTIVE SUMMARY

Noll & Tam Architects has been retained by North Coast County Water District (NCCWD) to conduct a study of their existing administration and corporation yard facilities. The primary goal of the study is to establish a path towards upgrading an early 1960's facility to current District needs and providing future generations of service to the NCCWD service area. The study is comprised of the following elements:

- Existing space programming assessment / Future facility needs assessment
- Analysis of existing building conditions to assess building replacement or renovation
- Structural seismic performance review of the existing facility
- Review of universal accessibility conditions and code compliance for California Building Code Chapter 11B, Equivalent to the Americans with Disabilities Act (ADA)
- Facility replacement and renovation approach with associated estimated cost of work

## ACCESSIBLE BUILDINGS

The District headquarters was constructed 28 years prior to the adoption of Americans with Disabilities Act (ADA) in 1990 and the facility does not comply with the current federal law and fails to address primary access issues. These concerns include but are not limited to properly sized accessible vehicle parking, an accessible path of travel throughout the NCCWD site/buildings and universal access for compliant public restroom facilities. Proposed building addition and renovation strategies incorporate accessibility compliant components to serve the staff and public spaces of the Administration Buildings and provide code-compliant public site access.

## NEEDS ASSESSMENT

The NCCWD Building Committee, Staff and Noll & Tam developed a needs assessment of administrative spaces and corporation yard requirements, and through refinement of program use areas and test fitting spaces, a final program scope document was established. Surveys were provided to all staff and interviews with key staff were performed to develop a current needs document for each department. In general, there is a modest growth of staff space along with a change to modern workplace requirements and amenities to support staff retention, sustainability goals, security needs and legal compliance. These spaces include a lactation room, dedicated breakroom, secured server room, wellness room and unisex private shower/changing rooms. To meet current Americans with Disabilities Act (ADA) access, all program spaces in the assessment include additional square footage allowances to achieve path of travel and access clearances. The area requiring the most significant accessibility concerns is the existing second floor office area and water quality lab, which is not served by an elevator or compliant stairs. In conducting the surveys and receiving Board feedback, the need for a new flexible conference space and a District Boardroom came to the forefront. Programming of this space includes supporting the Board of Directors public meetings, and providing an education/training room.

## EXISTING BUILDING EVALUATION & SUSTAINABILITY

To evaluate the existing building, Noll & Tam and their consulting team reviewed existing documentation, performed field exploration, and coordinated site walk interviews with facility staff to identify the current deficiencies and record the experience of facility staff, working in and maintaining the building. Overall, the existing building systems have extended far beyond their prescribed life and there is opportunity to provide significantly improved mechanical equipment and high efficiency lighting in addition to a general modernization of interior and exterior service spaces. As part of the upgrade strategy, Noll & Tam recommends focusing on providing enhanced building ventilation air and daylighting to all work spaces to promote a healthy workplace environment. Advances in the California Energy Code and the California Green Building Standards have provided a strong framework for highly sustainable and energy efficient buildings. Per review with the NCCWD Building Committee, energy conservation and onsite power generation are of particular interest and provide an opportunity to design a resilient new headquarters that can produce the power that it consumes. To further advance the District's interest in sustainability, it is recommended to provide a fully electric facility and eliminate the use of carbon based fuels for building mechanical systems and plan for all electric fleet vehicles in the future.

## SEISMIC PERFORMANCE

Noll & Tam has coordinated with IDA Structural Engineers to review the current condition of the existing facilities from a seismic risk perspective and additionally review forecasted sea level elevations and tsunami inundation levels for the NCCWD site. Overall, the existing buildings have been determined to perform poorly in a seismic event and require structural improvements to meet current structural code and seismic safety factors. Sea level rise elevations for 2070 show the possibility that water may reach the lower portion of the site at the southwest corner, at an elevation of 14ft to 16ft above mean sea level. The proposed building addition is recommended to remain at the northwest corner and an approximate floor elevation of +/- 20ft above mean sea level. The tsunami map has been updated as of March 2021 and the NCCWD site is in the inundation zone. The current building code has additional recommendations based on the level of inundation. As part of the next phase of project planning, IDA Structural recommends additional assessment of tsunami conditions at the site.

## CONCEPTUAL PLANNING

For the initial round of masterplan study in 2020, Noll & Tam presented two Headquarters project options. Both options maintained and proposed seismic improvements to the existing maintenance building and removed the existing administration and service bay building portion. Option A proposed a single-story renovation and addition approach, constructing an addition to the east of the existing maintenance building, along Francisco Blvd to house administrative offices, a water quality laboratory, operations and a public meeting space. Option B proposed a two story addition to the east of the existing maintenance building on the corner of Francisco Blvd and Brighton Rd to house all district departments including the water quality laboratory plus public functions. The NCCWD Building Committee expressed a preference to maintain site area for the

corporation yard functions and to move essential building services up and out of a potential impact from future water inundation. The building committee selected Option B, the two-story addition and renovation approach as the preferred option. The future District Boardroom and essential building infrastructure was requested to be located on the second floor of the facility. N&T has developed conceptual building plans with District staff to reflect the program needs for the preferred two story addition.

## SUMMARY

Having been built in the mid-20<sup>th</sup> century and after serving the District well for over sixty years, it is timely to create a new District headquarters facility that is current with structural codes and provides an enhanced safety factor to keep the buildings operational after a seismic event. Additionally, a new administrative addition will address universal building accessibility to meet California code and federal laws. By addressing the accessibility, programming deficiencies of the existing facilities and adopting a strong environmental attitude, NCCWD can provide a modern and upgraded facility for current and future staff. Each part of the outlined strategy reflects the intent of the North Coast County Water District mission statement, that “to serve our customers by delivering a sufficient quantity of high quality water in the most cost-effective, reliable, and environmentally sensitive manner.”

### List of Advisory Group Members

<b>North Coast County Water District</b>	
Director Thomas Piccolotti (TP)	Board President
Director Jack Burgett (JB)	Board Vice-President
Adrienne Carr (AC)	General Manager
Scott Dalton (SD)	Assistant General Manager - Operations
Stephanie Dalton (SDa)	Management Analyst II/ Conservation

# II. NEEDS ASSESSMENT & PROGRAMMING

## A. Needs Assessment Overview

The program assessment was conducted through surveys individual interviews and an iterative process to develop a final program document. Program documentation includes all identified spaces, square footage of each program element and desired adjacencies.

### Goals for an administration building addition and maintenance building renovation:

- Seismic safety & minimized service interruption in the event of natural disaster
- Natural light & well ventilated spaces
- Mitigation of noise from adjacent freeway.
- Space for NCCWD staff to facilitate communication and community outreach
- Offices, conference rooms, and open office space to suit individual departments
- District Boardroom space and flexible community/training areas
- Barrier free facilities with current universal access accommodations to meet the ADA guidelines
- Planning for digital archiving and a reduced paper office
- Meet new energy efficiency standards

## NORTH COAST COUNTY WATER DISTRICT - PROGRAM SUMMARY

Two Story - 3/12/2021

Department	Number of Staff	Total Area by Department		Primary Adjacencies
Administration	10	2,069	sq ft	Engineering, Public
Engineering	1	452	sq ft	Admin, Ops & Maintenance, Construction
Lab	1	264	sq ft	Ops Superintendent, Engineering
Ops & Maintenance	10	1,812	sq ft	Construction, Engineering
Public and Shared Spaces	0	5,079	sq Ft	Admin & Eng & Ops
<b>Total (Building)</b>	<b>22</b>	<b>9,676</b>	<b>sqft (Gross)</b>	

## **B. Program Development & Department Priorities**

### **Public Facilities & Boardroom and Training Spaces:**

- Provide an appropriately sized board room with up to-date audio / video systems
- Training / Education space for internal staff and public outreach
- Provide barrier free access to all public spaces and dedicated restrooms
- Clear security design for reception to control visitors to Staff areas
- Secondary exit to Boardroom in the event of a security issue

### **Administrative Department:**

- Provide adjacency for public-facing staff to share customer service duties
- Provide separate circulation for Staff outside of public access
- Right-size offices for storage and privacy needs
- Filing and storage approach to allow daily access to documents

### **Operations & Maintenance Department:**

- Dedicated workstations for field staff
- Consolidate filing areas and “Library” storage
- Create a Mudroom for field staff including lockers and storage
- New technology space for servers, SCADA equipment and radios with dedicated conditioning
- Provide improved site lighting and security for the facility

### **Engineering Department:**

- Dedicated print room
- Create a Community Work Area for easy access storage and collaboration

### **Water Quality Lab:**

- Update lab facilities to modern standards
- Provide a dedicated workstation with sit/stand functionality to provide an efficient workflow
- Layout, equipment and finish materials to support contamination control

### **Corporation Yard & Site Facilities:**

- Consolidation of construction materials, racked storage
- Provide dedicated vehicle washing station to suit largest apparatus
- Protection and security for maintenance vehicles
- Improved access to recycled water for public

# III. CONCEPTUAL PLANS & APPROACH

## Site Diagram & Corporation Yard Plan



### III. CONCEPTUAL PLANS & APPROACH



View looking West from Freeway

### III. CONCEPTUAL PLANS & APPROACH



View looking Northwest from Francisco Blvd & Clarendon Rd

### III. CONCEPTUAL PLANS & APPROACH



View looking Southwest from Francisco Blvd & Brighton Rd

BRIGHTON ROAD



NORTH COAST COUNTY WATER DISTRICT OFFICE 04/14/2021 - FIRST FLOOR PLAN

NOT TO SCALE



NORTH COAST COUNTY WATER DISTRICT OFFICE 04/14/2021 - SECOND FLOOR PLAN

NOT TO SCALE

## IV. CONCEPTUAL SCHEDULE & COSTS

### A. Project Scope Phasing & Project Cost

Estimated construction costs are based on a traditional “Design / Bid / Build” project delivery approach. Construction costs have been escalated to midpoint of construction based on proposed project schedule.

SCOPE OF PROJECT	SQUARE FEET (APPROXIMATE)	TOTAL PROJECT COST
<b>New Building Addition &amp; Maintenance Renovation:</b> New construction for the Administration building per conceptual plans and associated utility infrastructure, demolition of existing and maintenance building renovation, corporation yard improvements	9,700 SF New 4,600 SF Renovated 22,250 SF Site Improvements	\$16.8 mil
<b>Total Project Cost</b>		<b>\$16.8 mil</b>

Other Project Scope Considerations		TBD
<b>Solar Panel System and Battery Back-up at Administration Building Roof</b>	3,000 SF	\$253,000
<b>Solar Panel System and Battery Back-up at corporation yard on structural canopies</b>	1,700 SF	\$256,000
<b>Corporation Yard Site – Tsunami Mitigation</b> Scope of work is to be determined		TBD
<b>Maintenance Building Seismic Strengthening</b> Scope of work is to be determined based on seismic safety factor for existing building		TBD

**B. Project Milestone Schedule**

See phase milestone dates in table below. Full preliminary schedule is provided in appendix documents.

<b>Phase of Service</b>	<b>Start</b>	<b>End</b>
<b>Pre-Design/Schematic Design</b>	May 2021	August 2021
<b>Design Development</b>	August 2021	November 2021
<b>Project Zoning / Development Approvals</b>	August 2021	November 2021
<b>Contract Documents</b>	December 2021	May 2022
<b>City of Pacifica Permitting</b>	May 2022	June 2022
<b>Project Bid and Contract Award</b>	June 2022	August 2022

<b>Construction Phase</b>	August 2022	September 2023
<b>Project Closeout</b>	September 2023	September 2023

## **IV. APPENDIX**

### **A. Original Reference Documents**

1. Original Drawings Provided & Reviewed: 1961 Drawing Set – North Coast County Water District (Reference Only, not included in this document), 1972 addition, 1979 addition
2. Geotechnical Report: Treadwell & Rollo, Dated October 2003
3. NCCWD Masterplan: Dated February 2016

### **B. Needs Assessment & Program Document**

1. Space Needs Survey Response
2. Structural Memo
3. Program Document, All Departments and Corporation Yard Areas

### **C. Schedule & Cost Model & Construction Cost Estimate**

1. Estimated Project Schedule (Dated 4/14/2020)
2. Construction Conceptual Cost Plan Estimate (Dated 3/12/2021)



**2. Available Drawings**

Date	Consultant	Sheets	Purpose	Code
Sept 1961	Charles S. McCandless & Company	13	Original drawings of Admin and eastern Maintenance Building.	Unknown
February 1972	Charles S. McCandless & Company	18	Original drawings of western Maintenance Building, aka Maintenance Building #2, aka Vehicle Storage Building.	Unknown, likely 1970 UBC
July 1979	McCandless, Boone and Cook	Sheet 2 only, of a 5 sheet set.	Original drawings of small office addition.	Unknown, likely 1976 UBC
March 2007*	Kennedy/Jenks Consultants	10 (G1, S1-S9)	Retrofit of 1972 Maintenance Building No. 2.	2001 CBC, with I=1.25

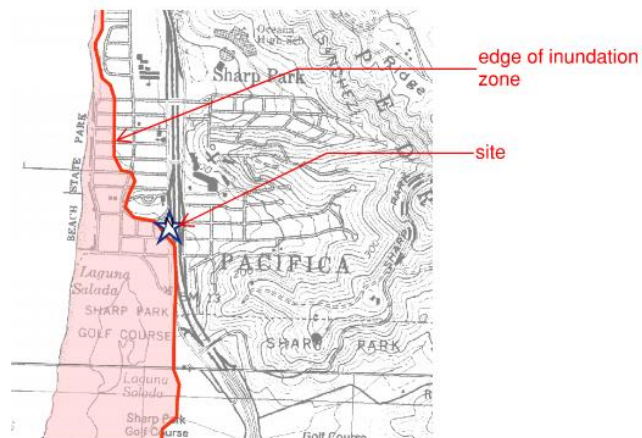
\*Retrofit drawings are marked "Not for Construction" and were never approved by District, nor constructed.

**3. Reports**

Date	Consultant	Purpose	Criteria	Conclusion
2/12/2003	Kennedy/Jenks Consultants.	Seismic evaluation of all buildings	Unclear. Appears to be combination of 1997 UCBC and a SEAONC guideline for tilt-up retrofit.	Admin building OK. Maintenance Buildings seriously deficient.
8/22/2007	SGH	Peer review of KJ report and 2007 Retrofit drawings	NA	KJ report overly conservative. Recommended lesser retrofit.

#### 4. Tsunami Zone

The 2009 Cal OES map shows the site just outside inundation zone. Sea level rise not specifically included.



An updated map released in March, 2021 shows the site well inside the inundation zone. Snip below is from the ASCE Tsunami Hazard Tool. <https://asce7tsunami.online/>



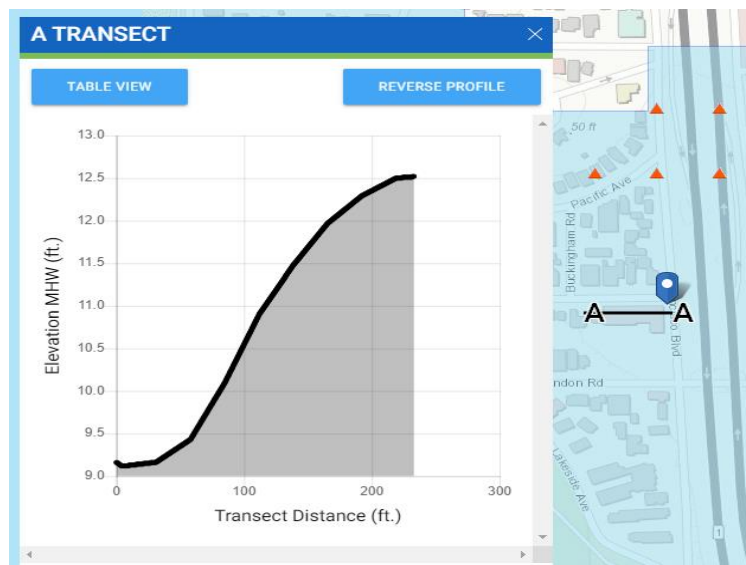
The 2019 CBC references Tsunami criteria in both Sec 1615, and Appendix M.

Section 1615 refers to ASCE 7-16 Chapter 6 for criteria. The scope of this chapter is as follows.

**6.1.1 Scope.** The following buildings and other structures located within the Tsunami Design Zone shall be designed for the effects of Maximum Considered Tsunami, including hydrostatic and hydrodynamic forces, waterborne debris accumulation and impact loads, subsidence, and scour effects in accordance with this chapter:

- a. Tsunami Risk Category IV buildings and structures;
- b. Tsunami Risk Category III buildings and structures with inundation depth greater than 3 ft (0.914 m) at any location within the intended footprint of the structure, and
- c. Where required by a state or locally adopted building code statute to include design for tsunami effects, Tsunami Risk Category II buildings with mean height above grade plane greater than the height designated in the statute and having inundation depth greater than 3 ft (0.914 m) at any location within the intended footprint of the structure.

Based on discussions with the design team, we understand the building is RC III. If confirmed, the requirement to design for Tsunami loading applies only if the inundation depth is greater than 3 feet. Using the ASCE online tool, height of the ground above Mean High Water (MHW) can be found. See snip below, with the plan of the current building on the right, showing Section A-A, with a graph of the grade to the left. The current building is approximately 9.1 feet to 12.25 feet above MHW.



From this data, and using ASCE 7 Chapter 6, an Inundation depth can be determined. IDA is in the process of determining inundation depth, and will advise when calculations on complete, or if additional data is required from the District or geotechnical engineer.

Appendix M provides guidance for "Vertical Evacuation" planning criteria for buildings within a Tsunami hazard zone. It is not mandatory unless adopted by the local jurisdiction or a State agency. It doesn't appear the City of Pacifica has specifically adopted this Appendix, so our understanding is that it would not apply. We should get this confirmed before proceeding with the work.

## 5. Existing Building Descriptions

Admin building is a one story wood frame structure with plywood shear walls. Both KJ and SGH conclude this building is a low risk to life safety. IDA generally agrees with this assessment, but expects the building to perform poorly in an earthquake for the following reasons.

- Shear walls consist of exterior 1/4" plyschord sheathing. This material has low strength and stiffness.
- The roof directly abuts the tilt-up Maintenance building to the west. While the Admin roof is supported independently of Maintenance, the buildings will pound together during an earthquake, likely leading to extensive roof damage to the Admin building.
- There are no interior shear walls in the Admin building. Considering the length of the building, IDA expects there will be considerable damage as the roof moves laterally relative to the floor during an earthquake.

- Interior partition walls are likely acting as shear walls, even though not designed as such. Any future remodeling will need to take this into account.

While we expect only moderate life safety risk, the building will likely not be occupiable immediately post-earthquake.

Maintenance No. 1 constructed in 1961 is a tall one-story/partial two-story plus mezzanine tilt-up concrete building with mezzanine. No documentation of seismic upgrades has been provided. Per District, an upgrade occurred in 1998. There are post-installed connections from the roof framing to the concrete walls that appear to be late 1990's hardware. There are some discrepancies between the original drawings and site conditions (steel column layout, CMU walls). Building may be a minor life safety hazard, and would not be expected to be occupiable immediately post- earthquake for the following reasons.

- Roof to wall connections likely inadequate. Many were installed to existing anchor bolts, with minimal overlap of nut onto existing thread.
- Connection of tilt-up panels to foundations/floor slab non-existent. Panels are connected only to concrete columns with reinforcing which has only a 4" embedment.
- Building designed per antiquated code, with inadequate seismic detailing.

Maintenance No. 2 constructed in 1972 is a tall one story plus mezzanine tilt-up concrete building. Per District, an upgrade occurred in 1998. Connections are of similar type to Maintenance No. 1.

IDA does not expect this building to perform to a life safety level based on the as-built retrofit. Roof to wall connections do not have adequate strength to transfer forces. Further, this building relies on a tie to Maintenance No. 1 for stability. The tie does not appear to have adequate strength for this purpose.

## **6. Proposed Construction**

Preliminary plans describe a new 2-story office building at the location of the existing Admin and Maintenance No. 1 buildings, with Maintenance No. 2 remaining. Various site structures, including a new shop, wash racks and PV canopy are planned.

The office building structure will be highly dependent on the results of Tsunami studies and inundation depth. If the building must be designed for Tsunami forces, a cast in place concrete structure, or hybrid building with a concrete first floor and wood/steel 2nd floor is likely required. Consideration may be given to raising the floor level, installing deep (piers/piles) foundations, and/or limiting the first floor to uses that can be easily repaired after flooding.

A determination must be of the Risk Category (RC) of the building. "Standard" buildings are RC II, while buildings whose failure, "pose a substantial risk to human life" are categorized as RC III. A higher RC leads to more stringent design, the likely required consideration of Tsunami forces, and an increase in construction cost of 2% to 15%. Higher risk categories are associated with reduced probability of failure of both the structural system and non-structural components. Expected performance is provided due to the Maximum Credible Earthquake expected at the site. For structural components, the Conditional Probability of Failure for structural stability is:

Risk Category	Probability of Failure
II	10%
III	5%

Note the risk to human life described in the Code encompasses not just building occupants, but also risks to the community served by the District.

Maintenance Building No. 2, slated to remain, will require retrofits regardless of the chosen risk category. Generally, new roof-to-wall connections and a moment frame or shear wall (to replace the tie to Maintenance No. 1) will be necessary.

END MEMO

# NORTH COAST COUNTY WATER DISTRICT - PROGRAM

Two Story - 3/12/2021

## Administration

	# of Staff	# of Spaces	Width	Length	Square Feet	Total Area	Reductions	Comments	Adjacencies
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### General Manager

GM Private Office	1	1	10	x	16	160	160	3-4 guest chairs/table; file storage/bookshelf	
Assistant GM Private Office	1	1	10	x	12	120	120	2 guest chairs; Double as small conference until 2nd AGM	
Admin Archives	0	1	10	x	20	200	200	Some offsite storage; Adrienne to follow up on digitizing	
File Room	0	1	6	x	10	60	60	Vault - Fire Proof inside Admin Archives	Accounting/HR
<b>Subtotal:</b>	<b>2</b>	<b>4</b>					<b>540</b>		

### Accounting & HR

Private Office - Accountant	1	1	11	x	12	132	132	Accountant currently has two 3-drawer big file cabinets and a 4-drawer tall, plus the safe, printer, typewriter	
Private Office - Management Analyst	1	1	10	x	12	120	120		
Standard Workstation	0	0	8	x	8	64	0	1 Part time bookkeeper (future) - may not need this much space	Accountant -
File Room	0	0	10	x	15	150	0	If offices are large enough, no need for separate file room - can use Admin archives for file storage	
<b>Subtotal:</b>	<b>2</b>	<b>2</b>					<b>252</b>		

### Customer Service

Receptionist/Service Counter	0	1	5	x	10	50	50	2 part time customer service reps cover the reception, cash register; 3 high lateral and 4 high lateral file for mail/some files	
Private Office - Lead Meter Reader	1	1	8	x	10	80	80		
Private Office - Cust Service II	1	1	10	x	12	120	120	1 fulltime customer service rep, one lead meter reader office	Reception
Bullpen	3	1	15	x	20	300	300	2 part time customer service rep (lot of reference material - provide bookshelf); 1 Customer Service/Management Analyst	Reception
Meter Reader Rep Workstations	1	1	6	x	6	36	36	Full time, bookshelf for manuals; tablet	Customer Service
<b>Total:</b>	<b>6</b>	<b>5</b>					<b>586</b>		

### IT

Small Hotel Station	0	0	4	x	6	24	0	Troubleshooting - up to 4 hours- not necessary to have a dedicated workstation	Server Room
Server Room	0	1	10	x	10	100	100	Provide separate temp control and security includes SCADA server (back-up offsite)	
<b>Total:</b>	<b>0</b>						<b>100</b>		

Office Area Subtotal:

Office Area Circulation Factor 0.4

**Total:** 10 2,069 sqft

# NORTH COAST COUNTY WATER DISTRICT - PROGRAM

Two Story - 3/12/2021  
Shared Spaces

	# of Staff	# of Spaces	Width	Length	Square Feet	Total Area	Reductions	Comments	Adjacencies
<b>Public - Boardroom at 2nd Floor</b>									
Lobby	0	2	12	x 14	168	336		2 groups of seating for 2 people; standing room 8-10; Display area, refreshment table (could be in Boardroom)	Boardroom/Public Restrooms
Boardroom/Training/Community Events	0	1	30	x 36	1080	1080		To fit up to 50 occ (Board Meeting: 5 board members, attorney, minute taker, 3-4 staff, podium) 20-25 for all office meeting or community events	Lobby/Reception
Boardroom Storage	0	1	8	x 8	64	64		Tables/Chairs/AV server	Boardroom
Single Occupancy Restroom	0	2	8	x 9	72	144			
<b>Subtotal:</b>	<b>0</b>	<b>6</b>				<b>1624</b>			
<b>Conference/Collaboration</b>									
Medium Conference	0	1	12	x 18	216	216		10-12 occupants (closed session - Board)	Boardroom (tentative)
Small Conference/Lactation/Quiet Room	0	1	8	x 10	80	80		2-4 Occupants; Occupancy lock, privacy consideration	
<b>Subtotal:</b>	<b>0</b>					<b>296</b>			
<b>Ancillary/Amenity</b>									
Copy/Print/Mail Area	0	1	10	x 10	100	100		1 standing MFD; small postage meter; paper cutter, binding machine, paper/office supplies; Reception/Customer Service layout table for board packet assembly	
Swag/Educational Material Closet	0	1	3	x 8	24	24		Buckets, Shower Heads, etc	Reception
Unisex Shower/Changing Room	0	2	10	x 10	100	200		Midpen model (2 showers) with washer/driver	Mudroom/Maintenance
Break Room	0	1	12	x 16	192	192		Typical 6-8 occupants	
<b>Subtotal:</b>	<b>0</b>					<b>516</b>			
<b>Utility</b>									
Toilet Rooms	0	2	10	x 16	160	320		At least one single occupancy restroom, future direction from Adrienne	Single occupancy restroom adjacent to boardroom, Also one in lobby on first floor
Custodial	0	1	6	x 6	36	36			
Mechanical	0	1	8	x 12	96	96			
Electrical	0	2	8	x 10	80	160		One for Service Buildings/One for Admin (Additional space needed for PV equipment)	
Stairs	0	2			150	300			
Elevator	0	2	8'-6"	10'-6"	90	180			
Elevator Machine Room	0	1			36	36			
Telcom	0	1	8	x 8	64	64		Combined Server/Boardroom Storage	
Server								Included in Administration section	
<b>Subtotal:</b>	<b>0</b>					<b>1192</b>			
Area Subtotal:						3,628	0		
Area Circulation Factor	0.4					1,451	0		
<b>Total:</b>						<b>5,079</b>	<b>0</b>		

# NORTH COAST COUNTY WATER DISTRICT - PROGRAM

Two Story - 3/12/2021									
Operations & Maintenance	# of Staff	# of Spaces	Width	Length	Square Feet	Total Area	Reductions	Comments	Adjacencies
<b>Operations and Maintenance</b>									
Private Office	2	2	10	x	12	120	240	AGM Ops; Field Supervisor	Bullpen
SCADA Workstation	1	1	9	x	10	90	90	Secured Space - including a desk for Plant supervisor	Bullpen
Bullpen Workstation	4	4	6	x	8	48	192		Private Office/Corp Yard/ Mudroom>Showers
Workstation - Management Analyst	1	1	8	x	8	64	64		
Office - Senior Field Staff	2	2	8	x	10	80	160		Bullpen
Library	0	1	4	x	10	40	40	Digital Display in Medium Conf or here? (Have 3 large Samsung 60" displays - 2 in Boardroom/1 in Break area)	
File/Storage	0	1	10	x	10	100	100	Future Survey of linear feet of storage	
Mudroom	0	1	12	x	14	168	168	Includes 18x18 lockers - We need 12 lockers	Corp Yard
Subtotal:	<b>10</b>	<b>13</b>					<b>1,054</b>		
Office Area Subtotal:							1,294		
Office Area Cirulation Factor	0.4						518		
<b>Total:</b>	<b>10</b>						<b>1,812</b>		

# NORTH COAST COUNTY WATER DISTRICT - PROGRAM

Two Story - 3/12/2021

## Engineering

	# of Staff	# of Spaces	Width	Length	Square Feet	Total Area	Comments	Adjacencies
<b>Engineering</b>								
Engineering Workstation	1	1	8	x	8	64	64	GIS workstation
								2 6x8 tables, approx. 4 people per table with
Community Work Area	0	1	10	x	14	140	140	map files with bookshelves, map storage - here and in Ops&Main library
Print Room	0	1	6	x	8	48	48	One Large format printers
Engineering Archives	0	1	10	x	20	200	200	
Subtotal:	1					452		
Office Area Subtotal:							452	
Office Area Cirulation Factor	0.4						181	
<b>Total:</b>	<b>1</b>					<b>633</b>	<b>sqft</b>	

# NORTH COAST COUNTY WATER DISTRICT - PROGRAM

Two Story - 3/12/2021

Lab	# of Staff	# of Spaces	Width	Length	Square Feet	Total Area	Reduced	Adjacencies
<b>Laboratories</b>								Near Laboratory Staff Office Areas
Lab		1	12.0	x 18.0	216	216		Include sit-stand desk work area - Note that 200-220 sq ft of total lab space should be adequate -including desk/workstation - need small fridge, incubator, autoclave, counter space and cabinetry for material storage; corp yard - entrance helpful
General Lab Storage		0	10.5	x 10.5	110	0		
Sample Receiving & Cold/Wet Storage		0	10.0	x 15.8	158	0		15 LF Lab Bench Space Required
Lab Janitorial + Mechanical		0	5.0	x 8.0	40	0		Contamination prevention
Subtotal:		<b>0</b>				<b>216</b>		
<b>Laboratory Staff - Office Areas</b>								Near Laboratories
Large Workstation	1	1	8	x 8	64	48		Fulltime Lab Technician inside Lab
Subtotal:		<b>1</b>				<b>48</b>	<b>0</b>	
Office Area Subtotal:						264	0	
Office Area Circulation Factor	0					0		
<b>Total:</b>						<b>264</b>	<b>0</b>	<b>sqft</b>

# NORTH COAST COUNTY WATER DISTRICT - PROGRAM

Two Story - 3/12/2021		# of Staff	# of Spaces	Width	Length	Square Feet	Total Area	Comments	Adjacencies
Yard Spaces									
<b>Enclosed Storage</b>									
Engineering - Conservation Program Storage	0	0	6	x	2	12	0	This currently in emergency shipping container - 8 boxes, each 3'x1.5'x1.5'	In new Swag Closet
Emergency Supplies - Storage Container		0	8		20	160	0	metal shipping container for emergency in event of disaster - could be moved offsite	
Trash Enclosure for Dumpsters (Current Garbage/Cardboard)							0	see below	
Oil/Gas Waste Containment Sheds (3 barrels - 1 used oil, 1 used oil filters)		1	8		6	48	48	Enclosed shed, elevated platform into a 55 gallon; 50 square feet #2 container waste oil,waste filters, and spill management materials - needs to be in/on containment	
Storage sheds (at end of life_		3	8		6	48	144	Storage sheds landcapping supplies, used paint, stains, concrete construction supplies, cones - these could be moved offsite.	
<b>Subtotal:</b>	<b>0</b>						<b>192</b>		
<b>Equipment &amp; Open Storage</b>									
Vehicles small Pickups	0	9	9	x	16	144	1296	Canopies for vehicles, if possible - two trucks taken home at night - one can be in shop overnight	
Long flatbeds with equipment		2	9		22	198	396	Due to extreme conditions anything able to park inside is ideal - these flatbeds are best to be inside - one can be in shop at night	
Passenger vehicles		2	9		12	108	216	Corolla and RAV-4 (parks only during day)	
Special trucks		2	9		16	144	288	Mini dump and service truck	
Vehicles Large Backhoe	0	1	10	x	26	260	260	Backhoe and Vac truck need to be stored in buildings	
Vacuum truck		2	10		26	260	520	The newest one needs to be in the garage, and the other can be stored under an outside canopy, but quite tall. Could store offsite	
Washing Rack (current site drain dumps into the golf course)	0	1	15	x	30	450	450	Concrete pad with a gravity sand oil separator. It may require a cover or valve so stormwater does not intrude. need a rack that would accommodate the largest vehicle – the VacCon – so it would be ~10 ft x 26 ft	
Existing Con vault (fuel)		1	50		50	2500	2500	Con vault sits inside containment has to be accessible by vehicles including vacuum truck access all 4 sides	
Portable hose reel -large (could be OFF-SITE)		1	8		15	120	120	Large - could be stored outside under canopy - has a cover; not used in 10 years - could be stored at Gypsy Hill - would need new building (Budget - Scott/Norm)	
Generator in yard		1				120	120	Existing Diesel generator for building needs be near building and/or main pannel on a 120 sf pad; they have a fuel truck . Explore adding battery back-up for peak shaving.	
<b>Subtotal:</b>	<b>0</b>						<b>6166</b>		
<b>Material Storage (Exterior)</b>									
Racked pipe Storage	0	2	4	x	20	80	160	Outside vertical racks would be great - pipe length 18 ft	
Racked storage	0	1	8	x	32	256	256	Meter boxes and lids and old meters/recycle/copper - up to 18 pallets , currently takes up to 800 square feet -could stack vertically	
Double wrapped used AC pipe before hauled away		1				32	32	Containment of used ac pipe	
Recycled Water Fill Station		1	2		6	12	12	Needs to have vehicle access - can move from current site	
Pipe trailer		1	6		15	90	90	Used to haul pipe to/from sites	
Fill material storage		2	10		10	100	200	Class 2 rock and cutback -- requires backhoe access	
Propane storage		1				16	16	Propane storage had to be in flammable containment and locked	
Trench plates of different sizes		1				60	60	Metal plate to cover holes for excavation purpose - could store offsite if needed; stored on block (not on racks, lay on ground)	
Trash and recycling dumpsters		1	4		20	80	80	Needs to be accessible by garbage department	
<b>Subtotal:</b>	<b>0</b>						<b>906</b>		

**Existing Maintenance (remove mezzanine and conveyor belt)**

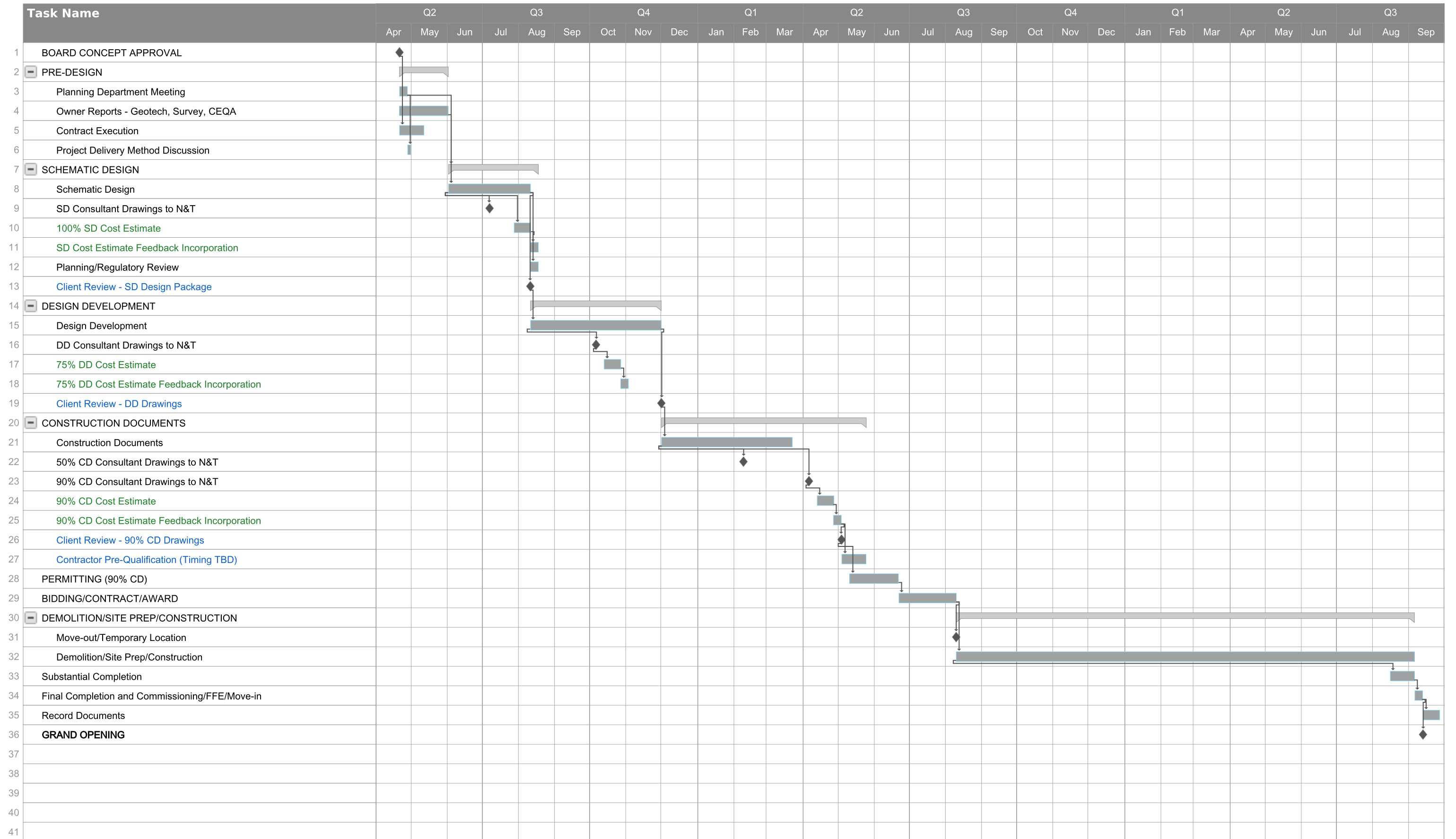
	0	1	31	x	4.5	139.5	139.5	Holds mole, fans, lighting, small engines, cutting wheels, cement, cement mixer, copper, tripod lights, wheel barrows, plate wackers, generators, diffuser - on western wall - storage is 9.5 ft high, could go higher to accommodate more items	
Warehouse storage									
Warehouse storage		11	5.5		3	16.5	181.5	Orange frame shelves storage for portable meters, distribution piping	
Shelving		7	9.5		6	57	399	Orange frame shelves storage continued - couplings,	
Tire storage		1	15		3	45	45	7 ft tall storage of tires- may not need?? Move to shop?	
warehouse toolbox		1	4		3	12	12		
oxygen tank storage		1	2		2	4	4	Currently under storage shelves	
Forklift	0	1	3	x	6	18	18	Belongs in warehouse	
Drill press		1	3		3	9	9		
Shelving		7	9.5		6	57	399	Orange frame shelves storage continued - couplings,	
sand blaster		1	4		6	24	24	In warehouse - used to take rust of pipe pieces	
Welding/Garage	0	1	8	x	5	40	40	small table with acetylene torch	
Portable hose reel -small		1	4		4	16	16	Fits in the back of a pickup truck -small -currently stored inside	
Barricade/Signage Storage needed onsite		1	8		6	48	48	Storage/Barricades; Paint (in yellow locker for hazardous) Explore hanging barricades in Maintenance Bldg (4' high by 4" deep by 30"wide)	
Palettes of water for Customers		1	4		4	16	16	1 gallon in 2 packs	
Rain Barrel - Stacked (55 gallon drums) - 24		1	4		8	32	32	Additional could be stored offsite if more than 32sf	
Light tower	0	1	8	x	5	40	40	Lights trailer about 4x4, but has large boom that extends out many feet from main body - currently stored inside; dimensions by Scott D.	
Air compressors	0	1	6	x	10	60	60	air compressor - about size of compact car - needs to be parked inside	
Shop Sink/Eyewash Required?							0	Verify if OSHA requirement in Schematic Design	
<b>Total:</b>	<b>0</b>						<b>1483</b>		

**New Shop (New Building)**

Office Areas for shop	2	1	4	x	6	24	24	Along wall in Shop Area - Need filing cabinet area (4' wide)	Missy prefers standing working - counter
New Shop measurements (onsite - San Pedro Park is not possible)		1	25		55	1375	1375	Repair shop should be separate at least by a partial wall from warehouse	
New Automobile lift		1					0	Needs to be in Shop - bolted down - current one is not in good shape	
Shelving - 100' linear							0	Included above	
Shop Sink/Eyewash Required?							0	Verify if OSHA requirement in Schematic Design	
Tire storage? (Contracted out??)		1	15		3	45	45	7 ft tall storage of tires- may not need?? Move to shop?	
Tire Laith		1	4		4	16	16		
<b>Total:</b>	<b>2</b>						<b>1460</b>		

Area Subtotal:							8,747		
Area Circulation Factor	0.05						0		
<b>Total:</b>							<b>8,747</b>	General overall SQFT for Corp Yard (Excludes drive aisles)	

# NCCWD Office Replacement Schedule



# North Coast County Water District

**Administration Building & Corporate Yard**  
Pacifica, CA

## Feasibility Cost Plan

**Report Prepared for:**

**Noll & Tam Architects**

March 12, 2021 rev3

*more value, less risk*

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**BASIS OF ESTIMATE**

**REFERENCE DOCUMENTATION**

This Construction Cost Estimate was produced from the following documentation. Design and engineering changes occurring subsequent to the issue of these documents have not been incorporated in this estimate.

<u>Document</u>	<u>Date</u>
- Rev1 Estimate comments per NCCWD	3/12/21
- NCCWD Siteplan - draft	3/3/21
- NCCWD Central Sheets D05 & D06 - Two Story Opts A & B	3/1/21
- NCCWD Updated Plan Feedback	2/24/21
- Yard Spaces Survey of needs	2/24/21
- NCCWD Updated Program plans	2/19/21
- NCCWD Conceptual Cost Est Narrative	2/9/21
- NCCWD Site and Design Elements	2/9/21
- NCCWD Office Design/Const Schedule	2/4/21
- NCCWD Bldg Comm Plans	2/4/21
- NCCWD Program	2/4/21
- NCCWD Cost Model example	2/ /21
- NCCWD existing bldg dwgs - 1979 Addition Site, 1972 Corp Yard Bldg, 1961 Maintenance Bldg	various
- NCCWD site photos	6/23/20 & 6/24/20
- Discussions and reviews with Noll & Tam	various

**PROJECT DESCRIPTION**

The scope of work includes demolition and replacement of an existing Admin Building & Shop Building, along with the retrofit of an existing maintenance building and new site structures and elements in the corporation yard.

**BASIS FOR PRICING**

This estimate reflects the fair construction value for this project and should not be construed as a prediction of low bid. Prices are based on local prevailing wage construction costs at the time the estimate was prepared. Pricing assumes a procurement process with competitive bidding for all sub-trades of the construction work, which is to mean a minimum of 3 bids for all subcontractors and materials/equipment suppliers. If fewer bids are solicited or received, prices can be expected to be higher.

Subcontractor's markups have been included in each line item unit price. Markups cover the cost of field overhead, home office overhead and subcontractor's profit. Subcontractor's markups typically range from 15% to 25% of the unit price depending on market conditions.

General Contractor's/Construction Manager's Site Requirement costs are calculated on a percentage basis. General Contractor's/Construction Manager's Jobsite Management costs are also calculated on a percentage basis.

<b>Site Requirements</b>	5.0%	
<b>Jobsite Management</b>	5.0%	
<b>Phasing</b>	5.0%	<i>Build shop building prior to existing building demo</i>

General Contractor's/Construction Manager's overhead and fees are based on a percentage of the total direct costs plus general conditions, and covers the contractor's bond, insurance, site office overheads and profit.

<b>Insurance &amp; Bonding</b>	4.4%
General Contractor Bonding	0.7%
Sub-Contractor Bonding	1.2%
CCIP	2.5%
<b>Fee (G.C. Profit)</b>	4.5%

Unless identified otherwise, the cost of such items as overtime, shift premiums and construction phasing are not included in the line item unit price.

This cost estimate is based on standard industry practice, professional experience and knowledge of the local construction market costs. TBD Consultants have no control over the material and labor costs, contractors methods of establishing prices or the market and bidding conditions at the time of bid. Therefore TBD Consultants do not guarantee that the bids received will not vary from this cost estimate.

**BASIS OF ESTIMATE**

**CONTINGENCY**

**Design & Engineering Contingency**                      15.0%

The Design & Engineering Contingency is carried to cover scope that lacks definition and scope that is *anticipated* to be added to the Design. As the Design becomes more complete the Design & Engineering Contingency will reduce.

**Construction Contingency**                                      3.0%

The Construction Contingency is carried to cover the unforeseen during construction execution and Risks that do not currently have mitigation plans. As Risks are mitigated, Construction Contingency can be reduce, but should not be eliminated.

An owners contingency has been included with the project soft costs to cover scope change, bidding conditions, claims and delays. Refer to section VI of the Executive Summary.

**CONSTRUCTION SCHEDULE**

Construction Start Date	Jun-2022	Construction End Date	Jul-2023
Mid-date of Construction	Dec-2022	Construction Duration	13 months
Escalation Period	21 months	Escalation End Date	Construction Mid-Point

**ESCALATION**

Escalation is carried to midpoint of construction, Dec 2022 based on the per annum rates below.

<b>Escalation:</b>	<b>5.23%</b>
Year 0 - 1	2.50%
Year 1 - 2	3.50%
Year 2 - 3	4.50%
Year 3 - 4	5.00%
Beyond 4 Years	5.00%

This calculation does not account for adverse bidding conditions and a separate Bid Contingency should be carried if there are limited qualified bidders or if a market research study indicates.

**EXCLUSIONS**

CEQA process, and associated efforts



KEY CRITERIA

AREA TABULATION

	ENCLOSED AREAS	GROSS AREA	COMMENTS
<b>TWO STORY BUILDING OPTION A</b>			
Floor 01	4,930 SF		
Floor 02	4,770 SF		
<b>Subtotal</b>	<b>9,700 SF</b>	<b>0 SF</b>	
<b>TWO STORY BUILDING OPTION A - GSF Incl. 50% Covered Area</b>		<b>9,700 GSF</b>	

**EXECUTIVE SUMMARY**

	QUANTITY	\$ / UNIT	TOTAL \$ INCL MARKUPS	COMMENTS
I.i. TOTAL 2 STORY BUILDING CONSTRUCTION INCLUDING DEMOLITION AND SITEWORK	9,700 GSF	\$968	9,393,249	HARD COSTS
I.ii. TOTAL 1 STORY BUILDING CONSTRUCTION INCLUDING DEMOLITION AND SITEWORK	8,400 GSF	\$999	8,387,571	HARD COSTS
II. TOTAL NEW SHOP BUILDING CONSTRUCTION	1,456 GSF	\$514	748,000	HARD COSTS
III. TOTAL CORPORATE YARD	22,250 GSF	\$74	1,643,574	HARD COSTS
IV. TOTAL CONSTRUCTION COST OF EXISTING MAINTENANCE BUILDING RETROFIT	4,590 GSF	\$115	529,735	HARD COSTS
V. TOTAL FF&E AND OTHER COST IMPACTS	1 LS	\$386,360	386,360	SOFT COSTS
VI. TOTAL PROJECT MANAGEMENT / FEES / DESIGN / ENGINEERING	1 LS	\$4,101,928	4,101,928	SOFT COSTS
<b>GRAND TOTAL (INCL 2 STORY BLDG OPTION)</b>	<b>1 LS</b>	<b>\$16,802,845</b>	<b>16,802,845</b>	<b>HARD + SOFT COSTS</b>

**ADD ALTERNATES**

FURNISH/INSTALL SOLAR SYSTEM AT ADMIN BLDG ROOF, IN LIEU OF PAYING A VENDOR THROUGH ANNUAL OPERATING COSTS.	2,958 SF	\$86	252,993	ASSUME 60% ROOF COVERAGE (BASED ON 2 STORY). SYSTEM TO INCLUDE BATTERY BACK-UP
FURNISH/INSTALL SOLAR SYSTEM & CANOPY OVER PARKING, IN LIEU OF PAYING A VENDOR THROUGH ANNUAL OPERATING COSTS.	1,710 SF	\$150	256,500	SYSTEM TO INCLUDE BATTERY BACK-UP

**EXPANDED SUMMARY**

	QUANTITY	\$ / UNIT	TOTAL \$ INCL MARKUPS	COMMENTS
<b>I.i. TWO STORY BUILDING OPTION A</b>				
HARD COSTS				
CORE & SHELL	9,700 GSF	\$695	6,743,730	INCL MARINE PREMIUM 10%
FITOUT BY PROGRAM				
ADMINISTRATION	1,743 GSF	\$230	401,150	
ENGINEERING	252 GSF	\$234	59,049	
LAB	264 GSF	\$290	76,671	
LAB EQUIPMENT ALLOWANCE	1 LS	\$20,000	20,000	PARTIAL REPLACE OF SMALL FRIDGE, INCUBATOR, AUTOCLAVE
OPS & MAINTENANCE	1,378 GSF	\$183	252,859	
SHARED SPACES	4,209 GSF	\$179	752,704	
BOARDROOM FINISHES	1,780 GSF	\$148	263,440	
CIRCULATION	1,854 GSF	\$165	305,607	
<b>SUBTOTAL FITOUT</b>	<b>9,700 GSF</b>	<b>\$220</b>	<b>2,131,479</b>	
<b>TOTAL 2 STORY BUILDING NEW CONSTRUCTION</b>				
	<b>9,700 GSF</b>	<b>\$942</b>	<b>9,138,649</b>	
DEMOLITION OF EXIST BLDG #1 AND ADMIN	4,200 GSF	\$23	96,600	HAZMAT REMOVAL & ABATEMENT EXCLUDED HERE (SEE SECTION VI. SOFT COSTS)
SOLAR PANELS INFRASTRUCTURE, ROOFTOP	1 LS	\$8,000	8,000	CONDUIT INSIDE BLDG
SITWORK FOR 2 STORY BUILDING	3,000 SF	\$50	150,000	
<b>I.i. TOTAL 2 STORY BUILDING CONTRUCTION INCLUDING DEMOLITION AND SITWORK</b>				
	<b>9,700 GSF</b>	<b>\$968</b>	<b>9,393,249</b>	HARD COSTS
<b>I.ii. ONE STORY BUILDING</b>				
HARD COSTS				
CORE & SHELL	8,400 GSF	\$703	5,902,340	INCL MARINE PREMIUM 10%
FITOUT BY PROGRAM				
ADMINISTRATION	1,743 GSF	\$230	401,150	
ENGINEERING	252 GSF	\$234	59,049	
LAB	264 GSF	\$290	76,671	
LAB EQUIPMENT ALLOWANCE	1 LS	\$20,000	20,000	PARTIAL REPLACE OF SMALL FRIDGE, INCUBATOR, AUTOCLAVE
OPS & MAINTENANCE	1,378 GSF	\$183	252,859	
SHARED SPACES	4,209 GSF	\$179	752,704	
BOARDROOM FINISHES	1,780 GSF	\$148	263,440	
CIRCULATION	554 GSF	\$165	91,319	
<b>SUBTOTAL FITOUT</b>	<b>8,400 GSF</b>	<b>\$228</b>	<b>1,917,191</b>	
<b>TOTAL 1 STORY BUILDING NEW CONSTRUCTION</b>				
	<b>8,400 GSF</b>	<b>\$962</b>	<b>8,082,971</b>	
DEMOLITION OF EXIST BLDG #1 AND ADMIN	4,200 GSF	\$23	96,600	HAZMAT REMOVAL & ABATEMENT EXCLUDED HERE (SEE SECTION VI. SOFT COSTS)
SOLAR PANELS INFRASTRUCTURE, ROOFTOP	1 LS	\$8,000	8,000	CONDUIT INSIDE BLDG
SITWORK FOR 1 STORY BUILDING	4,000 SF	\$50	200,000	
<b>I.ii. TOTAL 1 STORY BUILDING CONTRUCTION INCLUDING DEMOLITION AND SITWORK</b>				
	<b>8,400 GSF</b>	<b>\$999</b>	<b>8,387,571</b>	HARD COSTS

**EXPANDED SUMMARY**

	QUANTITY	\$ / UNIT	TOTAL \$ INCL MARKUPS	COMMENTS
<b>II. NEW SHOP BUILDING</b>				
HARD COSTS				
NEW WAREHOUSE/REPAIR/SHOP BUILDING	1,456 GSF	\$500	728,000	
AUTOMOBILE LIFT	1 EA	\$20,000	20,000	INCL INSTALL AND FNDS
DEMOLISH EXISTING				INCL W/BLDG #1 DEMO
SOLAR PANELS ON ROOF				NOT APPLICABLE
OFFSITE BUILDING, PREFAB, 50'x100'				N/A, DELETED FROM SCOPE
<b>II. TOTAL NEW SHOP BUILDING CONSTRUCTION</b>				
	<b>1,456 GSF</b>	<b>\$514</b>	<b>748,000</b>	HARD COSTS
<b>III. CORPORATE YARD</b>				
HARD COSTS				
EQUIPMENT AND OPEN STORAGE	7,174 GSF	\$31	223,108	SEE FF&E FOR EQUIPMENT
MATERIAL STORAGE (EXTERIOR)	951 GSF	\$31	29,587	
ENCLOSED STORAGE SHEDS	252 GSF	\$130	32,760	
RECLAIMED WATER FILLING STATION/PORTS	1 EA	\$13,000	13,000	
CMU TRASH ENCLOSURE, COVERED	144 GSF	\$430	61,920	
SOLAR PANEL INFRASTRUCTURE, CANOPY OVER PARKING	1 LS	\$16,000	16,000	UNDERGROUND CONDUIT, STUBBED UP IN BLDG & YARD
VEHICLE WASH RACK	1 LS	\$110,000	110,000	INCL WASH RACK, SAND/OIL SEP, UTILITIES, CONC PAD
OTHER CORP YARD SITE IMPROVEMENTS				
FREESTANDING CMU WALLS	50 LF	\$1,320	66,000	
ALLOW FOR SIDEWALK/CURB RESTORATION	375 LF	\$580	217,500	2 SIDES NEXT TO CORP YD
ALLOW FOR PLANTER REWORK	1 LS	\$15,000	15,000	
FENCE AND GATE MODIFICATION	165 LF	\$260	42,900	ALONG CLAREDON ST (SOUTH)
NEW CURB CUT	1 EA	\$1,550	1,550	
NEW YARD LIGHTING	1 LS	\$200,000	200,000	
ALLOW FOR MINIMAL SITE IMPROVEMENTS AS NEEDED	22,250 GSF	\$11	244,750	CUT AND PATCH, STRIPING, TOPCOAT, ETC.
SITE UTILITIES	1 LS	\$310,000	310,000	
EV CHARGING STATION, DUAL PORT	1 EA	\$17,000	17,000	BY THE GENERATOR
EV INFRASTRUCTURE, FOR FUTURE	5 EA	\$8,500	42,500	ALONG EAST PARKING SPOTS, ASSUMING FUTURE DUAL PORT TYPE
<b>III. TOTAL CORPORATE YARD</b>				
	<b>22,250 GSF</b>	<b>\$74</b>	<b>1,643,574</b>	HARD COSTS
<b>IV. RETROFIT EXISTING MAINTENANCE BUILDING</b>				
HARD COSTS				
DEMOLITION OF ( E ) MEZZANINE	510 GSF	\$31	15,810	
DEMOLITION OF ( E ) STAIR AND CONVEYOR	1 LS	\$16,000	16,000	
SEISMIC RETROFIT OF EXISTING BUILDING	4,590 GSF	\$80	367,200	
NEW LIGHTING AT EXISTING BUILDING	4,590 GSF	\$16	71,375	
HEAVY DUTY STORAGE RACKS AT BACK WALL	85 LF	\$310	26,350	
UPGRADE EXISTING STREET FACING FAÇADE, MINIMAL	1 LS	\$33,000	33,000	
<b>IV. TOTAL CONSTRUCTION COST OF EXISTING MAINTENANCE BUILDING RETROFIT</b>				
	<b>4,590 GSF</b>	<b>\$115</b>	<b>529,735</b>	HARD COSTS

**EXPANDED SUMMARY**

	QUANTITY	\$ / UNIT	TOTAL \$ INCL MARKUPS	COMMENTS
<b>V. FF&amp;E AND OTHER COST IMPACTS</b>				SOFT COSTS
MARINE ENVIRONMENT PREMIUMS				INCL WITH BLDG CORE & SHELL
PHASING IMPACTS - BUILD SHOP BLDG PRIOR TO (E) BLDG DEMO				CARRIED WITH HARD COST MARKUPS
FF&E AT NEW ADMINISTRATION BUILDING	9,700 GSF	\$30	291,000	BASED ON 2 STORY BLDG
FF&E AT NEW SHOP BUILDING	1,456 GSF	\$10	14,560	
FF&E AT MAINTENANCE BUILDING	4,590 GSF			N/A, SEE SECT IV. HARD COSTS
SOLAR SYSTEMS AT ADMIN ROOF AND YARD				N/A, PART OF OPERATING COSTS, SEE ADD ALTERNATES
<b>CORPORATE YARD/STORAGE EQUIPMENT</b>				
CONVAULT (FUEL)				EXISTING
AIR COMPRESSERS				EXISTING
PORTABLE HOSE REEL - LARGE & SMALL				EXISTING
GENERATOR IN YARD				EXISTING
LIGHT TOWER				EXISTING
RACKED PIPE STORAGE	18 LF	\$550	9,900	INCL FNDS
RACKED STORAGE	18 PALLETS	\$550	9,900	INCL FNDS
DOUBLE WRAPPED USED AC PIPE BEFORE HAULED AWAY	20 LF	\$550	11,000	INCL FNDS
PIPE TRAILER				EXISTING
PROPANE STORAGE				EXISTING
TRENCH PLATES OF DIFFERENT SIZES				STACK ON GROUND
TRASH AND RECYCLING DUMPSTERS				EXISTING
FUELING STATION				EXISTING
<b>WAREHOUSE/REPAIR/SHOP EQUIPMENT</b>				
DRILL PRESS & TIRE LAITH				EXISTING
FORKLIFT & SANDBLASTER				EXISTING
ALLOWANCE TO RELOCATE EQUIPMENT	1 LS	\$50,000	50,000	
<b>V. TOTAL FF&amp;E AND OTHER COST IMPACTS</b>				SOFT COSTS
<b>VI. PROJECT MANAGEMENT / FEES / DESIGN / ENGINEERING</b>				SOFT COSTS
A/E FEES SD-CA / MISC SUB-CONSULTANTS	\$12,314,557	12.00%	1,477,747	
CONSTRUCTION MANAGEMENT	\$12,314,557	5.00%	615,728	
OWNER PROJECT MANAGEMENT				N/A
ABATEMENT, HAZARDOUS SOILS	1 AL	\$250,000	250,000	
CEQA - PROCESS				EXCLUDED
VENDOR UTILITY FEES	1 AL	\$1,000	1,000	
CITY UTILITY FEES	1 LS	\$30,000	30,000	
PRINTING/REPRODUCTION	1 LS	\$10,000	10,000	
TESTING/INSPECTION/SPECIAL INSPECTIONS	\$12,314,557	0.50%	61,573	
PERMITS, PERIODIC INSPECTION AND CITY FEES				
BLDG PERMIT	\$12,314,557	\$0.0052	64,165	
PLAN CHECK FEE	1 LS	\$41,707	41,707	65% OF PERMIT FEE
GENERAL PLAN MAINTENANCE	\$12,314,557	0.05%	6,157	
INSPECTION FEES	\$12,314,557	1.00%	123,146	\$134/HR ? FOR 2021
OTHER FEES ALLOWANCE	1 AL	\$10,000	10,000	
MOVING EXPENSES	2 EA	\$15,000	30,000	
OWNER PROJECT CONTINGENCY	\$12,314,557	10.00%	1,231,456	
OFFICE SPACE LEASE - 3000 SF	15 MO	\$8,750	131,250	ALLOWED \$35/SF/YR
ON SITE OFFICE TRAILER RENTAL	15 MO	\$1,200	18,000	INCL DELIV/REMOVAL/TOILETS
<b>VI. TOTAL PROJECT MANAGEMENT / FEES / DESIGN / ENGINEERING</b>				SOFT COSTS

**EXPANDED SUMMARY**

	QUANTITY	\$ / UNIT	TOTAL \$ INCL MARKUPS	COMMENTS
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**ADD ALTERNATES**

FURNISH/INSTALL SOLAR SYSTEM AT ADMIN BLDG ROOF, IN LIEU OF PAYING A VENDOR THROUGH ANNUAL OPERATING COSTS.	2,958 SF	\$86	252,993	ASSUME 60% ROOF COVERAGE (BASED ON 2 STORY). SYSTEM TO INCLUDE BATTERY BACK-UP
FURNISH/INSTALL SOLAR SYSTEM & CANOPY OVER PARKING, IN LIEU OF PAYING A VENDOR THROUGH ANNUAL OPERATING COSTS.	1,710 SF	\$150	256,500	SYSTEM TO INCLUDE BATTERY BACK-UP